**ONLINE CAMPUS FUND RAISER SYSTEM**

**ABSTRACT**

Fund-raising efforts at college and universities continue to be a top priority. It is clear that an institution’ s ability to realize their innovative but costly strategic goals is directly dependent on their ability to generate donations from alumni, foundations, friends, parents, and other institutional partners. The reliance on fund-raising dollars is even more pronounced due to the rising public scrutiny of the cost of higher education (Farrell, 2003; Trompley, 2003 ; US Department of Education, 2006) . Over the year’s students use manual ways to raise funds to support their election ambitions, help pay less privileged students school dues, sick friends and many other challenges which they face in the school. To overcome the problems of manual fund raising, the researcher has developed “an Online Campus Fund Raiser System”. The system which will be implemented on the internet and can be accessed on any operating device, either desktop or mobile devices connected to the internet. The system communicates with the database residing on a remote server. This system has been built with HTML, CSS and PHP.

**CHAPTER ONE**

**1.1 INTRODUCTION**

The Internet has opened up a whole new world that nonprofits large and small are using to expand their universe of influence and support. The Internet lets even small or local organizations in every work of life reach out to potential supporters around the world and around the clock. Fundraisers are especially excited about online opportunities for locating new donors and for adding a new communication channel for cultivating existing donors.

Successful online fundraising programs generally have two major components. The foundation is an informative, interactive web site communications program which, together, help build relationships with your website visitors and the people you get to sign up for your email newsletter or online advocacy program. The second component, often overlooked, is a strategy for attracting new people – especially potential donors – to your site, so you can begin the relationship-building process. Online fundraising can’t exist in a vacuum. The success of your online fundraising program will be largely dependent on your organization’s overall Internet presence as well as your traditional offline activities.

How can campuses effectively integrate the Internet into its strategy for fulfilling its mission? With the Internet’s growing importance, influence, and widespread use, nonprofits have new opportunities for communicating with their constituents, getting their work done, and garnering support. The Internet isn’t replacing other media, but it is taking its place alongside them. Most notable is the role that an online donor system is playing in the operational capacity of nonprofit organizations. This system has created a sea change as a tool for communicating with donors and colleagues, alerting activists, and disseminating information. Initially, the Web created a revolution in “brochure-ware,” allowing nonprofits to reach many new supporters and media with simple sites. New services enable even nonprofits with the smallest budgets to sign up members, take credit card donations, sponsor online discussions, offer surveys, put up searchable databases, and much more. As a complement to existing methods, the Internet is a medium that has finally come of age for a nonprofit sector that is hungry for modern and effective campaign tools and techniques.

**1.2     STATEMENT OF PROBLEM**

In most educational institutions fund raising is done manually. It is not only time consuming, but it is also unsecure and unreliable and it can be lead to money laundering among corrupt student officials. Some institutions use manual paper fund raising sheets for funds collection while this will be difficult for record keeping and also to keep track of the large number of students donating towards a particular project, so it is not reliable.

**1.3 OBJECTIVE OF THE STUDY**

The purpose of this research is to develop an online campus fund raising system, for students’ to easily raise funds/ donations towards a particular project and challenges faced in the school campus. The funds collected from students are taken automatically by a payment gateways which will be integrated on the system, each student details and records will be easily recorded automatically without time consuming, which is reliable and without any error.

* Eliminate duplicate data entry and errors in time and entries.
* Eliminate paperwork and save time.
* Reduce money laundering among students officials.
* To increase the charity/ giving among students.

**1.5     SCOPE OF THE STUDY**

The scope of the project is limited to several processes: handling of student fund raising on campus, managing records of successful donations, and record every transaction for easy assessments. It will generate the reports such as funds raised during a particular campaign. The online campus fund raiser system is designed in such a way that makes it possible to access through any device connect to the internet.

**1.6     DEFINITION OF TERMS**

**Internet**- a global computer network providing a variety of information and communication facilities, consisting of interconnected networks using standardized communication protocols.

**Transaction**- an exchange or transfer of goods, services, or funds

**Campus** - A campus is traditionally the land on which a college or university and related institutional buildings are situated

**Online** – Computer or device connected to a network (such as *Internet*) and ready to use (or be used by) other computers or devices.

**Donations**- A donation is a gift for charity, humanitarian aid, or to benefit a cause. A donation may take various forms, including money, alms, services, or goods such as clothing, toys, food, or vehicles.

**Organizations**- an organized group of people with a particular purpose, such as a business or government department.

**Fundraisers**- *Fundraising* or fund raising (also known as "development") is the process of gathering voluntary contributions of money or other resources, by requesting donations from individuals, businesses, charitable foundations

**Nonprofits-** not established for the purpose of making a profit; not entered into for money

**CHAPTER TWO**

**REVIEW OF RELATED LITERATURE**

**2.1 INTRODUCTION TO ONLINE FUNDRAISISNG**

With the rise of the internet, online fundraising has become ever more popular and economically important. Smith, Windmeijer, and Wright (2015) document how online fundraising has become a major source of income for many UK charities. The total revenue of the biggest individual online fundraising website recently crossed the £1 billion mark. According to Meer (2014), Kickstarter.com, a leading US crowd funding website, crossed the $1 billion threshold in March 2014.Germany’s biggest platform, Betterplace.org, collected a total of €1.17 million in revenues for charitable organizations over an eleven month period in 2012/13 (Altmann et al. 2014).

There is a growing number of online experiments and field studies that (i) either consider donation platforms (Altmann et al. 2014; Meer 2014), (ii) environments in which the fundraiser actively asks for donations (Chen, Li, and MacKie-Mason 2006; Exley and Petrie 2016) or (iii) other forms including peer-to-peer solicitations (Bøg et al. 2012; Castillo, Petrie, and Wardell 2015; Elfenbein, Fisman, and McManus 2012). Our study is closest to the second type – it is a situation in which individuals come to the website to buy opera tickets and are not expecting to be asked for donations, since the opera house has never used online fundraising before. This type of add-on fundraising has not been yet studied extensively, although it may have important implications for the main business.

