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Can mass fundraising harm your core business? A field experiment on how fundraising affects ticket sales

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Abstract

Can mass fundraising harm your core business? A field experiment on how fundraising affects ticket sales*

Some companies engage in mass fundraising in addition to their core business. Via a corporate social responsibility (CSR) channel this may increase sales. However, ask avoidance, if present, could imply that fundraising activities may harm a company's core business. We examine how asking for donations affects ticket sales of a publicly owned leading opera company. In two large scale randomized controlled trials with over 50,000 opera visitors, who are asked to donate for an opera-organized social youth project, we find that donations can crowd out ticket expenditure during a campaign. But for the longer run we observe a precisely estimated null effect.

Keywords: Charitable giving, field experiments, ask avoidance, corporate social responsibility

JEL classification: C93, D64, D12, L21, M14

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1. Introduction

Many companies engage in charitable activities: some companies ask workers to contribute to projects or offer payroll giving (Hutchison-Quillan, Reiley, and Samek 2018; Grieder, Kistler, and Schmitz 2021), others donate small amounts for each item they sell or unit of service they provide (Singh, Teng, and Netessine 2019; Elfenbein, Fisman, and McManus 2012), or collect donations from their customers. In this study we focus on the latter type of engagement for which there are many prominent examples including British Airways or American Airlines who ask for spare change during flights.¹ But there are also many retailers, cafés or small services that place donation boxes at their check-outs. Some of them forward donations to charities (Khadjavi 2017) while others provide charitable or public goods themselves (Adena and Huck 2019b) as is the case in this paper.

Why do companies engage in such activities outside of their core business? The popular opinion is that demonstrating corporate social responsibility (CSR) is demanded by a subset of stakeholders (Bénabou and Tirole 2010; Morgan and Tumlinson 2019) and can also positively affect sales and profits by enhancing demand for the company's products (Besley and Ghatak 2007; Pigors and Rockenbach 2016; Albuquerque, Koskinen, and Zhang 2019). However, directly asking customers to contribute to a charitable campaign can also bear risks as a new strain of literature on “ask avoidance” suggests. Ask avoidance describes the phenomenon that individuals targeted in a fundraising drive exert effort in order to avoid being actually asked. For example, in DellaVigna, List, and Malmendier (2012) forewarned households do simply not open the door for fundraisers; in Andreoni, Rao, and Trachtman (2017) customers take detours to avoid the entrance of a supermarket where a fundraiser does his work; and in Adena and Huck (2019b) customers switch away from online purchasing after experiencing an online fundraising call.²

Ultimately, if ask avoidance is strong, customers may simply decide to substitute away from a company that hassles them in which case fundraising designed to be profit enhancing or at the very least well-meaning could actually harm core business. In the present paper we explore this threat through two large-scale field experiments with a publicly owned company. Specifically, we

¹<https://www.unicefusa.org/supporters/organizations/companies/american-airlines> (viewed on 22.05.2019) and <https://fundraising.co.uk/2017/08/07/celebrities-in-ba-flight-safety-video-to-boost-donations-to-comic-relief/> (viewed on 01.08.2019).

² If customers asked for donations turn away from the company, this could potentially also be explained by “reactance” in response to a perceived threat to their autonomy (Brehm and Brehm 2013).

examine the effects of a leading German opera house's mass mailings to raise funds for an opera-led social youth project on their ticket sales. There are two aspects of this setting which are important for our purpose. First, the charitable activity, here the youth project, is not part of the company's core business. Second, there are only two ways to escape mass mailings: one can write to the sender to unsubscribe from the relevant mailing list or one can turn away from the organization. The consequence of these twin facts is that fundraising, while non-essential for core business, may pose a serious threat: it could turn customers away from the product.

Causal evidence from field experiments regarding the effects of CSR and ask avoidance in such context is scarce. To close this gap, we conduct two large-scale field experiments in subsequent years. In the first experiment customers are randomly sent a fundraising letter or not. We find that neither a standard letter nor a letter that suggests repeated fundraising has any effect on ticket purchasing behavior of customers. This holds for different time frames that we can examine after the fundraising drive; it holds for all relevant outcomes such as the number of purchased tickets or the total amount spent; and it holds for all groups of customers. We replicate this result in the second year.

Given the presence of two channels through which fundraising may affect sales, the positive CSR channel and the negative ask avoidance channel, we have to address the possibility that they simply cancel each other out. We do this in three different ways. First, in our year-1 experiment, we vary the intensity of the treatment by suggesting repetition of the fundraising call in one treatment. Second, for year 2, we vary the total number of letters received and we compare ticket buying behavior of individuals who received zero, one, and two letters. Of course, both these variations may enhance both, CSR and ask avoidance, but it would be surprising if the two effects would precisely cancel out for all combinations. Finally, our third line of enquiry tackles the problem more directly. In year 2, we simply add one treatment where customers receive a purely informational letter describing the opera houses youth project—without asking for a donation. This shuts down the ask avoidance channel and allows, hence, separate identification. Somewhat surprisingly, we find precisely estimated zero effects for both, CSR and ask avoidance.

For year 1, we can only examine responses to the campaign after the campaign ended and we do so for different time windows to which we shall refer as the medium and the long term. Our results hold for both. In contrast, in our year-2 experiment, we are also able to analyze customers'

immediate responses during the campaign, to which we will refer as the short term and, in the short term, we do observe a reduction in ticket spending for a treatment where we announce further repetition of the fundraising activities, that is, there is some substitution between tickets and donations. Given that the total spend (tickets plus donations) remains equal between treatment groups, we interpret this result as an effect of budgeting where customers consider tickets and donations to the opera as belonging to one budget (Heath and Soll 1996).

2. A brief literature review

2.1. Ask avoidance

The recent literature on ask avoidance has established that individuals are willing to incur costs in order to avoid a fundraiser. For example, they choose longer walking distances (Andreoni, Rao, and Trachtman 2017), they choose not to be at home when they know that a fundraiser will arrive (DellaVigna, List, and Malmendier 2012), or they unsubscribe from a mailing list (Damgaard and Gravert 2018). Adena and Huck (2019b) show that more intense online fundraising has adverse effects on future online sales: customers shift to more cumbersome ways of buying tickets. In contrast to these findings, Huck and Rasul (2010) show, in the context of a letter-based fundraising drive, that announcing a donation request on the envelope has no effects on donation values and frequency. Similarly, Adena and Huck (2019a) observe very low rates of unsubscription, even if the option is explicitly pointed out. Longer-term effects and effects regarding financial dimensions have so far been neglected by the literature and the current study is designed to close this gap.

2.2. Corporate social responsibility

Companies may choose to behave in a socially responsible way by reducing negative externalities of production, providing public goods, paying higher wages etc. in response to their stakeholders' and consumers' preferences (see, for example, Besley and Ghatak 2007; Bénabou and Tirole 2010; Morgan and Tumlinson 2019, or, for a survey, Kitzmüller and Shimshack 2012, and Schmitz and Schrader 2015). In general, CSR activities might reduce profits and simply reflect social preferences of shareholders but they can also be strategic and profit maximizing, for example, when consumers are swayed to buy more products from a firm that engages in CSR. In our setting, the company does incur some fixed costs for the infrastructure that is required for the project but in

terms of the project's scale the company serves more like a platform passing the social responsibility on to its customers (Besley and Ghatak 2007; Bénabou and Tirole 2010).

Sen, Bhattacharya, and Korschun (2006) show that stakeholder attitudes can be indeed positively affected by CSR and Dyck et al. (2019) show how institutional investors exert influence on companies' CSR activities. Tonin and Vlassopoulos (2014) document that workers may work harder if their productivity is tied to a donation received by a charity while List and Momeni (2021) document detrimental effects on worker behavior. Regarding the attitudes of customers and CSR effects on profits, Pigors and Rockenbach (2016) find, in a laboratory experiment, that suppliers offering socially responsible products achieve significantly higher profits than their competitors. Similarly, in another experiment, Danz, Engelmann, and Kübler (2020) find that customers are willing to pay more for goods produced by a company paying a minimum wage to employers.

A nuanced picture emerges in Hainmueller, Hiscox, and Sequeira (2015) who find that the effects of CSR differ depending on the segment of the customers and product attributes, and Newman, Gorlin, and Dhar (2014) suggest that overemphasizing CSR can backfire as consumers might perceive the products being of lower quality. Evidence on an outright negative effect of CSR on shareholder value is provided in global panel study by Marsat and Williams (2012). Exploring a different channel through which CSR can operate, Albuquerque, Koskinen, and Zhang (2019) provide field evidence that CSR can soften competition and increase profits by generating (artificial) product differentiation.

More closely related to the collection of donations from customers, Singh, Teng, and Netessine (2019) study the effects of promotions that either offer donations or discounts by a taxi-booking platform on subsequent taxi rides. Beyond an immediate positive effect on the number of taxi rides (that is much higher for discount codes than for charity promotions) the authors find no effect for a period of 30 days following the campaign. Since the customers are not asked to donate their money (the donation is made by the platform per ride conditional on applying the charity promotional code) the authors do not test the ask avoidance hypothesis but concentrate on corporate social responsibility (CSR). In another, closely related paper, Khadjavi (2017) studies the effect of a donation ask for a charity helping children in need on tipping behavior in a hair salon. He finds evidence for complementarity between donations and tips: tips are higher when customers are also asked for a donation.

In which form the CSR actions take place and, more specifically, who does actually contribute—the company independently of the amount of goods and services sold, or employing some linear function of the sales, or the customers directly—can potentially dramatically mold the effectiveness of the CSR activity. This relates to the question of donor preferences (Ottoni-Wilhelm, Vesterlund, and Xie 2017) or the mechanism through which donors are motivated (Landry et al. 2010). Here, we contribute to the less understood direct interaction between fundraising and sales where the latter is part of the core business while the former is not.³

3. Design of the year-1 experiment

We conducted our experiment with the Semper Opera in Dresden, an institution that had previously not engaged in this type of fundraising activities nor in social projects of this scale. Semper Opera in Dresden is a publicly owned company. Ticket sales cover up to 40% of the costs⁴ and around 60% is covered through fixed subsidies from the local government. Opera tickets are, compared to other countries, relatively inexpensive, and for specific groups reduced prices apply. There is also a very large difference in prices depending on performance category and seat location. Altogether, tickets for many performances are sold out very quickly, and for other performances best seats are quickly sold out.⁵ Tickets for opera performances are, hence, a consumption good in high demand.

At the end of November 2015, the opera house mailed 35,705 letters to its customers asking them to support a social youth project that enhances cultural education and social integration run by the opera house (see Appendix B for details of the mail-out) while 11,905 individuals were randomly selected as a control group and did not receive any mailing.

There were three variations of the letter: a standard letter, a letter that suggested repetition of the fundraising drive, and a third version that also highlighted repetition but explicitly mentioned the possibility to unsubscribe from future fundraising. We examined these rather more subtle differences with respect to fundraising outcomes in Adena and Huck (2019a) documenting that anticipated repetition causes a substantial reduction in donation levels. Here our focus is on the

³ A somewhat related question is whether fundraising activities of one organization harm the income of others. For a recent survey on this issue, see Gee and Meer (2019).

⁴ https://www.saechsische.de/ein-starkes-team-3969299.html?utm_source=szonline, (viewed on 04.08.2021).

⁵ On average, 93% of seats get sold out (https://www.saechsische.de/ein-starkes-team-3969299.html?utm_source=szonline, viewed on 04.08.2021).

rather more pronounced difference between receiving or not receiving any letter, with differences between letters designed to help us understand the mechanism. The letter did not otherwise advertise the core activities of the opera nor referred to ticket sales in any way, that is, fundraising and ticket sales were completely disconnected.