**2.1.1 Image motives in charitable giving.**

Ariely et al. (2009) distinguish between three broad categories of motives for charitable giving: intrinsic, extrinsic and image motivation. The third of these includes “the desire to be liked and respected by others and by one-self.” The authors show that individuals donate more when they can publicly signal their pro-sociality. Allowing for public signals of pro-sociality has also been confirmed by other authors to be effective in increasing charitable giving (see the literature cited in Glazer and Konrad (1996) who offer a theoretical model of signaling as an explanation for giving). The psychology literature has recognized *self-signaling* as an important behavioral force, see e.g. Bodner and Prelec (2003) and a number of laboratory experiments have sought to understand its relevance. In Dana, Weber, and Kuang (2007) individuals behave less pro-socially in the laboratory if they can make their actions less transparent to both others and themselves. In a lab experiment by Tonin and Vlassopoulos (2013) individuals choose their donation and their choice is implemented with some probability. At the final stage they can withdraw their donation choice. The authors explain numerous observed revisions through satiation in self-signaling at the earlier stage and higher monetary cost at the end. By varying the probability of the implementation and the observability of a chosen allocation, Grossman (2015) aims at disentangling self- and social signaling. He finds little evidence for self-signaling and stronger evidence for social signaling. In contrast, Grossman and van der Weele (2017) are able to identify the role of self-signaling in a laboratory study. Mazar, Amir, and Ariely (2008) suggest that individuals behave dishonestly when it pays but are willing to incur significant costs to maintain their self-image. Bénabou and Tirole (2006) propose a model which combines the different motives in prosocial behavior including self and social signaling and point out the complex interplay of both. In our context, individuals appear to deceive themselves by overlooking the donation request when possible but donate non-negligible amounts if as non-donors they are forced *to admit to themselves* that they are indeed non-donors.

**2.1.2 Social pressure, ask avoidance, and unintended consequences of fundraising.**

While allowing for signaling of one’s pro-sociality, a public ask creates social pressure when individuals do not want to appear greedy or have difficulties in turning down the fundraiser. This creates costs for the individuals who may, in response, take measures to avoid the ask. This has been documented in DellaVigna, List, and Malmendier (2012) and Andreoni, Rao, and Trachtman (2017). These studies have in common that there is some direct social interaction between fundraiser and donor or between different donors – rendering social signaling and social pressure possible. In an online fundraising campaign (without direct social interaction), Exley and Petrie (2016) vary whether an upcoming ask is expected or not. The additional time to deliberate leads to a 22% lower rate at which the individuals agree to be forwarded to the donation pages. This difference is strongly reduced if subjects receive additional information about projects which they cannot avoid. Exley and Petrie conclude that individuals are searching for excuses not to donate if given the opportunity to do so. Damgaard and Gravert (2016) document that reminders in fundraising – while increasing donations in the short term – also substantially increase unsubscriptions from the mailing list. The authors show the hidden costs of reminders: annoyance costs for the solicited and long-term effects on donations for the charity. Knutsson, Martinsson, and Wollbrant (2013) find that the introduction of a donation button at recycling machines in a chain store in Sweden led to a reduction in the recycling amount at those machines. The authors conjecture that customers shifted locations for their recycling since the overall material recovered had not decreased over the analyzed period.

**2.2.3 Defaults and donation grids.**

It is popular in fundraising to suggest amounts that can be donated. Suggestions offer guidance in choosing contributions and transmit information about how much is needed. In practice, suggestions can be implemented in different ways – they can be more or less binding and there is either one suggestion (usually a default which may be changed) or a menu to choose from (donation grids). There are a number of studies concerned with donation grids or defaults and the conclusions are mixed. For an extensive literature review and a discussion, see Adena, Huck, and Rasul (2014) who study the effect of nonbinding suggestions in a field experiment. They find that suggestions of €100 and €200 increase the average positive donation significantly as compared to a treatment without suggestions. The overall revenue effect is, however, non-significant due to reductions in the response rates. Altmann et al. (2014) study defaults and conclude that although they do change the distribution of donations, they do not have an effect on aggregate donations. This is because the defaults exert pulling effects, both increasing and decreasing donations. However, in a secondary choice dimension, a contribution to support the running costs of the online platform, donations do increase with defaults. Finally, Reiley and Samek (2015) find that increasing donation grids by 20% leads to a decrease in response rate by 15–16% and a similar average positive donation. Approximately doubling the donation grids leads to a drop in response rate by 16% and 11% lower average donation, yielding an overall decrease in return of 24%.

**2.2 A model sketch**

We can capture the role of self-deception in our online environment with a model in the spirit of Bodner and Prelec (2003) and Bénabou and Tirole (2006) where decision making has two elements: a choice component based on true consumption preferences and a judgement module that also cares for diagnostic or ego utility. See also Dubé, Luo, and Fang (2016) for a similar approach in a similar context – cause marketing where the sale of an object is bundled with a charitable donation. Specifically, we consider the case where decision makers have some uncertainty about their own type, here their prosocial attitude, and derive ego utility that is increasing in their belief that they are a “good” type, that is, a type who cares about others.

Let us sketch the simplest version of such a model. We assume that there are just two types, an egoist and an (imperfect) altruist. The decision maker’s consumption utility is 𝑢(𝑥) + 𝑣(𝑐) where 𝑥 denotes private consumption and c the donation to a charitable good, with 𝑢’ > 0,

𝑢’’ < 0 for both types, 𝑣’ > 0, 𝑣’’ < 0 for the altruistic type and 𝑣’ = 0 for the egoistic type.

Consumption utility is driving choices. Total utility is modelled as:

𝑈(𝑥, 𝑐, 𝛽) = 𝑢(𝑥) + 𝑣(𝑐) + 𝐸(𝛽)

where 𝐸(𝛽) is the ego utility derived from attaching a probability of 𝛽 ∈ [0,1] to being the altruistic type. In such a setup the decision maker can strategically manipulate his decision in order to protect his ego utility.

Let *I* denote the decision maker’s disposable income. Then in the absence of ego utility or, to be more precise, for constant ego utility (that is, for 𝐸’ = 0) the decision maker will make a donation if and only if 𝑢’(𝐼) < 𝑣’(0). For the egoistic type this is, of course, never the case but let us suppose that at income level 𝐼, the condition holds for the altruist such that he would make a donation of 𝑐∗ in the absence of ego utility.

Once 𝐸’ > 0, things become more interesting as the decision maker is now engaged in a selfsignaling game. Let the decision maker’s prior in this game be denoted by 𝛽̂ and let us assume that the decision maker, once he expresses his decision not to donate cannot fool himself into believing that he did. For off-equilibrium beliefs that satisfy the intuitive criterion there are two equilibrium candidates for this game: (A) a pooling equilibrium where both types donate 𝑐∗ and (B) a separating equilibrium where the altruist donates and the egoist does not. Pooling with both types not donating would not satisfy the intuitive criterion as the altruist could deviate to making a donation, increasing both, his consumption and ego utility. For our purposes the interesting equilibrium candidate is (A) where both types donate. This equilibrium exists if 𝑢(𝐼 − 𝑐∗) +

𝐸(𝛽̂) > 𝑢(𝐼) + 𝐸(0), that is, if the egoist’s self-revelation to be the egoist weighs heavily enough on him to make a *strategic* donation. The same condition rules out equilibrium type (B).

Things change once we introduce the option for decision makers to forget a past choice or trick themselves into believing there was no choice to be made. This is exactly what a direct click on the “proceed” button – without ticking one of the two boxes explaining the choice – may achieve. In this case the egoist has the possibility to preserve his prior by clicking on the “proceed” button conveniently “overlooking” the fundraising call. In this case, the two types will separate but learning will be incomplete: while the altruist learns his type by making donation 𝑐∗ and achieving total utility 𝑢(𝐼 − 𝑐∗) + 𝑣(𝑐∗) + 𝐸(1), the egoist successfully fools himself thinking that he did not make a decision achieving total utility of 𝑢(𝐼) + 𝐸(𝛽̂). In other words, the egoist preserves his self-image by engaging in self-deception.

**2.3** **Description of the quasi-experiment**

An opera house in Germany introduced an online fundraising tool for a period of approximately three months. When individuals sought to buy tickets, they first logged in/registered, selected tickets, and then decided to proceed with the payment. At this point they were asked to support a charitable project aimed to introduce school children from socially disadvantaged areas to classical music and opera. Customers could contribute to a fund that pays for children who would otherwise have no access to opera. When deciding on the amount they wanted to donate they could choose a number of “tickets” in different price categories. This had mainly technical reasons as the ticketing tool employed by the opera house can only accept payments for tickets. Hence, the charitable project had to feature as a “performance” in the ticketing system for which donors could buy arbitrarily many tickets in different “price categories,” the sum of which generated their total donation. This is similar to introducing a number of possible defaults through a donation grid (see, for example, Reiley and Samek 2015) with the small difference that our donors could choose “multiple tickets” in one or multiple price categories at the same time.

There were two subsequent changes in the design of the online fundraising tool. The first change occurred after 28 days and involved roughly a doubling of the donation categories from €10, €20, €50, and €100 to €20, €50, €100, and €200 Euros respectively. The second change occurred after a further 33 days of operation and an additional 11 days of suspension.[[1]](#footnote-0) The higher grid remained in place but now the buyers were forced to tick either the “I have donated already” or the “No, thank you” box if they decided to proceed to the payment stage without making a donation. These two checking boxes had also been available in the previous treatments, but one could click the button “proceed” without checking them. Figures A1 and A2 in Appendix A show the exact implementation. The last period continued for 20 days and the online fundraising campaign was completely suspended afterwards. We do not expect giving behavior to be affected by any major holiday. Indeed, the Easter holiday fell into the suspension period between treatment 2 and treatment 3, and if at all, we would have expected it to affect the donations at the end of treatment 2 positively, which was not the case.

Also, the online fundraising campaign did not coincide with the end of the fiscal year.[[2]](#footnote-1) In what follows we shall refer to the three treatments as T1, T2, and T3. The choice of the grids for the current study was based on evidence from a fundraising campaign with a similar sample of operagoers – a field experiment documented in Adena, Huck, and Rasul (2014) which studied the effect of nonbinding suggestions.[[3]](#footnote-2)

The final sample consists of 8,442 customers that arrived at the platform in the period under study. We excluded *frequent* buyers (1,136) who arrived in at least two different treatments in order to avoid spillover effects (Appendix A4 offers some additional analysis including frequent buyers). Although there was no random assignment into treatments, the decision when to buy tickets does not depend on treatments directly. However, different compositions of customers and pools of tickets over time potentially pose a challenge for the identification of the effects of interest. Appendix A2 offers some descriptive statistic at the level of treatments and day by day. It also describes the composition of the available tickets and buyers at the platform, the numbers and the types of tickets bought and the prices in detail. Importantly, given a day by day release of new tickets, the available ticket pool remains approximately constant over time.[[4]](#footnote-3) There are some differences between treatments in terms of total spent on tickets and the number of tickets bought, however, they do not seem to favor one treatment over another (see Table A1). In our empirical strategy, we make sure that any potential differences between treatments other than our experimental variation do not affect our results. First, we control for an extensive set of observables including the following variable categories: flexible ticket controls at time of purchase, past season controls, performance controls, time controls, and demographics. Second, when adding the above variable categories separately, the magnitude of coefficients of interest remains stable, which suggests that, under any correlation between observables and unobservables, unobservables are not driving our results. Third, we show that the magnitude of the coefficients of interest does not depend on the specific timing. We present results using much shorter periods around the change in treatment. Since the timing of the change in treatments was unknown to customers, those who arrived shortly before or shortly after the change landed in a particular treatment quasi randomly. Finally, we show that specific types of customers are not driving our results.