Participants in the experiment were selected from the opera's database of individuals. The database includes customers who registered online, bought tickets per telephone, e-mail, or fax, and in most cases registered when buying tickets in person. Close to 60% of customers registered online, and the remainder used the other purchase ways. We only included individual customers who had attended at least one opera performance in the opera season 2014/2015 and lived in Germany, Austria or Switzerland.⁶ Participants were randomly assigned to one of four treatment groups, such that there were almost 12,000 subjects per treatment.⁷ Given that a number of customer characteristics were available from the database, we made sure that the treatment groups were sufficiently balanced using methods of blocked randomization. In Appendix A, Table A1, we present evidence that treatment groups do not differ significantly in terms of observables: the sum of money spent on opera tickets, the number of purchased tickets, the average price per ticket, the distance from the opera house, and dummy variables for season ticket holders, females, couples, academic degree,⁸ PhD, professor title, living locally in Dresden, living in Germany, living in a big city, and being an online customer.

In the control treatment (O), there was no communication about the social youth project between the opera and customers during the experiment. In treatment A, the participants received a solicitation letter that asked them in a standard way to donate money to the project. The second (B) and third treatment (C) consisted of a fundraising letter similar to that in treatment A but in addition suggested future repetition of the fundraising and the project. Specifically, the letters differed from treatment A at seven places in the text. In treatment B and C, the following phrases were injected: permanently, over the long-term, year by year, in the year 2015 (twice), this year, première: first (see the letter and attached flyer in Appendix B). This was done to create a higher salience of the possible repetition of the fundraising and to increase the expectation that the present letter would

⁶ Corporates, employees of the opera house, and other selected customers were excluded.

⁷ We allocated exactly 11,905 individuals to each of the treatments. However, between treatment assignment and mailing ten subjects passed away or got otherwise erased from the database and were not replaced.

⁸ Academic degrees can only be taken into account if stated (truthfully or not). However, a standard (online) form in Germany contains an open space for a title. This is often used (especially by the older generations) to enter any title including academic degrees.

be the first in an annual series, which we expected to result in a higher ask avoidance than in treatment A (if any). On top, treatment C included a footnote pointing out the option to unsubscribe from fundraising. We expected that, relative to treatment B, treatment C might lessen the ask avoidance (if any) as customers can unsubscribe from fundraising while still receiving (separate) program-relevant information and enjoying the opera.

All letters contained information that seed money of €15,000 had been provided by an anonymous donor.⁹ Beyond that, one additional page described the project in more detail; this was equal in treatments A, B, and C (see again Appendix B for details).

If CSR increases demand for the core product, we expect a positive effect of the campaign on subsequent ticket sales, if ask avoidance is the dominant force we expect the reverse. Moreover, treatments B and C with their announcements of future calls may enhance both CSR and ask avoidance in a different way and may, thus, change the outcomes.

4. Results of the year-1 experiment

In the following we will study ticket purchasing behavior after the fundraising campaign. Most donations arrived within a month and until the end of the fiscal year that coincides with the calendar year. We received aggregate ticket data from 1 January 2016 until the end of the current opera season 15/16, that is for months 2–8 following the campaign, and we refer to this period as the medium term (for graphical exposition relating to the timing of the experiment and the outcome variables, see Figure A2 in Appendix A). We also received data on months 10–12 following the campaign including advanced sales for the new season, more specifically, all tickets bought for the season 16/17 until 28 November 2016, and we refer to this period as the long term (see again Figure A2 for the exact timing). Out of our final sample of 47,557¹⁰ customers, 18% bought tickets in the medium term and 13% bought tickets in the long term.

⁹ This was done to enhance giving, as previous research strongly indicates that lead donations serve as a quality signal (see, for example, Huck and Rasul 2011 for field evidence on signaling). The anonymous lead gift was provided by us.

¹⁰ The opera house removed *ex post* a small group of corporates that was initially wrongly selected in and for whom we do not have any *ex post* information. Together with the initial removal from the randomization stage, the sample is reduced by 63 observations.

4.1. Main result: No effect of fundraising on ticket sales in the medium and long term

In Table 1, we test whether receiving a fundraising letter has any effects on the subsequent ticket purchasing behavior in the medium term (Panel A) or the long term (Panel B). In Column I and II, we regress the number of tickets bought on the fundraising letter dummy. As the outcome variable is highly skewed we take the log of the variable plus one and can later interpret the results in terms of percentage changes. In Column III and IV, we regress ticket revenue on the fundraising letter dummy, again using a log transformed outcome variable. In the final two columns, the outcome variable is a dummy equal to one if the customer bought at least one ticket in the period under study. The methods used are OLS in Columns I–IV. In Column V and VI we use Logit and present average marginal effects. The regressions in Columns II, IV, and VI contain, in addition, available controls.

All coefficients of interest are very small and not significant, suggesting that there is no effect of fundraising letters on ticket purchasing behavior. In addition, treatment variation has no explanatory power at all; the R squared is virtually equal to zero in regressions without controls. At the same time, individual characteristics and past ticket behavior are good predictors for subsequent buying behavior; the R squared in regressions with controls is relatively large.¹¹ Altogether, it appears that the opera house’s fundraising has no effect on ticket demand in the middle and long term. However, there is the possibility, of course, that both CSR and ask avoidance are present and simply cancel each other out which we will examine next.

¹¹ Note that the treatment variation did have a substantial effect on donation sizes and unsubscriptions from the mailing list as analyzed in Adena and Huck (2019).

Table 1: Effect of fundraising letter on tickets

Outcome	number of tickets		revenue		dummy customer	
Dependent variable	log(number of tickets including zeros+1)		log(ticket value including zeros+1)			
Method	OLS		OLS		Logit, m.e.	
	I	II	III	IV	V	VI
	Panel A: medium-term					
Dummy fundraising letter	0.003 (0.008)	0.003 (0.004)	0.012 (0.021)	0.014 (0.013)	0.002 (0.004)	0.001 (0.003)
Controls		yes		yes		yes
Observations	47557	47557	47557	47557	47557	47557
R^2 / Pseudo R^2	0.000	0.693	0.000	0.601	0.000	0.542
	Panel B: long-term					
Dummy fundraising letter	0.001 (0.005)	0.002 (0.003)	0.003 (0.016)	0.004 (0.010)	0.000 (0.004)	0.000 (0.002)
Controls		yes		yes		yes
Observations	47557	47557	47557	47557	47557	47557
R^2 / Pseudo R^2	0.000	0.633	0.000	0.635	0.000	0.618

Notes: Robust standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; m.e.: average marginal effects after Logit; Controls include: client number; number of tickets in t-1; average ticket price in t-1, distance in km; dummies for: female, couple, titled, professor, Dresden, big city, Germany, internet customer; and subscription holder in t-1; medium-term: 2-8 months after fundraising; long-term: 10-12 months after fundraising including earlier advance sales, see Figure A2 in Appendix A for details of the timing.

4.2. Treatment intensity

Our different letter types can potentially influence both, the strength of ask avoidance and the strength of a CSR effect. Arguably, repetition should increase ask avoidance but also signals stronger commitment to CSR. Our analysis above may suggest that, on average, for all letter types, both effects cancel out. That they would so for all different letter types would be surprising. Table 2 is analogous to Table 1 with the exception that the letter dummy is now substituted by separate letter types: A, B, and C. Again, all coefficients are small and not significant, and we do not see any differences between letter types suggesting that all three manipulations lead to the cancelling out of both effects or, more plausibly, that the opera company's fundraising drive induces neither ask avoidance nor a CSR effect.

Table 2: Effect of treatments on tickets

Outcome	number of tickets		revenue		dummy customer	
Dependent variable	log(number of tickets including zeros+1)		log(ticket value including zeros+1)		Logit, m.e.	
Method	OLS		OLS		Logit, m.e.	
	I	II	III	IV	V	VI
Panel A: medium-term						
A	0.006 (0.009)	0.006 (0.005)	0.020 (0.026)	0.019 (0.016)	0.004 (0.005)	0.003 (0.003)
B	-0.001 (0.009)	0.001 (0.005)	0.008 (0.026)	0.011 (0.016)	0.000 (0.005)	-0.000 (0.003)
C	0.002 (0.009)	0.003 (0.005)	0.010 (0.026)	0.012 (0.016)	0.002 (0.005)	0.002 (0.003)
Controls		yes		yes		yes
Observations	47557	47557	47557	47557	47557	47557
R^2 / Pseudo R^2	0.000	0.693	0.000	0.601	0.000	0.542
Panel B: long-term						
A	0.005 (0.006)	0.005 (0.004)	0.014 (0.020)	0.015 (0.012)	0.002 (0.004)	0.002 (0.003)
B	-0.001 (0.006)	0.001 (0.004)	0.001 (0.020)	0.004 (0.012)	-0.000 (0.004)	0.000 (0.003)
C	-0.001 (0.006)	-0.001 (0.004)	-0.006 (0.020)	-0.005 (0.012)	-0.001 (0.004)	-0.001 (0.003)
Controls		yes		yes		yes
Observations	47557	47557	47557	47557	47557	47557
R^2 / Pseudo R^2	0.000	0.633	0.000	0.635	0.000	0.618

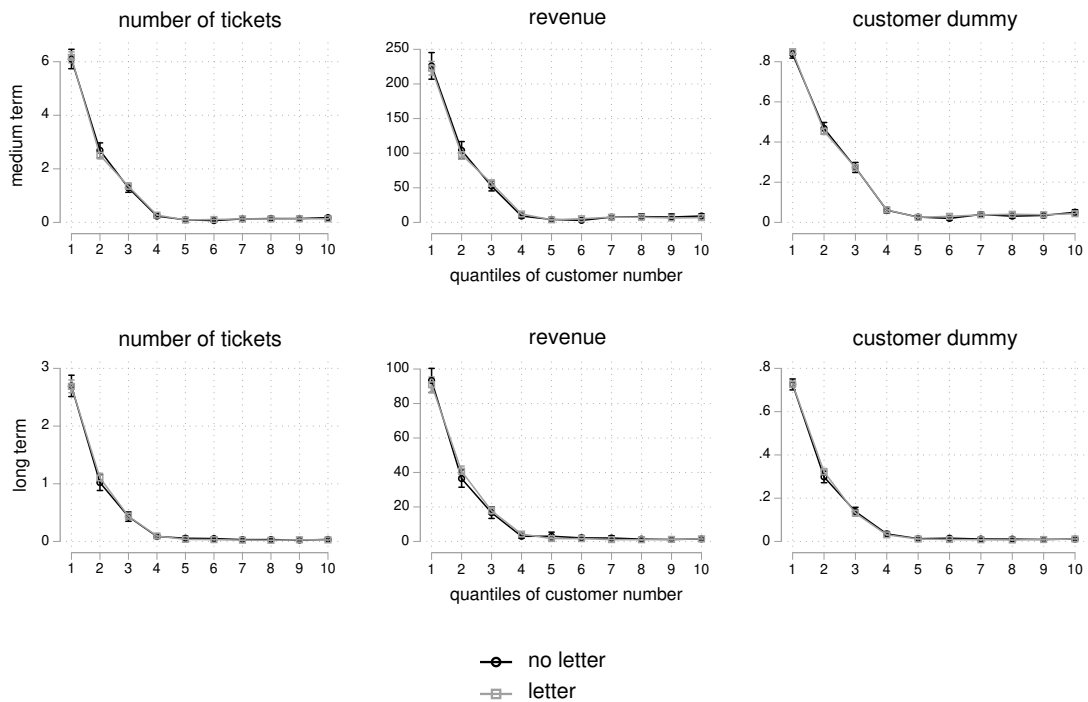
Notes: Robust standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; m.e.: average marginal effects after Logit; Controls include: client number; number of tickets in t-1; average ticket price in t-1, distance in km; dummies for: female, couple, titled, professor, Dresden, big city, Germany, internet customer; and subscription holder in t-1; medium-term: 2–8 months after fundraising; long-term: 10–12 months after fundraising including earlier advance sales, see Figure A2 in Appendix A for details of the timing; Treatment A: standard letter; Treatment B: letter suggesting repetition of fundraising; Treatment C: letter suggesting repetition of fundraising + opt out option.