**2.3.1 Individual-level results**

In Tables 1 and 2 we regress giving behavior on our treatments at the individual level. In Table 1 the results are presented in terms of the response rates (logit specification with a donation dummy as a dependent variable) and in Table 2 in terms of the return to fundraising (OLS regression with donation value including zeros as a dependent variable).[[5]](#footnote-4) The base treatment is T2, since we are primarily interested in comparisons between T1–T2 and T2–T3. Different columns present results after inclusion of different sets of controls, and Column V shows the results after the inclusion of all controls. Gender dummies for female and other (for couples and other) are included in all specifications. The OLS specification also includes corporate dummy.[[6]](#footnote-5) Ticket controls at *t* reflect current prices and individual demand. They include: individual average value of tickets, individual average value of tickets squared, individual average value of tickets cubed, individual number of tickets, daily average value of tickets. Past season controls that we found to be relevant for the time of arrival at the platform include: dummy customer in previous season, number of tickets in previous season, individual average value of tickets in previous season, and dummies for means through which tickets had been ordered in previous season dummy (box office, mail, phone). Performance controls reflect individual tastes and include: separate performance dummies for five performances with the largest number of tickets in the sample (A Midsummer Night’s Dream, Rigoletto, The Yellow Sound, Salome, Boris Godunow), performance type dummies (opera north,[[7]](#footnote-6) other opera, ballet, other, the excluded category is concert), and a festival ticket dummy. Note that a number of the performances (including those listed above) were played repeatedly, and the period in which the tickets were sold spanned different treatments. By including performance dummies, we can compare the reactions to different treatments by people who decided to attend the same performance.[[8]](#footnote-7) Finally, time controls relate to the timing of arrival at the platform and include: time to performance, time to performance x festival ticket dummy, day of week dummies. The coefficients on T1 and T3 remain relatively stable independent of the set of controls included and strongly suggest that the effects found can indeed be attributed to the treatment variations.

Compared to T2, the response rate is significantly higher in T1 with an additional 0.7 percentage point and it is significantly higher in T3 by 1 percentage point.[[9]](#footnote-8) The same holds for the return per buyer, which is significantly higher in T1 by around 11 cents and in T3 by around 46 cents.

*Table 1: Response to fundraising*

Dependent variable: donation dummy

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Specification |  |  | Logit m.e. |  |  |
|  | I | II | III | IV | V |
| T1:lower grids | 0.007\*\*\* (2.81) | 0.007\*\*\* (2.78) | 0.007\*\*\* (2.60) | 0.007\*\*\* (2.99) | 0.007\*\*\* (2.68) |
| T3: statement required | 0.010\*\*\* (3.24) | 0.010\*\*\* (3.64) | 0.011\*\*\* (3.48) | 0.009\*\*\* (3.65) | 0.010\*\*\* (2.86) |
| Ticket controls at t | yes |  |  |  | yes |
| Past season controls |  | yes |  |  | yes |
| Performance controls |  |  | yes |  | yes |
| Time controls |  |  |  | yes | yes |
| Demographics | yes | yes | yes | yes | yes |
| Observations Pseudo *R*2 | 9028  0.039 | 9028  0.043 | 9028  0.044 | 9028  0.042 | 9028  0.072 |
| Wald Test T1≥T3, p-value | 0.094 | 0.065 | 0.035 | 0.110 | 0.119 |

Notes: non-frequent buyers; unit of observation: buyer per day; errors clustered at the day level; z-statistics in parentheses; \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01; m.e.: marginal effects; Ticket controls at t include: individual average value of tickets, individual average value of tickets squared, individual average value of tickets cubed, individual number of tickets, daily average value of tickets; Past season controls include: dummy customer in previous season, number of tickets in previous season, individual average value of tickets in previous season, box office in previous season dummy, letter in previous season dummy, phone in previous season dummy; Performance controls include: separate performance dummies for five performances with the largest number of tickets in the sample (A Midsummer Night’s Dream, Rigoletto, The Yellow Sound, Salome, Boris Godunow), performance type dummies (opera nord, other opera, ballet, other, excluded category is concert), festival ticket dummy; Time controls include: time to performance, time to performance x festival ticket dummy, day of week dummies; Demographics include female and other dummy.

The experiment is not designed to directly compare T1 with T3 since it includes a twofold change. Still, it is interesting to see whether the loss from the higher grid was reversed by the change in the navigation. A Wald test rejects the null T1≥T3 at p<0.10 in all response specifications and at p<0.05 in all return specifications (except Tobit, see bottom of Table 1 and Table 2). This suggests that the loss from the introduction of higher grids was more than compensated by the change in website navigation.