4.3. Heterogeneity

Next, we test for potential heterogeneity by length of relationship with the opera house, amounts spent on tickets in the previous season, and by looking at subscription holders separately. Figure 1 shows that the longer the relationship with the opera house (as proxied by the lower customer number quartile), the higher is the number of tickets bought, amount spent and return rate both in the medium and long term. But importantly, there is no difference in behavior of those who received fundraising letters and those who did not. Figure 2 shows a similar picture with higher quantiles of ticket spending in the past season being more likely to visit the opera again, spending more, and buying more tickets. Again, there is no statistical difference between recipients and non-recipients. Finally, Table C1 in Appendix C shows that subscription holders do not change their ticket buying behavior in reaction to the fundraising letter. Note that those are very loyal customers

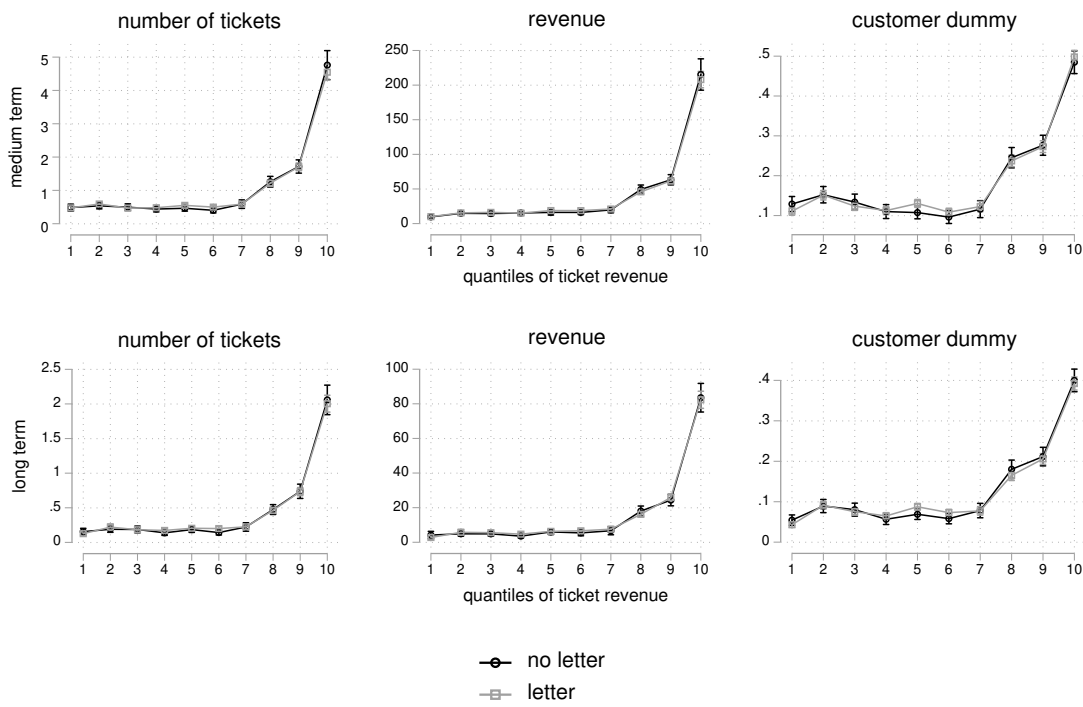
with return rates of 99% in the medium term and around 90% in long term (see Table C3 in Appendix C).

Figure 1: Number of tickets, ticket revenue and probability of return in middle and long term by quantiles of customer number



Notes: For computational and presentation simplicity, we use OLS method and level outcome variables for all regressions.

Figure 2: Number of tickets, ticket revenue and probability of return in middle and long term by quantiles of previous season revenue



Notes: For computational and presentation simplicity, we use OLS method and level outcome variables for all regressions.

4.4. Unsubscription

Finally, we look at the rate of active unsubscriptions as a reaction to treatments. Customers who wanted to unsubscribe had to write an e-mail, letter, or call the opera house if they did not wish to receive further fundraising letters. The total unsubscription rate was as low as 0.06–0.08% in treatments A and B. In treatment C, which highlighted the option to unsubscribe explicitly in a footnote, the rate was 0.37%. More specifically, in each treatment 4 customers demanded complete deletion from the database and 6, 3, and respectively 40 demanded unsubscription from fundraising mailing list. The difference in total unsubscription between treatment C and the remaining treatments is significant with $p < 0.0001$.

5. Design of the year-2 experiment: Replication, a second letter, and a new treatment

In the following year, we conducted a second field experiment in order to add additional twists to our design. First, we tested the replicability of our year-1 results for the medium term. Second, in order to test the possibility that ask avoidance and CSR are cancelling each other out more directly, we add a new treatment (I), a letter that simply informs customers about the opera's social project without requesting any donations. This allows us to check whether there is a pure CSR effect without the potential interference of ask avoidance. If both effects are present but happened to cancel out in year 1, we should now see a positive effect of treatment I. Third, we revisit the intensity question: a subsample of past recipients receives letters A and B for a second time, that is, they receive an intensified treatment. This provides another variation on the above theme of potentially increasing both, ask avoidance and a CSR effect. Fourth, we test heterogeneity again by distinguishing between top customers¹² and new customers. Finally, this time, we also have data on the immediate effect of our letters on ticket sales, that is, on the first month after the intervention.

Since the opera house preferred a smaller scale for the fundraising campaign with better targeting of potential donors, the specific selection of individuals into the second-year experiment was as follows: First, from the previous group that did not receive any letter in the first year, 4,000 individuals were selected. The selection was on customer's observable individual characteristics, such that customers with the highest amounts spent on tickets in the season 2014/15 were included (henceforth the top tier). The control group received again no letter. In treatment A participants received a standard letter for the first time in the second year. In treatment B the additional words (revival: second, permanently, over the long term, year by year, in the year 2016, this year, in the year 2016) again suggested the regular character of the project and fundraising activities. All letters additionally informed recipients about seed money of €10,000¹³ and contained a project flyer that was the same in A and B treatment (see Appendix B for details of the letter and attached flyer). There was no treatment C in the second year. Instead, the new treatment I informed the recipients about the opera's engagement in the social project without asking them for donations. The letter was supported by a project flyer similar to that in the A and B treatments but absent any information relating to donations such as bank account, etc. (see Appendix B for details). Participants were

¹² With the highest spending on tickets in the season 2014/15.

¹³ This amount was somewhat higher than the mailing costs. The anonymous lead gift was provided by us.

randomly and equally distributed between treatments assuring balancing based on predicted donation value (see Adena and Huck 2019 for more details). This resulted in good balancing according to previous ticket purchasing behavior and the length of the relationship between the customer and the opera house as proxied by the customer number, see Table A2 in the Appendix.¹⁴

Additionally, 4,000 new customers with the highest ticket purchases in the first half of 2016 were selected and received the treatments O, A, B, and I with equal probability. Table A3 in the Appendix shows that the groups were well balanced according to all available covariates.

In addition, 9,000 (25%) of first-year participants who did receive letters were again included in the new fundraising campaign provided they did not unsubscribe. They were again selected based on their observable individual characteristics such that customers with the highest amounts spent on tickets in the season 2014/15 were included (henceforth the top quarter). For these individuals, a selected subsample of the year-1 control group constitutes a balanced comparison group (again, the top quarter): 2,250 individuals receive a letter for a first time (including 750 individuals receiving a pure information letter) and 750 individuals never receive any project-related letter. The randomization is based on the same procedure as described above for the previous O group. Table A4 in the Appendix shows the balancing that again performs well for ticket purchasing behavior and the length of the relationship between the customer and the opera house as proxied by the customer number.

6. Results of the year-2 experiment

Among the selected top tier previous customers 37% buy at least one ticket in the medium term (see Table A2) while only 8% of new customers do so. In the following, we pool these groups together but look at them separately in the heterogeneity section.

6.1. Replication

¹⁴ There are some individual characteristics for which the simple tests show some significant differences. Therefore, we will present later the analysis with and without additional controls in order to correct for any potential imbalances. As it will turn out, it does not play any role for the magnitudes but sometimes for precision.

We replicate year-1 results by using a set comprising the top tier customers and new customers (4,000 each) for the medium term. Table 3 shows the results of regressions analogous to the previous tables with the exception that we now use a linear probability model in the last two columns because of the lack of convergence when using Logit. The number of controls is reduced (see note to Table 3) as not all controls are available for the set of new customers. Again, the coefficients are small and not significant confirming our main year-1 result.

Table 3: Effect of fundraising letter on tickets, medium-term

Outcome	number of tickets		revenue		dummy customer	
Dependent variable	log(number of tickets including zeros+1)		log(ticket value including zeros+1)			
Method	OLS		OLS		OLS	
	I	II	III	IV	V	VI
Letter	-0.033	-0.013	-0.010	-0.004	-0.002	0.002
	(0.055)	(0.034)	(0.020)	(0.012)	(0.011)	(0.007)
Controls		yes		yes		Yes
Observations	8000	8000	8000	8000	8000	8000
R^2 / Pseudo R^2	0.000	0.606	0.000	0.613	0.000	0.575

Notes: Sample: new customers; Robust standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; OLS in last two columns because of lack of convergence; Controls include: client number; number of tickets in t-1 first and second half; average ticket price in t-1 first and second half, internet customer dummy, new customer dummy; Short-term: month directly following the mailing; medium-term: months 2–7 after the campaign; see Figure A2 in the Appendix for the exact timing.

6.2. The pure information treatment: Measuring CSR in isolation

The introduction of the new treatment Info shuts down the ask avoidance channel and is expected to result in higher ticket sales if CSR is at work. The results of regressions analogous to Table 2 are presented in Table 4. The coefficients on all treatment dummies are small and insignificant including the Info treatment. In other words, we find no evidence for a positive CSR effect in the medium term.

Table 4: Effect of fundraising letter on tickets, medium term

Outcome	number of tickets		revenue		dummy customer	
Dependent variable	log(number of tickets including zeros+1)		log(ticket value including zeros+1)			
Method	OLS		OLS		OLS	
	I	II	III	IV	V	VI
A	-0.036 (0.067)	0.008 (0.043)	-0.014 (0.024)	0.001 (0.015)	-0.003 (0.013)	0.005 (0.009)
B	-0.045 (0.067)	-0.046 (0.041)	-0.012 (0.024)	-0.013 (0.015)	-0.003 (0.013)	-0.003 (0.009)
Info	-0.017 (0.067)	-0.003 (0.042)	-0.005 (0.024)	-0.000 (0.015)	0.002 (0.013)	0.004 (0.009)
Controls		yes		yes		yes
Observations	8000	8000	8000	8000	8000	8000
R^2 / Pseudo R^2	0.000	0.606	0.000	0.613	0.000	0.575

Notes: Sample: new customers; Robust standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; OLS in last two columns because of lack of convergence; Controls include: client number; number of tickets in t-1 first and second half; average ticket price in t-1 first and second half, internet customer dummy, new customer dummy; Short-term: month directly following the mailing; medium-term: months 2–7 after the campaign; see Figure A2 in the Appendix for the exact timing; Treatment A: standard letter; Treatment B: letter suggesting repetition of fundraising; Treatment Info: info about the project, no donation request.

6.3. Treatment intensity revisited: zero, one versus two letters

Since a one-off fundraising campaign might not be sufficient to prompt a behavioral change, next, we study whether an actual treatment repetition has an effect (in contrast to a suggested repetition) via the ask avoidance channel. If ask avoidance is present, we expect two letters leading to lower ticket sales and lower rates of return. In Table 5, we compare customers who received no letter, one letter or two letters. The structure of the tables is similar to Table 3. In the medium-term, we find no effects of one or two letters. So, yet again, we also find no evidence for meaningful ask avoidance in the medium term.

Table 5: Effect of fundraising letters on tickets, medium term

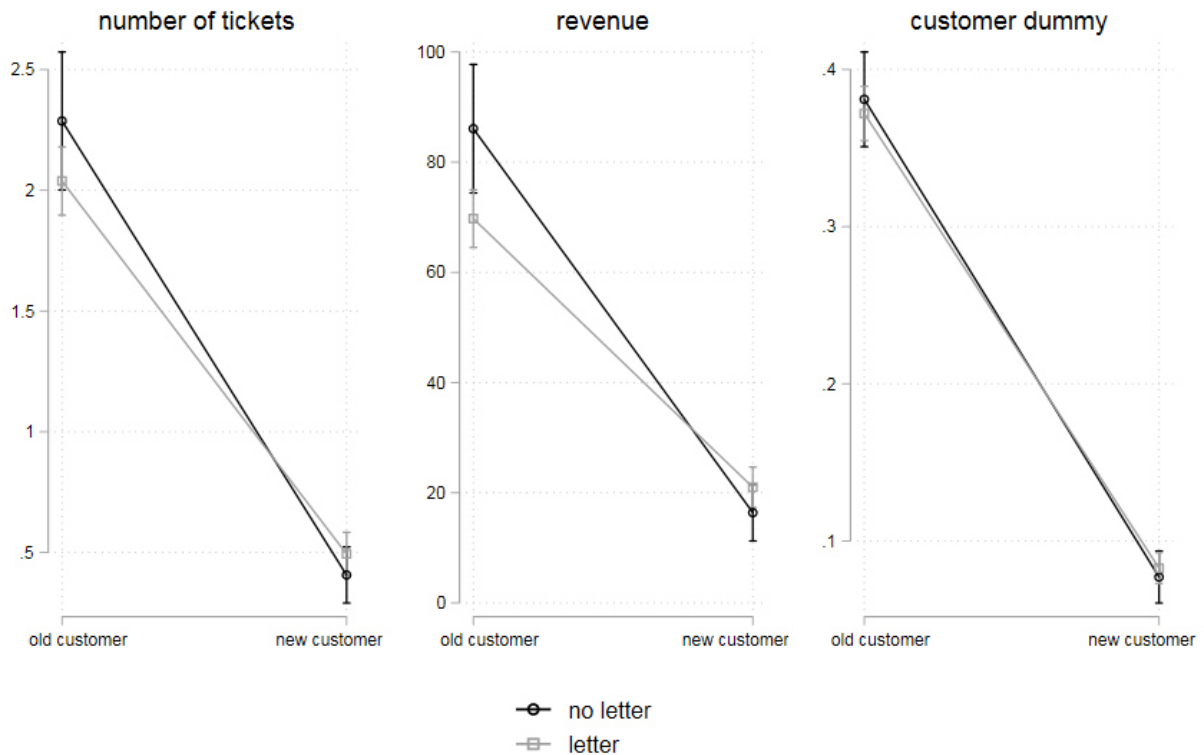
Outcome	number of tickets		revenue		dummy customer	
Dependent variable	log(number of tickets including zeros+1)		log(ticket value including zeros+1)			
Method	OLS		OLS		Logit, m.e.	
	I	II	III	IV	VII	VIII
One letter	-0.030 (0.041)	-0.011 (0.023)	-0.069 (0.109)	-0.009 (0.063)	0.004 (0.021)	0.006 (0.012)
Two letters	-0.035 (0.037)	-0.013 (0.021)	-0.075 (0.099)	-0.015 (0.057)	-0.006 (0.019)	-0.003 (0.011)
Controls		yes		yes		yes
Observations	12000	12000	12000	12000	12000	11942
R^2 / Pseudo R^2	0.000	0.691	0.000	0.680	0.000	0.615

Notes: Sample: the top quarter of established customers; Robust standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; m.e.: average marginal effects after Logit; Controls include: client number; number of tickets in t-1; average ticket price in t-1, distance in km; dummies for: female, couple, titled, professor, Dresden, big city, Germany, internet customer; and subscription holder in t-1; Short-term: month directly following the mailing; medium-term: months 2-7 after the campaign; see Figure A2 in the Appendix for the exact timing.

6.4. Heterogeneity: top versus new customers

In Figure 3 we distinguish between previous and new customers. We see differences in their ticket purchasing behavior but no significant differences with respect to the fundraising letter. That means that the null result holds for both groups.

Figure 3: top tier of previous customers versus new customers



Notes: horizontal axis 0- top tier customer in season 2014/15, 1- new customer in season 2015/16

6.5. Short term

In year 2, we also have data on immediate responses in the month directly following the fundraising campaign, that is, for December 2016. Most of the donations (94%) arrived between December 2 and December 30 and only few after New Year. Table 6 shows the results of regressions similar to Table 1 with additional results in Columns V and VI for a new outcome, the amount spent on tickets and donations combined (plus one and logged). Here we observe negative significant coefficients for ticket outcomes and insignificant and small coefficients for the joint ticket and donation outcome. In other words, it appears as if donors cut their ticket budget by the amount they donate suggesting that they have an overall opera budget. Note that budgeting cannot explain the negative effect of the Info treatment,¹⁵ therefore, we repeat the above exercise looking at all treatments separately (see Table 7) and, indeed, the coefficients for the Info treatment are not significant. The same holds for treatment A. The negative short-term effect on ticket purchasing is

¹⁵ There is a small restriction to this. Indeed, few donations happened in the Info treatment although it did not contain an explicit ask.

mainly driven by the more intense treatment B but it has no effect on the joint ticket and donations outcome. We conclude that, in the short term, a fundraising campaign might reduce sales outcomes through budgeting effect and that this is more likely for a more intense form of fundraising.

Table 6: Effect of fundraising letter on tickets, short term

Outcome	number of tickets		revenue		revenue and donations		dummy customer	
Dependent variable	log(number of tickets including zeros+1)		log(ticket value including zeros+1)		log(ticket value including zeros + donation+1)			
Method	OLS		OLS		OLS		Logit, m.e.	
	I	II	III	IV	V	VI	VII	VIII
Dummy Letter	-0.018*	-0.016**	-0.062*	-0.056*	-0.007	-0.001	-0.011	-0.010*
	(0.010)	(0.008)	(0.035)	(0.029)	(0.036)	(0.029)	(0.007)	(0.006)
Controls		yes		yes		yes		yes
Observations	8000	8000	8000	8000	8000	8000	8000	8000
R^2 / Pseudo R^2	0.000	0.311	0.000	0.307	0.000	0.292	0.001	0.371

Notes: Sample: new customers; Robust standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; m.e.: average marginal effects after Logit; Controls include: client number; number of tickets in t-1 first and second half; average ticket price in t-1 first and second half, internet customer dummy; Short-term: month directly following the mailing; medium-term: months 2–7 after the campaign; see Figure A2 in the Appendix for the exact timing.

Table 7: Effect of fundraising letter on tickets, short term

Outcome	number of tickets		revenue		revenue and donations		dummy customer	
Dependent variable	log(number of tickets including zeros+1)		log(ticket value including zeros+1)		log(ticket value including zeros + donation+1)			
Method	OLS		OLS		OLS		Logit, m.e.	
	I	II	III	IV	V	VI	VII	VIII
A	-0.018	-0.014	-0.054	-0.039	0.020	0.036	-0.010	-0.006
	(0.012)	(0.010)	(0.042)	(0.034)	(0.044)	(0.036)	(0.009)	(0.007)
B	-0.029**	-0.030***	-0.106**	-0.107***	-0.037	-0.039	-0.022**	-0.022***
	(0.012)	(0.010)	(0.041)	(0.034)	(0.042)	(0.035)	(0.009)	(0.008)
Info	-0.006	-0.005	-0.026	-0.021	-0.005	-0.000	-0.003	-0.003
	(0.012)	(0.010)	(0.043)	(0.036)	(0.043)	(0.037)	(0.009)	(0.007)
Controls		yes		yes		yes		yes
Observations	8000	8000	8000	8000	8000	8000	8000	8000
R^2 / Pseudo R^2	0.001	0.311	0.001	0.308	0.000	0.292	0.001	0.373

Notes: Sample: new customers; Robust standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; m.e.: average marginal effects after Logit; Controls include: client number; number of tickets in t-1 first and second half; average ticket price in t-1 first and second half, internet customer dummy; Short-term: month directly following the mailing; medium-term: months 2–7 after the campaign; see Figure A2 in the Appendix for the exact timing; Treatment A: standard letter; Treatment B: letter suggesting repetition of fundraising; Treatment Info: info about the project, no donation request.

7. Conclusions

We have been working with different opera houses on fundraising for over a dozen years. This has been a very happy relationship. It allowed us to study various academic questions on charitable giving and it generated substantial additional income for the opera houses. In almost all of our studies the projects we collected money for were in the realm of music education for disadvantaged children and young teenagers, that is, for projects outside the core business of the opera houses.

In all these studies we used information on ticket purchases as explanatory variables for giving behavior but never examined whether there is also a feedback channel from fundraising to ticket purchases until in 2015 we did. Documented in Adena and Huck (2019b), we found for an online fundraising campaign with the Bavarian State Opera that such a feedback channel is indeed present. Specifically, we found that customers switched away from online purchases towards other channels of ticket sales and, not documented in the paper, some indication of potential reduction in total ticket expenditure.

Both, our project partners and we ourselves, were extremely worried by these findings. What if ask avoidance is so strong that our fundraising experiments had all the time a negative effect on ticket sales? Due to selecting customers into these experiments, we were not able to study the consequences of our campaigns with our previous data sets. So, in order to tackle this question, we designed the experiments documented in the present paper—with a new opera house such that we would be able to examine possible feedback from fundraising on ticket sales starting with the very first exposure to fundraising.

Our results came as great relief to both, us and our project partners. Fundraising has a precisely estimated zero effect on ticket purchases in the medium and longer term. In contrast, we do observe an effect during the campaign when the letter is bold and announces future repetition. In the immediate aftermath of the campaign donors reduce their ticket budget by the amount they donated. It appears that they have something like a pretty much fixed opera budget.

So, as we have seen with our previous online study (Adena and Huck 2019b), companies that engage in fundraising for purposes other than their core business should exert substantial caution. There are feedback loops such that fundraising may adversely affect core business. Our study shows that for the opera context these concerns can be neglected. Customers appear not to mind. But at the same time there is also no positive effect through a CSR channel.

In the terms of List (2020), we believe that our study passes the four transparency conditions required for external validity: we sample a very large share of the relevant opera customers; attrition is a non-issue and the setting is natural. Scalability, of course, depends on how far to push – other opera houses, other companies in the culture sector, companies in other sectors. Regarding other opera houses there is no good reason to believe that our setting is special in any particular way and we also conjecture that our findings have external validity for the broader cultural sector where music companies or museums raise funds for educational or social projects. To what extent donation-based CSR activities can be deemed harmless in other industries remains an open question but we can engage in some speculation. Large companies in the culture sector face few direct competitors or, where they do, tend to be highly differentiated by putting on different shows. This makes “avoiding the ask” harder and we conjecture that donation-based CSR activities may be more dangerous to core business when there are more competitors offering close substitutes. This is in line with findings from Albuquerque, Koskinen, and Zhang (2019) who show that in more competitive markets CSR can generate perceived product differentiation and increase profits provided that consumers’ share in bearing the CSR costs is small.