*Table 2: Return from fundraising*

Dependent variable: donation value including zeros

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Specification: |  |  | OLS |  |  | Tobit m.e. y\* |
|  | I | II | III | IV | V | VI |
| T1:lower grids | 0.121\*\* (2.24) | 0.125\*\* (2.32) | 0.091  (1.47) | 0.136\*\*\* (2.74) | 0.110\*\* (2.04) | 0.249\*\*\* (2.92) |
| T3: statement required | 0.489\*\*\* (2.87) | 0.489\*\*\* (3.18) | 0.481\*\*\* (2.87) | 0.453\*\*\* (3.10) | 0.457\*\* (2.44) | 0.373\*\*\* (3.16) |
| Ticket controls at t | yes |  |  |  | yes | yes |
| Past season controls |  | yes |  |  | yes | yes |
| Performance type controls |  |  | yes |  | yes | yes |
| Time controls |  |  |  | yes | yes | yes |
| Demographics | yes | yes | yes | yes | yes | yes |
| Observations *R*2 /Pseudo *R*2 | 9028  0.004 | 9028  0.003 | 9028  0.005 | 9028  0.003 | 9028  0.007 | 9028  0.042 |
| Wald Test T1≥T3, p-value | 0.0204 | 0.0129 | 0.0226 | 0.0174 | 0.0417 | 0.2024 |

Notes: see notes to Table 1; t- and z-statistics in parentheses, Marginal effects after Tobit with lower limit set to zero in Column VI; demographics include female, corporate, and other dummy in OLS specifications.

We also show that the results do not depend on the specific timing. In order to address the additional worry about potential time trends influencing our results, we present results using much shorter periods around the change in treatment. Since the timing of the change in treatments was unknown to customers, those who arrived shortly before or shortly after the change landed in a particular treatment quasi randomly. Therefore, we repeat our analysis by looking only at individuals who arrived shortly before or after the change. Starting with 4 days before and after, we extend the sample day by day and present the coefficients on treatment dummies with confidence intervals for the donation probability and average return in Figure 1.

Figure 1: Regression coefficients from a series of regressions spanning an increasing number of days around the change in treatments

|  |  |  |
| --- | --- | --- |
|  | Response to fundraising | Return |
| Dependent variable: | donation dummy | donation value including zeros |
| Specificatio n: | Logit m.e. | OLS |
| T1: lower grids |  |  |
| T3: forced statement |  |  |

Notes: all regressions are at the individual level and include the full set of controls (exceptions: festival tickets and their interaction with time is dropped in both upper graphs since festival tickets started to be available only at the end of T2, some other are dropped in small samples), see notes to Table 1 and Table 2. Right y axis shows the number of observations used in the estimation. Days (+/-) is the number of days around the change from T1 to T2 in the upper graphs and from T2 to T3 in the lower graphs. The upper left graph starts at +/- 6 days since the smaller sample does not converge.

We see that both coefficients (for T1 and T3) are (almost) independent of the time span analyzed. Similar magnitudes to those obtained for the full sample are already estimated with a very small sample and time span. We also offer a placebo exercise showing that there is no similar effect of a fictitious treatment dummy (Figure A5 in the Appendix A). Specifically, we take the respective T1, T2, and T3 periods separately and create a set of fictitious treatment dummies for the first 3, 4, 5, up to (n-3) days. Figure A5 in the Appendix shows the regression results analogue to the above. We see that almost all estimated coefficients (126 out of 128) are not statistically significant, and most are very close to zero. Only the coefficients for the return at the end of the T2 period and during the T3 period are somewhat larger and closer to being significant. This, however, points toward an opposite time trend (if any), that should have made finding the real T3 effect rather more difficult. Overall, we conclude that the effects that we find cannot be accounted for by any time specific trends other than implied by our treatments.

Table 3: Heterogeneity and exclusion of festival ticket buyers

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Probit m.e.: donation dummy | | | OLS: return (donation value including zeros) | | |
|  | I | II | III | IV | V | VI |
| T1:lower grids  T3: statement required | 0.007\*  (1.84)  0.011\*\*  (2.41) | 0.008\*\*\* (2.88)  0.013\*\*\*  (3.32) | 0.008\*\*\* (2.92)  0.013\*\*\*  (3.32) | 0.024  (0.41)  0.478\*  (1.88) | 0.134\*\*  (2.49)  0.574\*\*\*  (2.82) | 0.144\*\*\* (2.68)  0.592\*\*\*  (2.85) |
| T1 x past customer | -0.005  (-0.69) |  |  | 0.121  (0.55) |  |  |
| T3 x past customer  T1 x average ticket value in past season above median | -0.005  (-0.74)  0.009\*  (1.78) |  |  | -0.095  (-0.21)  0.311  (0.92) |  |  |
| T3 x average ticket value in past season above median  T3 x festival ticket  dummy | 0.005  (0.86) | -0.024\*\*  (-2.50) |  | 0.021  (0.05) | -1.098\*\*\*  (-4.08) |  |
| Ticket controls at t | yes | yes | yes | yes | yes | yes |
| Past season controls | yes | yes | yes | yes | yes | yes |
| Performance type controls | yes | yes | yes | yes | yes | yes |
| Time controls | yes | yes | yes | yes | yes | yes |
| Demographics | yes | yes | yes | yes | yes | yes |
| Observations Pseudo *R*2 */R*2 | 9028  0.076 | 9028  0.078 | 8317  0.083 | 9028  0.007 | 9028  0.007 | 8317  0.008 |

See notes to Table 1 and Table 2. In addition to respective columns V in Table 1 and 2, column I and IV of this table adds interaction terms between T1(T3) and past customer dummy. Column II and V adds an interaction terms between T3 and festival ticket dummy (at least one festival ticket). Columns III and VI exclude customers who bought at least one festival ticket.

Given differences in the timing of arrival (more specifically, days between the booking and performance) of past versus new customers presented in Appendix A2.3 and the specific timing for summer festival ticket buyers, we now analyze whether those groups are potentially driving our results. In Table 3, we add interaction terms between treatment dummies and the past customer dummy as well as between treatment dummies and the individual average ticket price in the previous season to our main specification (Column II and V). We find no interaction effects. Importantly, the coefficients on T3 for the probability of giving and the return, and the coefficient on T1 for the probability of giving remain almost unchanged from their previous values (only the T1 coefficient for the return declines and loses significance). This leads us to the conclusion that the treatments work in a similar way for both past customers and new customers, and independently of the amount spent on tickets in the last year. Beyond that, we also test whether there are any interaction effects of festival ticket buyers with the T3 dummy (no festival tickets were sold in T1, therefore no interaction with T1, see Columns I and IV). We find that festival ticket buyers respond less to T3. However, the main coefficient on T3 remains significant and even increases in magnitude.

Finally, in order to make sure that our analysis is not biased by customers who arrive to buy festival tickets towards the end of the online campaign, in Columns III and VI of Table 3, we repeat our main analysis on a sample that excludes customers buying festival tickets. We replicate the main results from Table 1 and 2, with slightly larger coefficients.

**2.4 Long-term impact of fundraising on ticket-related behavior**

We now analyze long-term effects of online fundraising by looking at ticket-related behavior in the following opera season that started 4 months and ended 15 months after the campaign. We use the same sample of non-frequent customers (8442 individuals) that was used in the previous analysis. The base treatment is, again, T2. Specifically, we are interested in the effect of T3 relative to T2, that is, the effect of exerting more pressure on customers on ask avoidance. This is similar to the endeavours in Andreoni, Rao, and Trachtman (2017) and DellaVigna, List, and Malmendier (2012). However, in contrast to the immediate effects measured in these studies, we are interested in long-term persistence of ask avoidance.

We run a set of regressions analogous to the previous section but now with next-season outcomes, specifically, the number of tickets purchased online (Table 4), online ticket revenue (Table 5), the total number of tickets purchased (also through the box office, mail, telephone, Table 6), and the total revenue (Table 7). The specifications include exactly the same set of controls as previously, and errors are, equally, clustered on day level.[[10]](#footnote-9)

The results suggest that the more intensive fundraising in treatment T3 relative to the base treatment T2 has adverse long-term effects on online tickets and online revenue (Tables 4 and 5). Customers who were forced to admit being a non-donor during an online fundraising buy significantly fewer tickets online in the next season. The online return from those customers is lower as well.[[11]](#footnote-10) However, when accounting for all means through which tickets can be purchased the results turn non-significant in specifications with the full set of controls (Tables 6 and 7, Columns VI). This suggests substitution between different means to buy tickets. Customers avoid the online ask by purchasing tickets on the phone or at the box office.

Our results are similar to “avoiding the ask” in DellaVigna, List, and Malmendier (2012) and Andreoni, Rao, and Trachtman (2017). However, the novelty of our findings is, that the ask avoidance at the ticketing platform persists over the long-term. This should have important consequences for firms and organizations for which fundraising is not the primary task like the opera house. Such firms and organizations need to understand how fundraising activities interact with other operational aspects and how they affect other sources of revenue. Of course, adverse short- and long-term effects of ask avoidance might be reduced through potential long-term positive effects stemming from those individuals who do choose to donate. It appears psychologically plausible that those who decided to make a donation and who, as a selfjustification of their donation, may increase their valuation of a (lavish) night at the opera. We cannot asses this directly since we do not know the identity of the would-be-donors who have just not been asked. However, the coefficients on donor dummies included in Tables 4–7, Columns II-VI suggest that donors (relative to treated non-donors and non-treated) are more loyal customers, buy more tickets, and spend more money in the next season.

Additionally, established and new customers might react to more invasive changes to the interface differently as pointed out by one of the referees. Indeed, we find that the negative effects are mostly driven by customers that purchased tickets in the previous season already (results not presented).

Finally, the substitution between the tickets bought online and through other channels relates to Lacetera, Macis, and Slonim (2012). They observed that blood donors in the US left neighboring drives without incentives to attend blood drives with incentives. Our results suggest that, when studying fundraising and other interventions, we need to take a broad perspective. Partial equilibrium and short-term results might be misleading. Our evidence is the first to point to longterm effects of fundraising campaigns.

Table 4: Long-term effects on tickets online

Dependent variable: number of tickets online in the next season (including zeros) Specification: OLS

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | I | II | III | IV | V | VI |
| T1: lower grids | -0.305  (-1.11) | -0.288  (-1.40) | -0.229  (-1.39) | -0.093  (-0.48) | -0.358  (-1.51) | -0.222  (-1.49) |
| T3: statement required | -0.622\*\* (-2.19) | -1.095\*\*\* (-3.65) | -0.369\* (-1.93) | -0.733\*\*\* (-3.21) | -0.646\*\* (-2.56) | -0.430\*\* (-2.22) |
| Donor dummy |  | 1.392  (1.58) | 0.940  (1.49) | 1.402  (1.62) | 1.496\* (1.70) | 1.029\* (1.71) |
| Ticket controls at t |  | yes |  |  |  | yes |
| Past season controls |  |  | yes |  |  | yes |
| Performance type controls |  |  |  | yes |  | yes |
| Time controls |  |  |  |  | yes | yes |
| Demographics |  | yes | yes | yes | yes | yes |
| Observations R2 | 8442  0.003 | 8442  0.063 | 8442  0.275 | 8442  0.043 | 8442  0.047 | 8442  0.309 |

Notes: see notes to Table 1; t-statistics; demographics include female, corporate, and other dummy.

Table 5: Long-term effects on revenue online

Dependent variable: online ticket revenue in the next season (ticket value including zeros) Specification: OLS

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | I | II | III | IV | V | VI |
| T1: lower grids | -26.173\* (-1.68) | -24.538\*\* (-2.24) | -19.837\*\* (-2.07) | -15.609 (-1.62) | -23.148\*\* (-2.41) | -19.911\*\*\* (-2.72) |
| T3: statement required | -22.972 (-1.43) | -52.594\*\*\* (-2.94) | -16.782 (-1.54) | -34.960\*\*\* (-2.66) | -28.290\*\* (-2.40) | -16.861\* (-1.73) |
| Donor dummy |  | 63.555\* (1.96) | 43.125 (1.60) | 63.179\* (1.97) | 66.347\*\* (2.04) | 46.780\* (1.80) |
| Ticket controls at t |  | yes |  |  |  | yes |
| Past season controls |  |  | yes |  |  | yes |
| Performance type controls |  |  |  | yes |  | yes |
| Time controls |  |  |  |  | yes | yes |
| Demographics |  | yes | yes | yes | yes | yes |
| Observations *R*2 | 8442  0.002 | 8442  0.049 | 8442  0.196 | 8442  0.034 | 8442  0.032 | 8442  0.219 |

Notes: see notes to Table 1; t-statistics; demographics include female, corporate, and other dummy.