Overall, we believe that this will remain a fruitful area for further experimental research, in particular, if more studies on the interaction of charitable activities and core business can be combined in the spirit of Maniadis, Tufano, and List (2014) and if careful consideration is paid to study-specific idiosyncrasies.

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Appendix A:

Table A1: Results of randomization in year 1

Treatment N variable	O 11,884		A 11,881		B 11,885		C 11,846		Comparison groups		
	mean	Std. error	mean	Std. error	mean	Std. error			O=A	O=B	O=C
	Panel A: pre-experimental variables										
Customer number	736008.81	1967.54	735516.19	1947.72	735461.08	1955.94	735304.00	1964.57	0.86	0.84	0.80
Number of tickets 2014/15	3.89	0.04	3.89	0.04	3.85	0.04	3.87	0.04	0.96	0.51	0.79
Average price 2014/15	65.45	0.30	65.02	0.30	65.18	0.30	65.20	0.30	0.32	0.52	0.55
female	0.50	0.00	0.50	0.00	0.50	0.00	0.50	0.00	0.97	0.91	0.97
couple	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	1.00	0.58
titled	0.05	0.00	0.05	0.00	0.05	0.00	0.04	0.00	0.99	0.98	0.97
Dresden	0.23	0.00	0.23	0.00	0.23	0.00	0.23	0.00	0.93	0.92	0.91
Distance in km	207.51	1.71	207.56	1.72	208.41	1.72	209.22	1.72	0.98	0.71	0.48
Online customer subscription	0.47	0.00	0.47	0.00	0.47	0.00	0.47	0.00	0.99	0.94	0.99
professor	0.11	0.00	0.11	0.00	0.11	0.00	0.11	0.00	0.94	0.97	0.97
Germany	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.93	0.93	1.00
Big city	0.96	0.00	0.96	0.00	0.96	0.00	0.96	0.00	0.90	0.95	0.81
	0.42	0.00	0.42	0.00	0.42	0.00	0.42	0.00	0.97	0.95	0.95
	Panel B: post-experimental variables										
Number of tickets, medium term	1.10	0.03	1.12	0.03	1.08	0.03	1.10	0.03	0.70	0.64	0.99
Average price, m.t.	7.85	0.19	8.10	0.19	8.18	0.20	7.85	0.19	0.35	0.24	0.98
Dummy customer, m.t.	0.18	0.00	0.19	0.00	0.18	0.00	0.19	0.00	0.48	0.95	0.67
Number of tickets, long term	0.45	0.01	0.46	0.02	0.44	0.02	0.44	0.01	0.47	0.94	0.96
Average price, l.t.	4.67	0.13	4.79	0.13	4.73	0.13	4.55	0.13	0.53	0.78	0.49
Dummy customer, l.t.	0.13	0.00	0.13	0.00	0.13	0.00	0.13	0.00	0.65	0.97	0.82
Number of tickets, first half 2017	0.79	0.02	0.80	0.02	0.81	0.03	0.76	0.02	0.84	0.66	0.36
Average price, f.h. 2017	6.08	0.16	6.12	0.16	6.22	0.16	5.90	0.16	0.87	0.52	0.41
Dummy customer, f.h. 2017	0.15	0.00	0.15	0.00	0.15	0.00	0.15	0.00	0.84	0.87	0.30

Notes: For t-tests comparisons of A, B, and C, see Appendix to Adena and Huck (2019); see Figure A2 for the exact timing of the variables; Treatment O: no letter; Treatment A: standard letter; Treatment B: letter suggesting repetition of fundraising; Treatment C: letter suggesting repetition of fundraising + opt out option.

Table A2: Results of randomization in year 2, established customers, non-treated in year 1

Treatment N variable	OO		OA		OB		OI		Comparison groups		
	1000 mean	Std. error	1000 mean	Std. error	1000 mean	Std. error	1000 mean	Std. error	OO=OA	OO=OB	OO=OI
	Panel A: pre-experimental variables									t-test p-value	
Customer number	575053.39	9418.96	587831.97	9218.61	582317.86	9181.25	579913.11	9154.35	0.33	0.58	0.71
Number of tickets 2014/15	6.68	0.22	6.80	0.23	6.92	0.23	7.05	0.23	0.70	0.45	0.24
Average price 2014/15	57.34	1.04	57.94	1.05	57.79	1.05	55.93	1.01	0.68	0.76	0.33
Number of tickets, second half of 2016	1.26	0.09	1.20	0.08	1.24	0.08	1.18	0.07	0.62	0.86	0.47
Average price, second half of 2016	12.03	0.66	11.49	0.63	12.18	0.64	11.96	0.63	0.56	0.86	0.95
Dummy customer, second half of 2016	0.33	0.01	0.33	0.01	0.34	0.01	0.34	0.01	0.92	0.74	0.70
female	0.51	0.02	0.45	0.02	0.48	0.02	0.46	0.02	0.01	0.18	0.03
couple	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00	0.18
titled	0.12	0.01	0.13	0.01	0.13	0.01	0.12	0.01	0.59	0.95	0.73
Dresden	0.56	0.02	0.53	0.02	0.51	0.02	0.52	0.02	0.15	0.02	0.07
Distance in km	89.77	4.78	93.39	4.88	97.52	4.93	92.51	4.82	0.60	0.26	0.69
Online customer subscription	0.94	0.01	0.93	0.01	0.94	0.01	0.93	0.01	0.28	0.71	0.36
professor	0.32	0.01	0.30	0.01	0.30	0.01	0.32	0.01	0.44	0.33	1.00
Germany	0.02	0.00	0.02	0.00	0.01	0.00	0.02	0.00	0.49	0.56	1.00
Big city	1.00	0.00	1.00	0.00	0.99	0.00	0.99	0.00	0.10	0.03	0.06
	0.64	0.02	0.62	0.02	0.57	0.02	0.59	0.02	0.31	0.00	0.02
Panel B: post-experimental variables											
Number of tickets, short term	0.49	0.04	0.39	0.04	0.35	0.03	0.43	0.04	0.09	0.01	0.31
Average price, s.t.	25.67	3.03	21.09	2.76	15.52	1.85	19.00	2.21	0.26	0.00	0.08
Dummy customer, s.t.	0.17	0.01	0.15	0.01	0.14	0.01	0.16	0.01	0.22	0.03	0.63
Number of tickets, medium term	2.29	0.15	2.01	0.14	2.06	0.13	2.05	0.11	0.16	0.24	0.19
Average price, m.t.	14.68	0.74	12.77	0.69	13.30	0.68	13.63	0.67	0.06	0.17	0.29
Dummy customer, m.t.	0.38	0.02	0.36	0.02	0.38	0.02	0.38	0.02	0.27	0.78	0.89

Notes: see Figure A2 for the exact timing of the variables; Treatment OO: no letter; Treatment OA: no letter in year 1, standard letter in year 2; Treatment OB: no letter in year 1, letter suggesting repetition of fundraising in year 2; Treatment C: no letter in year 1, letter suggesting repetition of fundraising + opt out option in year 2; Treatment OI: no letter in year 1, info about the project but no donation request in year 2.

Table A3: Results of randomization in year 2, new customers

Treatment N variable	OO		OA		OB		OI		Comparison groups		
	1000		1000		1000		1000		OO=OA	OO=OB	OO=OI
	mean	Std. error	mean	Std. error	mean	Std. error			t-test p-value		
Panel A: pre-experimental variables											
Customer number	836884.47	4492.90	840794.64	4127.06	836132.10	4464.62	835069.38	4274.46	0.52	0.91	0.77
Number of tickets, first half of 2016	6.06	0.16	6.34	0.46	6.05	0.18	6.04	0.16	0.57	0.95	0.91
Average price, first half of 2016	68.08	1.26	69.99	1.25	68.84	1.27	69.29	1.24	0.28	0.67	0.50
Number of tickets, second half of 2016	0.17	0.03	0.18	0.03	0.22	0.04	0.24	0.05	0.81	0.30	0.19
Average price, second half of 2016	2.42	0.38	2.13	0.35	2.50	0.40	2.18	0.35	0.58	0.88	0.65
Dummy customer, second half of 2016	0.06	0.01	0.05	0.01	0.06	0.01	0.05	0.01	0.69	0.77	0.84
Internet customer dummy	0.59	0.02	0.58	0.02	0.58	0.02	0.60	0.02	0.65	0.56	0.86
Panel B: post-experimental variables											
Number of tickets, short term	0.07	0.02	0.06	0.01	0.06	0.02	0.08	0.02	0.64	0.74	0.66
Average price, s.t.	3.68	0.97	3.07	0.75	3.77	1.14	4.54	1.18	0.62	0.95	0.57
Dummy customer, s.t.	0.03	0.01	0.03	0.00	0.02	0.00	0.03	0.01	0.89	0.17	0.78
Number of tickets, medium term	0.41	0.06	0.49	0.06	0.47	0.07	0.52	0.10	0.29	0.46	0.37
Average price, m.t.	3.51	0.46	4.80	0.57	3.62	0.48	3.34	0.44	0.08	0.87	0.79
Dummy customer, m.t.	0.08	0.01	0.09	0.01	0.08	0.01	0.08	0.01	0.17	1.00	1.00

Notes: see Figure A2 for the exact timing of the variables; Treatment OO: no letter; Treatment OA: no letter in year 1, standard letter in year 2; Treatment OB: no letter in year 1, letter suggesting repetition of fundraising in year 2; Treatment C: no letter in year 1, letter suggesting repetition of fundraising + opt out option in year 2; Treatment OI: no letter in year 1, info about the project but no donation request in year 2.