Table 6: Long-term effects on all tickets

Dependent variable: number of tickets (all means including online, box office, mail, and phone) in the next season (ticket value including zeros)

Specification: OLS

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | I | II | III | IV | V | VI |
| T1: lower grids | -0.432  (-0.90) | -0.406  (-1.13) | -0.230  (-1.14) | -0.083  (-0.26) | -0.518  (-1.37) | -0.183  (-1.07) |
| T3: statement required | -0.834\* (-1.75) | -1.673\*\*\* (-3.15) | -0.217  (-0.91) | -1.061\*\*\* (-2.66) | -0.899\*\* (-2.16) | -0.267  (-1.13) |
| Donor dummy |  | 1.584  (1.48) | 0.721  (1.57) | 1.619  (1.56) | 1.746\* (1.67) | 0.832\* (1.86) |
| Ticket controls at t |  | yes |  |  |  | yes |
| Past season controls |  |  | yes |  |  | yes |
| Performance type controls |  |  |  | yes |  | yes |
| Time controls |  |  |  |  | yes | yes |
| Demographics |  | yes | yes | yes | yes | yes |
| Observations *R*2 | 8442  0.002 | 8442  0.048 | 8442  0.556 | 8442  0.034 | 8442  0.043 | 8442  0.567 |
| Notes: see notes to Table 1; t-statistics; demographics include female, corporate, and other dummy.                Table 7: Long-term effects on whole ticket revenue  Dependent variable: ticket revenue (all means including online, box office, mail, and phone) in the next season ( including zeros) Specification: OLS | | | | | | ticket value |
|  | I | II | III | IV | V | VI |
| T1: lower grids | -28.609 (-1.07) | -26.563 (-1.38) | -13.721 (-1.09) | -11.832 (-0.72) | -24.369 (-1.48) | -12.439 (-1.28) |
| T3: statement required | -24.915 (-0.94) | -76.145\*\* (-2.54) | -5.199  (-0.36) | -46.769\*\* (-2.10) | -39.003\* (-1.91) | -1.796  (-0.13) |
| Donor dummy |  | 76.033\* (1.88) | 26.173 (0.70) | 74.624\* (1.83) | 77.902\* (1.90) | 29.492 (0.79) |
| Ticket controls at t |  | yes |  |  |  | yes |
| Past season controls |  |  | yes |  |  | yes |
| Performance type controls |  |  |  | yes |  | yes |
| Time controls |  |  |  |  | yes | yes |
| Demographics |  | yes | yes | yes | yes | yes |
| Observations *R*2 | 8442  0.001 | 8442  0.054 | 8442  0.400 | 8442  0.042 | 8442  0.041 | 8442  0.410 |

Notes: see notes to Table 1; t-statistics; demographics include female, corporate, and other dummy.

**2.5 Discussion**

**2.5.1 Self-image.**

Why do we observe more giving in T3? Individuals are more likely to donate and they donate higher amounts when they have to check a “No, thank you” box. This suggests that customers were successfully deceiving themselves in T2, behaving just as if the donation request had not been there, and thereby protecting their prior belief about their own type. When the act of declining becomes more salient, they are less likely to avoid it, and some egoistic types may now decide to give. This is related to the “avoiding the ask” phenomenon studied by DellaVigna, List, and Malmendier (2012) and Andreoni, Rao, and Trachtman (2017). In DellaVigna, List, and Malmendier (2012), individuals were less likely to be at home when they knew that a solicitor was coming. In Andreoni, Rao, and Trachtman (2017) some individuals chose other exit doors from a supermarket to avoid being asked. However, these papers’ primary concern is with social pressure to give and social interaction, although both, social and self-image may play a role in their environments. It is difficult to tell where self-image ends and social-image begins. Even if it appears that social image requires an audience, it is unclear what is in people’s minds when they are asked for donations online. They might still feel observed by the opera house, a partner or spouse, or might like to talk about their choices to other opera goers. In our case, however, there were no changes in social interaction between treatments, rendering the social-image concern unlikely to be relevant for treatment differences. Consequently, the check-box effect that we observe should stem from the self-image motive. For some individuals declining donations seems difficult to reconcile with their self-image, and saying “No, thank you” makes the decline apparent to themselves. In our context, the magnitude of the self-image motive in charitable giving is economically meaningful – increasing the return from fundraising six- to sevenfold or by 49 cents per person (after controlling for confounders).

**2.5.2 Costs of “avoiding the ask.” In** contrast to the literature concerned with immediate ask avoidance, we are able to measure long-term effects. The short-term cost-benefit analysis in Andreoni, Rao, and Trachtman (2017) and DellaVigna, List, and Malmendier (2012) leads to a conclusion that, overall, the fundraising campaigns analyzed were welfare enhancing. Beyond the short-term effect of ask avoidance documented in these studies our results indicate a long-term effect, here on the number of tickets and ticket revenue for opera performances purchased online. This effect is negative for non-donors who faced the online fundraising campaign and positive for actual donors. In order to evaluate the overall success of fundraising activities such long-term costs (that potentially arise in other operational arm of an organization) should be considered.