Table A4: Results of randomization in year 2, established customers, non-treated and treated in year 1

Treatment N variable	OO		OA		OB		OI		AA		BCA		BCB		Comparison groups					
	750		750		750		750		3000		3005		2995		OO=OA	OO=OB	OO=OI	OO=AA	OO=BCA	OO=BCB
	mean	Std. error	mean	Std. error	mean	Std. error	mean	Std. error	mean	Std. error	mean	Std. error	mean	Std. error	t-test p-value					
Panel A: pre-experimental variables																				
Customer number	523697.57	11199.84	541086.04	10937.17	531129.60	10856.74	523703.78	10807.67	528150.99	5393.17	535538.81	5417.85	526310.81	5437.21	0.27	0.63	1.00	0.72	0.34	0.83
Number of tickets 2014/15	7.86	0.27	8.07	0.28	8.20	0.30	8.37	0.28	8.13	0.14	7.87	0.13	8.12	0.13	0.58	0.39	0.19	0.38	0.97	0.38
Average price 2014/15	53.53	1.17	54.23	1.20	53.27	1.17	51.64	1.13	54.20	0.61	54.76	0.60	53.84	0.60	0.67	0.88	0.25	0.61	0.35	0.81
Number of tickets, first half of 2016	3.79	0.22	3.72	0.22	3.67	0.20	3.68	0.19	3.74	0.10	3.59	0.10	3.71	0.10	0.84	0.70	0.72	0.85	0.41	0.76
Average price, first half of 2016	20.65	0.95	20.14	0.96	20.25	0.95	19.86	0.94	21.24	0.49	19.99	0.48	20.32	0.46	0.71	0.77	0.56	0.58	0.54	0.76
Dummy customer, , first half of 2016	0.52	0.02	0.52	0.02	0.52	0.02	0.53	0.02	0.54	0.01	0.52	0.01	0.53	0.01	0.88	0.88	0.80	0.30	0.85	0.51
Number of tickets, second half of 2016	1.60	0.12	1.53	0.11	1.57	0.10	1.50	0.09	1.58	0.05	1.49	0.05	1.56	0.05	0.65	0.86	0.48	0.89	0.42	0.75
Average price, second half of 2016	15.11	0.82	13.95	0.75	15.20	0.80	14.51	0.75	14.96	0.39	14.23	0.39	14.71	0.39	0.30	0.93	0.59	0.87	0.33	0.66
Dummy customer, second half of 2016	0.40	0.02	0.41	0.02	0.42	0.02	0.42	0.02	0.42	0.01	0.40	0.01	0.42	0.01	0.96	0.60	0.56	0.53	0.95	0.51
female	0.51	0.02	0.46	0.02	0.50	0.02	0.47	0.02	0.48	0.01	0.48	0.01	0.48	0.01	0.03	0.64	0.09	0.10	0.09	0.08
couple	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	1.00	1.00	0.18	0.82	1.00	0.73
titled	0.16	0.01	0.16	0.01	0.15	0.01	0.15	0.01	0.16	0.01	0.16	0.01	0.15	0.01	0.83	0.72	0.72	0.79	0.86	0.56
Dresden	0.66	0.02	0.63	0.02	0.61	0.02	0.61	0.02	0.62	0.01	0.62	0.01	0.62	0.01	0.22	0.06	0.05	0.04	0.06	0.03
Distance in km	58.23	4.67	66.62	4.98	64.15	4.79	62.88	4.67	68.29	2.53	69.57	2.53	66.22	2.44	0.22	0.38	0.48	0.06	0.03	0.13
Online customer	0.95	0.01	0.93	0.01	0.95	0.01	0.94	0.01	0.94	0.00	0.95	0.00	0.94	0.00	0.09	0.90	0.25	0.31	0.74	0.11
subscription	0.40	0.02	0.38	0.02	0.38	0.02	0.41	0.02	0.39	0.01	0.38	0.01	0.39	0.01	0.43	0.46	0.71	0.62	0.31	0.93

professor	0.02	0.01	0.03	0.01	0.02	0.00	0.02	0.00	0.02	0.00	0.02	0.00	0.02	0.00	0.49	0.56	0.85	1.00	0.91	0.82				
Germany	1.00	0.00	1.00	0.00	0.99	0.00	0.99	0.00	0.99	0.00	0.99	0.00	1.00	0.00	0.08	0.03	0.05	0.00	0.00	0.00				
Big city	0.71	0.02	0.69	0.02	0.65	0.02	0.66	0.02	0.67	0.01	0.68	0.01	0.67	0.01	0.40	0.02	0.04	0.06	0.08	0.03				
	Panel B: post-experimental variables																							
Number of tickets, short term	0.60	0.06	0.51	0.05	0.45	0.04	0.53	0.05	0.53	0.03	0.49	0.02	0.49	0.02	0.20	0.04	0.36	0.26	0.07	0.05				
Average price, s.t. Dummy customer, s.t.	31.69	3.89	27.05	3.60	20.45	2.43	23.67	2.82	24.21	1.43	22.94	1.39	21.79	1.38	0.38	0.01	0.10	0.07	0.03	0.02				
Number of tickets, medium term	0.21	0.01	0.19	0.01	0.18	0.01	0.20	0.01	0.20	0.01	0.19	0.01	0.19	0.01	0.37	0.10	0.70	0.48	0.13	0.27				
Average price, m.t. Dummy customer, m.t.	2.86	0.19	2.55	0.17	2.62	0.16	2.60	0.14	2.69	0.08	2.52	0.09	2.64	0.08	0.22	0.32	0.25	0.39	0.10	0.26				
	17.39	0.87	15.63	0.84	16.48	0.83	16.91	0.81	16.95	0.43	15.91	0.42	17.22	0.43	0.14	0.45	0.68	0.65	0.12	0.86				
	0.45	0.02	0.44	0.02	0.46	0.02	0.48	0.02	0.45	0.01	0.43	0.01	0.46	0.01	0.50	0.80	0.38	1.00	0.27	0.79				

Notes: see Figure A2 for the exact timing of the variables; Treatment OO: no letter; Treatment OA: no letter in year 1, standard letter in year 2; Treatment OB: no letter in year 1, letter suggesting repetition of fundraising in year 2; Treatment C: no letter in year 1, letter suggesting repetition of fundraising + opt out option in year 2; Treatment OI: no letter in year 1, info about the project but no donation request in year 2; Treatment AA: standard letter in both years; Treatment BCA: letter suggesting repetition of fundraising with or without opt out option in year 1, standard letter in year 2; Treatment BCA: letter suggesting repetition of fundraising with or without opt out option in year 1, letter suggesting repetition of fundraising in year 2.

Figure A1: Group overlap between year 1 and 2 experiments

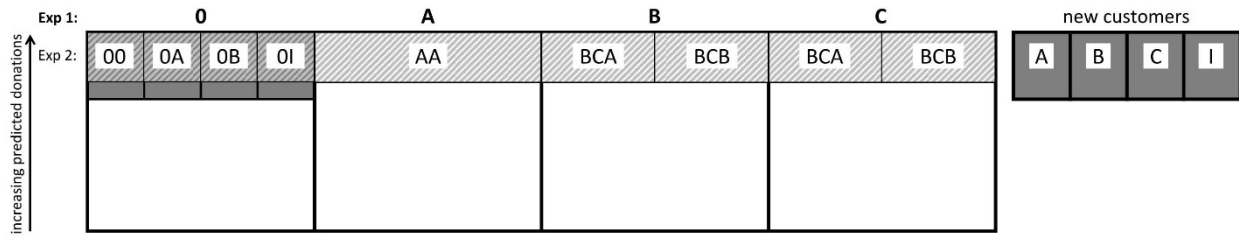
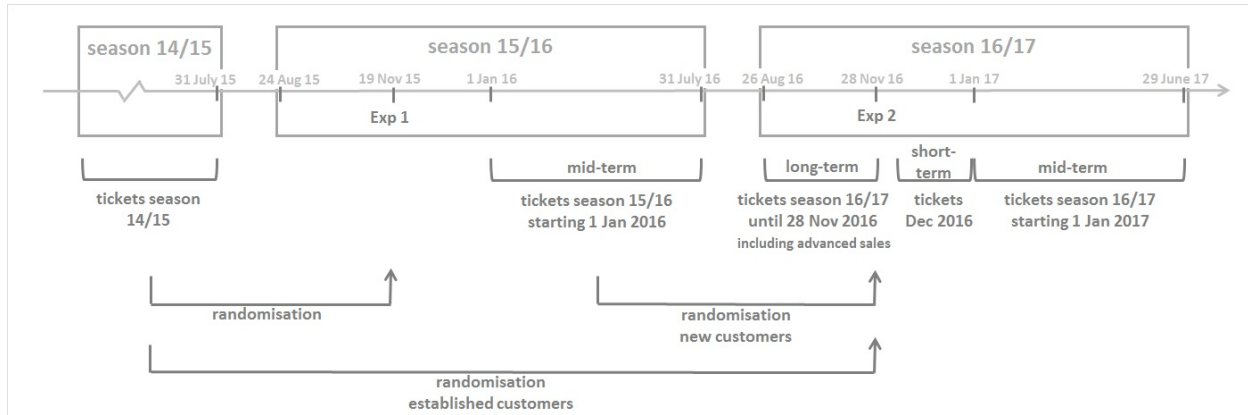


Figure A2: Timeline of the Experiment and information on tickets



Appendix B: Mailing details

Mail-out 2015: original

The additional words in B and C treatments are in square brackets, the additional footnote in C treatment is in curled brackets.

Sehr geehrter Herr ,

Dresden, 18.11.2015

**[Premiere:
Erster] Spendenaufruf**

Semperoper Junge Szene

**Ihre Kundennummer
10123456**

Intendant Staatsoper (kommissarisch) &
Kaufmännischer Geschäftsführer
XXX
T 0351 XXX
F 0351 XXX
XX@saechsische-staatstheater.de

es ist der **Semperoper Jungen Szene** ein großes Anliegen, jungen Menschen mit altersgerechten Angeboten die faszinierende Welt des Musiktheaters und die damit verbundenen Chancen [dauerhaft] zu eröffnen. Insbesondere mit den theaterpädagogischen Veranstaltungen fühlen wir uns den Themen Nachwuchsförderung, Nachhaltigkeit und gesellschaftliche Verantwortung verpflichtet und möchten [langfristig] wichtige Workshops und Projekte mit dem Schwerpunkt Inklusion und Integration anbieten.

Da für derartige Projekte kaum eigene Mittel aus dem Haushaltsetat zur Verfügung stehen, ist die **Semperoper Junge Szene** hierbei [jedes Jahr aufs Neue] überwiegend auf Ihre Spende angewiesen.

Helfen auch Sie mit Ihrer Spende [im Jahr 2015]! Dadurch tragen Sie entscheidend zur Entwicklung von musikalischer Bildung und Begeisterung für Oper und Musik junger Menschen bei, unabhängig von deren sozialem Hintergrund. Darüber hinaus unterstützen Sie die Stärkung sozialer Kompetenzen vieler Kinder aus verschiedenen gesellschaftlichen Milieus und Nationen.

Wir freuen uns, Ihnen mitteilen zu können, dass ein Geber, der anonym bleiben möchte, bereits gewonnen werden konnte. Er unterstützt die Junge Szene [in diesem Jahr] mit 15.000 Euro.

Als Dankeschön verlosen wir unter allen Spendern einen Besuch der Vorstellung »Lohengrin« mit Anna Netrebko im Mai 2016 für zwei Personen in der Intendantenloge.

Herzlichen Dank für Ihre Unterstützung [im Jahr 2015]!

Mit freundlichen Grüßen

XXX
Intendant Staatsoper (kommissarisch)
und Kaufmännischer Geschäftsführer

{P.S. Falls Sie in der Zukunft keine weiteren Spendenanfragen der Semperoper erhalten möchten, teilen Sie uns dies bitte unter Angabe Ihrer Kundennummer mit: XXX@semperoper.de oder 0351 XXX}

Mail-out 2015: translation

The additional words in B and C treatments are in square brackets, the additional footnote in C treatment is in curled brackets.

Dear Sir /Madam,

Dresden, 18.11.2015

[Premiere:

First] call for donations

Semperoper Junge Szene

Your customer number

10123456

Director Staatsoper (temporarily)

and Commercial manager

XXX

T 0351 XXX

F 0351 XXX

XX@saechsische-staatstheater.de

The **Semperoper Junge Szene** attaches great importance to [permanently] opening up the fascinating world of music theatre and the associated opportunities to young people with age-group-specific projects. Especially with our educational theatre events, we feel committed to the topics of youth development, sustainability and societal responsibility and aim at offering important workshops and projects with a focus on inclusion and integration [over the long term].

Due to the lack of resources from our own budget for projects of this kind, the **Semperoper Junge Szene** relies [year by year] heavily on your donations.

Help us by donating [in the year 2015]! In doing so, you will contribute decisively to the future development of musical education and enthusiasm for the opera and music among young people, irrespective of their social background. In addition, you will help many children from different social milieus and nations to strengthen their social skills of.

We are pleased to inform you that we have managed to attract a donor who wishes to remain anonymous for the project. He is supporting the Junge Szene to the tune of 15,000 Euro [this year].

As a thank you for taking part, all donors will be entered into a draw and the winner will get 2 tickets for the show "Lohengrin" with Anna Netrebko in May 2016 for 2 persons in the director's loge.

Many thanks for your support **[in the year 2015]!**

Sincerely

XXX

Director Staatsoper (temporarily)

and Commercial manager

{P.S. In case you do not wish to receive any further donation inquiries for the Semperoper in the future, please inform us, stating your customer number: XXX@semperoper.de or 0351 XXX}

Mail-out 2016: original

The additional words in B treatment are in square brackets.

Sehr geehrter

Dresden, 29.11.2016

**[Wiederaufnahme:
Zweiter] Spendenaufruf**

Ihre Kundennummer

10123456

Intendant Staatsoper (kommissarisch)
&
Kaufmännischer Geschäftsführer
XXXX
T 0351 XXX
F 0351 XXX
XX@saechsische-staatstheater.de

die Semperoper engagiert sich seit vielen Jahren durch Projekte der *Jungen Szene* auch für die Förderung von Kindern und Jugendlichen aus einem gesellschaftlich benachteiligten Umfeld, um ihnen [dauerhaft] die spannende Welt der Oper erlebbar und zugänglich zu machen.

Da wir gesellschaftliche Verantwortung sehr ernst nehmen, wollen wir künftig noch einen Schritt weiter gehen, indem wir Kindern aus diesen benachteiligten Milieus gemeinsam mit ihren Familien [langfristig] den Zugang zu Vorstellungen in der Semperoper ermöglichen wollen.

Da uns für derartige Vorhaben keine eigenen Mittel zur Verfügung stehen, ist die Semperoper hierbei [jedes Jahr aufs Neue] auf Ihre Spende angewiesen.

Helfen auch Sie mit Ihrer Spende [im Jahr 2016]! Ihre Spende leistet einen Beitrag zur Verminderung von sozialer Ungleichheit. Sie ermöglicht den Kindern aus benachteiligten Milieus und ihren Familien den Zugang zu kultureller Bildung. Sie trägt dazu bei, musikalische Neugier und die Begeisterung für Oper, Musik und Tanz zu wecken.

Wir freuen uns, Ihnen mitteilen zu können, dass ein Geber, der anonym bleiben möchte, bereits gewonnen werden konnte. Sein Beitrag in Höhe von EUR 10.000 deckt bereits [in diesem Jahr] die Verwaltungskosten, so dass **jede Spende den Kindern direkt zugutekommen wird.**

Als Dankeschön verlosen wir unter allen Spendern einen Vorstellungsbuch für zwei Personen in meiner Loge sowie 5 DVDs (Carl Maria von Weber »Der Freischütz«, Christian Thielemann, 2015).

Herzlichen Dank für Ihre Unterstützung!

Mit freundlichen Grüßen

XXX

Intendant Staatsoper (kommissarisch)
und Kaufmännischer Geschäftsführer

Mail-out 2016: translation

The additional words in B treatment are in square brackets.

Dear Sir / Madam,

Dresden, 29.11.2016

**[renewal:
second] call for donations**

**Your customer number
10123456**

Director Staatsoper (temporarily) and
Commercial manager
XXXX
T 0351 XXX
F 0351 XXX
XX@saechsische-staatstheater.de

The Semperoper has for many years been committed, through projects of the *Jungen Szene*, to support children and young people from a socially disadvantaged context, to [permanently] enable them to experience and access the exciting world of opera.

As we are taking social responsibility very seriously, we want to go even further by giving children from these disadvantaged milieus together with their families [long-term] access to performances at the Semperoper.

Since we have no funds of our own available for such projects, the Semperoper is dependent on your donation [every year].

Please help with your donation [in 2016]! Your donation contributes to the reduction of social inequality. It allows children from disadvantaged backgrounds and their families access to cultural education. It helps to evoke musical curiosity and the enthusiasm for opera, music and dance.

We are pleased to inform you, that a donor, who wants to remain anonymous, could already be won. His contribution of EUR 10,000 already covers the administrative costs [in this year], so that **every donation will directly benefit the children.**

As a thank you, we raffle an opera visit for two people in my box as well as 5 DVDs among all donors (Carl Maria von Weber "Der Freischütz", Christian Thielemann, 2015).

Thank you for your support!

Sincerely
XXX
Director Staatsoper (temporarily)
and Commercial manager

Mail-out 2016: original, version I and OI

Dresden, 29.11.2016

Sehr geehrter

Infobrief

die Semperoper engagiert sich seit vielen Jahren durch Projekte der *Jungen Szene* auch für die Förderung von Kindern und Jugendlichen aus einem gesellschaftlich benachteiligten Umfeld, um ihnen die spannende Welt der Oper erlebbar und zugänglich zu machen.

**Ihre Kundennummer
10123456**

Intendant Staatsoper (kommissarisch)
&
Kaufmännischer Geschäftsführer
XXXX
T 0351 XXX
F 0351 XXX
XX@saechsische-staatstheater.de

Da wir gesellschaftliche Verantwortung sehr ernst nehmen, gehen wir noch einen Schritt weiter, indem wir Kindern aus diesen benachteiligten Milieus gemeinsam mit ihren Familien den Zugang zu Vorstellungen in der Semperoper ermöglichen.

Dieses Projekt trägt dazu bei, musikalische Neugier und die Begeisterung für Oper und Musik dieser Kinder und deren Familien zu wecken und leistet einen Beitrag zur Verminderung von sozialer Ungleichheit.

Kinder und Jugendliche sind eingeladen, sich in die aufregende Welt des Musiktheaters zu stürzen. Denn die Erfahrung zeigt: Sie tun dies mit Begeisterung. Viele Kinder und Jugendliche nehmen jede Spielzeit am vielseitigen Angebot des Programms der Semperoper Jungen Szene teil, das **gezielt auf die Bedürfnisse junger Menschen eingeht.**

Das Team der Jungen Szene arbeitet dabei eng mit Schulklassen aller Schulformen zusammen. Die große Resonanz zeigt, wie wichtig es ist, die Phantasie und Kreativität junger Menschen zu fördern und ihre Neugier auf die Welt der Oper zu unterstützen.

Mit freundlichen Grüßen

XXX

Intendant Staatsoper (kommissarisch)
und Kaufmännischer Geschäftsführer

Dresden, 29.11.2016

Dear Sir / Madam,

Informational letter

The Semperoper has for many years been committed, through projects of the *Jungen Szene*, to support children and young people from a socially disadvantaged context, to [permanently] enable them to experience and access the exciting world of opera.

**Your customer number
10123456**

Director Staatsoper (temporarily) and
Commercial manager
XXXX
T 0351 XXX
F 0351 XXX
XX@saechsische-staatstheater.de

As we are taking social responsibility very seriously, we want to go even further by giving children from these disadvantaged milieus together with their families access to performances at the Semperoper.

This project helps to evoke musical curiosity and enthusiasm for opera and music in these children and their families, and contributes in lessening social inequality.

Children and teenagers are invited to immerse themselves in the exiting world of musical theatre. Speaking from experience: They do so with great keenness. Many children and teenagers participate every season in the wide range of activities offered by the Semperoper program Junge Szene which **deliberately caters to the needs of young people.**

The team Junge Szene works closely with classes of all school types. The large response shows how important it is to encourage the imagination and creativity of young people, and support their curiosity for the world of the opera.

Sincerely
XXX
Director Staatsoper (temporarily)
and Commercial manager

Flyer 2015 original:

Die Junge Szene der Semperoper Dresden

Das Angebot der **Semperoper Jungen Szene** thematisiert in der aktuellen und der kommenden Spielzeit das Spannungsfeld zwischen Fremdbestimmung und Selbstbehauptung, zwischen Egoismus und sozialer Verantwortung.

Das »Cochlear-Ferienprojekt« für schwerhörige und hörende Kinder und der Integrationsworkshop »Telling Stories - Fremd sein! - Wie gehe ich mit Fremden um?« sind ein wichtiger Bestandteil der **Integrations- und Inklusionsarbeit der Semperoper Jungen Szene**. Mit den theater-, tanz- und gesangspädagogischen Projekten, wie dem »Spielclub für Kinder« und der Neugründung eines »szenischen Jugendchores« sollen die Formate zum Thema kulturelle Bildung und soziale Integration weiter entwickelt werden.

Kinder und Jugendliche sind eingeladen, sich in die aufregende Welt des Musiktheaters zu stürzen. Denn die Erfahrung zeigt: Sie tun dies mit Begeisterung. Viele Kinder und Jugendliche nehmen jede Spielzeit am vielseitigen Angebot des Programms der



Semperoper Jungen Szene teil, das gezielt auf die Bedürfnisse junger Menschen eingeht. Das Team der Jungen Szene arbeitet dabei eng mit Schulklassen aller Schulformen zusammen. Die große Resonanz zeigt, wie wichtig es ist, die Phantasie und Kreativität junger Menschen zu fördern und ihre Neugier auf die Welt der Oper zu unterstützen. Wir sind auf Ihre Mithilfe angewiesen, um dieses Angebot fortsetzen und erweitern zu können.

Helfen auch Sie und ermöglichen Sie weiteren Kindern die Teilnahme an den Projekten der Jungen Szene!

Gewinnen Sie

einen Besuch der Vorstellung »Lohengrin« mit Anna Netrebko im Mai 2016 für 2 Personen in der Intendantenloge.

Ihre Spende

Falls Sie nicht den beigefügten Überweisungsträger verwenden, überweisen Sie Ihre Spende bitte auf folgendes Konto:

Empfänger: Sächsische Staatsoper Dresden
XXX Sparkasse XXX
IBAN: XXX
BIC: XXX
Stichwort: **Spende Semperoper Junge Szene: Ihre Kundennummer**

Spendenquittung

Sie erhalten eine Spendenquittung ab einer Spende von € 50,-. Falls diese an eine andere Adresse als im Briefkopf angegeben gesendet werden soll, wenden Sie sich bitte an das Development-Büro unter Tel. XXX.

Flyer 2015 translation:

The Junge Szene of the Semperoper Dresden

The offer of the Semperoper Junge Szene (Semperoper young scene) focuses, in the current and coming season, on the central theme of tension between heteronomy and self-determination, between selfishness and social responsibility.

The »Cochlear-Ferienprojekt« (Cochlear holiday project) for children with and without hearing impairments and the integrational workshop »Telling Stories - Be Different! - How do I deal with strangers? « are an important part of the integration and inclusion work of the Semperoper Junge Szene. Theater, dance and vocal pedagogic projects, such as the »Spielclub für Kinder« (Children's Play Club) and the founding of a new »scenic youth choir«, will further develop our formats of cultural education and social integration.

Children and young people are invited to plunge into the exciting world of the musical theater. Because experience shows: that they do so with enthusiasm. Every season, many children and adolescents take part in the varied program of the Semperoper Junge Szene, which focuses specifically on the needs of young people. The team of the Junge Szene cooperates closely with school classes of all school forms. The great response shows how important it is to promote the imagination and creativity of young people and to support their curiosity in the world of opera. To continue and expand this offer we require your support.

**Please help and
enable more children to benefit from the
participation in the projects by the Junge Szene!**

You can win

a visit of the performance »Lohengrin« with Anna Netrebko on Mai 2016 Mai for two people in the box of the creative director.

Your donation

Unless you are using the attached transfer form, please transfer your donation to the following account:

Recipient: Sächsische Staatsoper Dresden
XXXX Sparkasse
IBAN: XXXXXX
BIC: XXXX

Purpose: **Spende Semperoper Junge Szene: Ihre Kundennummer**

Donation receipt

You will be send a receipt for every donation larger than € 50,-. In case you need the receipt to be send to a different address than in the letterhead please contact Development-Office at Tel. XXXX

Flyer 2016 original:

The Flyer in the I and OI treatment contains only the text (until the pictures) and the three pictures.

Gesellschaftliche Verantwortung und Nachhaltigkeit

Operninszenierungen eröffnen neue Gedankenräume, machen Unsagbares sicht- und hörbar und laden den Zuschauer jeden Abend ein, einen neuen Kosmos mit allen Sinnen zu erleben. Kinder haben die Gabe in diese Welten ganz unbedarft einzutauchen und mit den Figuren auf der Bühne die Reise durch die Handlung mitzuerleben. Nach und nach lernen sie die Sprache des Theaters, die Sprache der Bilder und der Bewegung kennen. Wer als Kind die Möglichkeit hatte, diese Welten kennenzulernen, behält sein Leben lang die dadurch geweckte Neugier, Kreativität und Kritikfähigkeit.

Leider ist der Zugang zum Musiktheater bis heute abhängig vom sozialen Umfeld der Kinder. Wer nicht das Glück hat, mit der Schule in die Oper zu gehen, dem bleibt häufig die faszinierende Welt des Musiktheaters verwehrt.

Dabei könnte der gemeinsame Vorstellungsbuch der Familie ein Höhepunkt im Familienleben sein und Eltern und Kinder dazu anregen sich über das Erlebte auszutauschen.

Oper sollte unabhängig von sozialer Herkunft und Haushalteinkommen ein Gut für Alle sein, eine Möglichkeit im Kreise der Familie seine Freizeit zu gestalten.

Aus diesem Grund möchten wir insbesondere Kindern und deren Familien aus benachteiligten sozialen Milieus den Zugang zu den Vorstellungen der Semperoper ermöglichen.

Der familienübergreifende Aspekt ist wichtig, um Schwellenängste abzubauen, sozialer Ungerechtigkeit entgegen zu wirken und die Begeisterung für das Musiktheater umfassend und nachhaltig in der Familie zu etablieren.



Helpen auch Sie und ermöglichen Sie

Kindern und ihren Familien den Besuch einer Opern- oder Ballettvorstellung in der Semperoper!

Gewinnen Sie

einen Opernbesuch in der Intendantenloge für 2 Personen oder

eine von 5 DVDs der 2015 in der Semperoper aufgezeichneten Inszenierung von »Der Freischütz« (Musikalische Leitung: Christian Thielemann).

Ihre Spende

Falls Sie nicht den beigefügten Überweisungsträger verwenden, überweisen Sie Ihre Spende bitte auf folgendes Konto:

Empfänger: Sächsische Staatsoper Dresden
XXX Sparkasse XXX
IBAN: XXXX
BIC: XXXX
Stichwort: **Spende Familienförderung + Ihre Kundennummer**

Spendenquittung

Gerne stellen wir Ihnen ab einer Spende von € 200,- eine Spendenquittung aus (bis zu dieser Spendenhöhe ist der Überweisungs- oder Einzahlungsbeleg ausreichend). Falls diese an eine andere Adresse als im Briefkopf angegeben gesendet werden soll, wenden Sie sich bitte an das Development-Büro unter Tel. XXX.

Flyer 2016 translation:

The Flyer in the I and OI treatment contains only the text (until the pictures) and the three pictures.

Social responsibility and sustainability

Opera productions open up new mental spheres, making the unspeakable visible and audible, and invite the audience, every night, to experience a new cosmos with all their senses. Children have the ability to fully immerse themselves in these worlds and experience the story with the characters by partaking in their journeys on stage. Gradually they learn the language of theater, the language of pictures and movement. Those who had the opportunity to get to know these worlds as a child, will for the rest of their life benefit from the curiosity, creativity and critical abilities generated through these experiences.

Unfortunately, even today, the access to musical theater still depends on the social environment of the children. Those not lucky enough to visit the opera with their school, will be denied the fascinating world of musical theater.

Notwithstanding a collective visit of an opera performance with the family could be a highlight in family life and encourage parents and children to exchange their experiences.

Opera should be a good for all, independent of social origin and household income, it should be a possible option when spending recreational time with the family.

For this reason, we particularly want to enable children and their families from disadvantaged social backgrounds to take part in the performances of the Semperoper.

Including the children's families is an important aspect in overcoming inhibitions, relieving social injustice and establishing a lasting enthusiasm for the musical theater in the family.

Please help to facilitate the visit of an opera or ballet performance in the Semperoper for children and their families!

You can win

an opera visit in the box of the artistic director for 2 people or one of 5 DVDs of the in 2015 in the Semperoper recorded production »Der Freischütz« (Artistic director: Christian Thielemann).

Your donation

Unless you are using the attached transfer form, please transfer your donation to the following account:

Recipient: Sächsische Staatsoper Dresden
XXXX Sparkasse

IBAN: XXXX

BIC: XXX

Purpose: **Spende Familienförderung + Ihre Kundennummer**

Donation receipt

We are happy to send you a receipt for every donation larger than € 200,- (For donations smaller than this amount the transfer receipt is usually sufficient.) In case you need the receipt to be send to a different address than in the letterhead please contact Development-Office at Tel. XXXX

Appendix C: subscription holders

Table C1: Effect of fundraising letter on tickets – subscription holders

Outcome	number of tickets		revenue		dummy customer	
Dependent variable	log(number of tickets including zeros+1)		log(ticket value including zeros+1)			
Method	OLS		OLS		Logit, m.e.	
	I	II	III	IV	V	VI
	Panel A: medium-term					
Dummy fundraising letter	-0.010 (0.018)	0.004 (0.013)	-0.025 (0.032)	-0.003 (0.025)	0.002 (0.003)	0.003 (0.003)
Controls		yes		yes		yes
Observations	5098	5098	5098	5098	5098	5096
R^2 / Pseudo R^2	0.000	0.480	0.000	0.383	0.001	0.059
	Panel B: long-term					
Dummy fundraising letter	0.003 (0.020)	0.017 (0.016)	-0.007 (0.052)	0.021 (0.047)	0.005 (0.010)	0.006 (0.010)
Controls		yes		yes		yes
Observations	5098	5098	5098	5098	5098	5096
R^2 / Pseudo R^2	0.000	0.349	0.000	0.191	0.000	0.057

Notes: Robust standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; m.e.: average marginal effects after Logit; Controls include: client number; number of tickets in t-1; average ticket price in t-1, distance in km; dummies for: female, couple, titled, professor, Dresden, big city, Germany, internet customer; and subscription holder in t-1; medium-term: 2-8 months after fundraising; long-term: 10-12 months after fundraising including earlier advance sales, see Figure A2 in Appendix A for details of the timing

Table C2: Effect of treatments on tickets – subscription holders

Outcome	number of tickets		revenue		dummy customer	
Dependent variable	log(number of tickets including zeros+1)		log(ticket value including zeros+1)			
Method	OLS		OLS		Logit, m.e.	
	I	II	III	IV	V	VI
	Panel A: medium-term					
Standard letter	-0.007 (0.022)	0.004 (0.016)	-0.007 (0.038)	0.001 (0.030)	0.005 (0.004)	0.005 (0.004)
Letter repetition	-0.014 (0.022)	0.005 (0.016)	-0.023 (0.039)	-0.001 (0.031)	0.001 (0.004)	0.001 (0.004)
Letter repetition plus unsubscription	-0.010 (0.022)	0.001 (0.016)	-0.045 (0.038)	-0.007 (0.030)	0.002 (0.004)	0.002 (0.004)
Controls		yes		yes		yes
Observations	5098	5098	5098	5098	5098	5096
R^2 / Pseudo R^2	0.000	0.480	0.000	0.383	0.002	0.061
	Panel B: long-term					
Standard letter	0.019 (0.025)	0.028 (0.020)	0.040 (0.064)	0.048 (0.057)	0.007 (0.012)	0.007 (0.012)
Letter repetition	-0.006 (0.025)	0.013 (0.020)	-0.027 (0.064)	0.005 (0.058)	0.001 (0.012)	0.003 (0.012)
Letter repetition plus unsubscription	-0.003 (0.025)	0.010 (0.020)	-0.034 (0.064)	0.011 (0.058)	0.007 (0.012)	0.008 (0.012)
Controls		yes		yes		yes
Observations	5098	5098	5098	5098	5098	5096
R^2 / Pseudo R^2	0.000	0.349	0.000	0.191	0.000	0.058

Notes: Robust standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; m.e.: average marginal effects after Logit; Controls include: client number; number of tickets in t-1; average ticket price in t-1, distance in km; dummies for: female, couple, titled, professor, Dresden, big city, Germany, internet customer; and subscription holder in t-1; medium-term: 2-8 months after fundraising; long-term: 10-12 months after fundraising including earlier advance sales, see Figure A2 in Appendix A for details of the timing

Table C1: Results of randomization in year 1 – subscription holders

Treatment	0		A		B		C		Comparison groups		
N	11,884		11,881		11,885		11,846		0=A	0=B	0=C
variable	mean	Std. error	mean	Std. error	mean	Std. error			t-test	p-value	
Panel A: pre-experimental variables											
Customer number	280794.05	6614.98	288274.43	6496.35	292526.42	6647.98	283049.98	6597.35	0.42	0.21	0.81
Number of tickets 2014/15	10.83	0.25	10.59	0.23	10.45	0.21	10.60	0.22	0.48	0.25	0.49
Average price 2014/15	36.15	0.45	36.38	0.47	36.20	0.48	35.08	0.46	0.72	0.93	0.10
female	0.55	0.01	0.55	0.01	0.55	0.01	0.55	0.01	0.96	0.95	0.97
couple	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
titled	0.17	0.01	0.17	0.01	0.17	0.01	0.17	0.01	0.95	0.99	0.98
Dresden	0.66	0.01	0.66	0.01	0.66	0.01	0.66	0.01	0.99	0.99	0.86
Distance in km	15.48	1.41	13.59	1.28	18.27	1.75	18.61	1.66	0.32	0.22	0.15
Online customer subscription	0.98	0.00	0.98	0.00	0.98	0.00	0.98	0.00	0.79	0.68	0.80
professor	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00			
Germany	0.03	0.00	0.03	0.00	0.03	0.00	0.03	0.00	0.99	0.90	0.98
Big city	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00			
	0.67	0.01	0.67	0.01	0.67	0.01	0.67	0.01	0.92	0.89	0.83
Panel B: post-experimental variables											
Number of tickets, medium term	7.11	0.17	6.97	0.15	6.99	0.17	7.03	0.17	0.56	0.61	0.73
Average price, m.t.	34.51	0.50	34.38	0.49	34.01	0.47	32.97	0.47	0.85	0.47	0.02
Dummy customer, m.t.	0.99	0.00	0.99	0.00	0.99	0.00	0.99	0.00	0.26	0.86	0.60
Number of tickets, long term	3.14	0.09	3.15	0.08	3.06	0.09	3.07	0.09	0.94	0.56	0.59
Average price, l.t.	30.62	0.54	30.80	0.54	29.87	0.53	29.22	0.52	0.81	0.32	0.06
Dummy customer, l.t.	0.88	0.01	0.89	0.01	0.88	0.01	0.89	0.01	0.55	0.96	0.57
Number of tickets, first half 2017	5.11	0.15	5.22	0.13	5.20	0.14	5.16	0.16	0.59	0.64	0.81
Average price, f.h. 2017	30.59	0.52	31.69	0.54	30.52	0.52	30.47	0.53	0.14	0.92	0.87
Dummy customer, f.h. 2017	0.90	0.01	0.91	0.01	0.90	0.01	0.90	0.01	0.47	0.99	0.94

Notes: For t-tests comparisons of A, B, and C, see Appendix to Adena and Huck (2019); see Figure A2 for the exact timing of the variables

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