**2.5.3 Donation grids.**

Grids seem to exert multiple effects. On the one hand, grids serve as a reference point and convey information about the range of donations expected. Thus, grids that are set too high will deter small donors; grids set too low will lower the perceived expectation and induce lower donations. But the question about what is too high or too low might be an individual one, and for prospective donors it might be only resolved by means of trial and error. On the other hand, the number, the spread and the skewness of the grids chosen affects prospective donors and these effects are even less well understood. As discussed above, the literature on donation grids is not conclusive. While Adena, Huck, and Rasul (2014) found promising effects of non-binding suggestions in a similar environment, Reiley and Samek (2015) found negative effects of increasing grids and no better performance of tailored grids. Here we find dramatic effects of higher grids for non-frequent users: they donate less often and the overall return from them is significantly lower.

**2.5.4 Post-Study Probability.**

How confident are we about our findings? The sole reliance on statistical significance can lead to false positives. As Maniadis, Tufano, and List (2014) highlight, the rate of false positives depends on statistical power, research priors, and the number of scholars exploring the question. Indeed, there has been some work done recently on image concerns in charitable giving and ask avoidance. Although our findings are novel in at least two ways (pure self-image in the field, long-term effects of ask avoidance), they are a logical continuation of previous research. In a general sense (see Levitt and List 2009), our study can be seen as a replication of the previous studies of ask avoidance: we test the previous hypotheses with new research designs. For example, in Section 6 we test the ask avoidance hypothesis in a different setting than the previous studies do, but we largely addresses the same question. Our results point in the same direction as the previous findings. Now, we provide a fourth study in favor of ask avoidance additional to DellaVigna, List, and Malmendier (2012), Andreoni, Rao, and Trachtman (2017), and Trachtman et al. (2015) (although, we do not know how many studies with null results were undertaken and not published). Following Maniadis, Tufano, and List (2014), we compute the change in the *post-study probability* after our replication (see Table A9 in the Appendix). The conclusions are that (i) even with a very low prior it is difficult to believe that all four papers find results that are a statistical artefact, (ii) our replication makes a real difference for the posterior probability if the assumed prior probability is low.

**2.6 Conclusions**

In this paper we study an online fundraising campaign introduced on a ticketing platform by an opera house. This is an important setting to study, since an increasing portion of charitable giving is moving online. But the question of “how” and foremost “whether” at all is still open. Especially, it is not clear whether the findings about more traditional fundraising channels (e.g. Landry et al. 2006; Landry et al. 2010; Adena, Huck, and Rasul 2014; Adena and Huck 2017) carry over to the new environment. We contribute to a better understanding of “how” in online fundraising by studying donation grids and navigation structures. Against our expectations, we find that higher donation grids result in a substantially lower response rate, similar positive donations and consequently much lower returns. Then we demonstrate that a small, apparently superficial, change in the design of the choice architecture has unexpectedly large positive effects on giving. Not allowing for the possibility of conveniently overlooking the ask increases both, the response rate and positive donations – resulting in a substantial increase in return. This points to a pure self-signaling motive in charitable giving. To the best of our knowledge, the present study is the first to document the possible presence of such a self-image effect in the field.[[12]](#footnote-11)

Finally, we provide evidence of the fundraiser’s long-term costs of ask avoidance that result from more insistent fundraising. This suggests that the question of “whether” to engage in additional online fundraising is non-trivial. Overall, we conclude that fundraising management should not take place in isolation but that broader operational concerns require consideration

**CHAPTER THREE**

**METHODOLOGY AND SYSTEM ANALYSIS**

**3.1 INTRODUCTION**

A methodology is a system of methods used in a particular area of study. It is a body of practices, procedures and rules used by those who work in a discipline or engage in an enquiry. It is in other words, a set of working methods.

Methodology involves a process whereby the existing or current system is studied to identify the information requirements. It is used to refer to a specific series of steps or procedures which governs the analysis and design of a particular project. It also includes the techniques and methods which are used to collect and analyze information. The types of methodologies include: Prototyping, Object Oriented Analysis and Design Methodology (OOADM), Expert Systems and Structured System Analysis and Design Methodology (SSADM).

* **Prototyping:** A prototype typically implements only a small subset of the features of the eventual project (Osuagwu 2008).
* **Object-Oriented Analysis and Design Methodology (OOADM):** OOADM is adapted from Michael Gora’s application of OOADM in DBMS application. It can used to analyze problem requirements, design a solution to the problem, and implement a solution in a programming language or database.
* **Expert Systems:** An Expert System is a knowledge-based Information System that uses its knowledge about a specific, complex application area to act as an expert consultant to end users.
* **Structured Systems Analysis and Design Methods (SSADM):** Structured Systems Analysis and Design Methodology (SSADM) is an integrated set of standards which guides the analysis and design of computer systems. For the interest of this work, SSADM will be employed. The steps involved in the analysis of the to-be-system with regards to SSADM are explained below.

**3.2 Method of Data Collection**

A thorough investigation of the current system was made in order to obtain detailed fact about the application area to be re-designed. Investigation also covered looking at the functional requirement of the present system and finding out whether the requirements and objective of the present system are being achieved. In the investigation proper, several methods of data collection were employed which includes interviewing of office representatives, evaluation/inspection of forms and direct observation. These methods were adopted to ensure the validity of data collected and relevance of the process.

**3.2.1 Interviewing**

In view to investigation, office representatives, final year course adviser, as well as undergraduate students who are potential users of the proposed system were interviewed. This method yields the most profitable result as it is obtained by physical contacts; hence a firsthand knowledge of the various processes involved is obtained by speaking to the operator of the system. The essential element of the interview is obtained directly and in a short time than when other methods are employed since the interviewer is with the interviewed. This immediate feedback gives the opportunity to ask ambiguous questions and hence, obtain detailed responses.

**3.2.2 Observation**

The method of data collection enables the researchers to witness a firsthand operation of the old system or manual system. Direct observation is the surest method of learning as a scientist and this method was richly employed. During the observation, we had a feel of:

* The volume of work carried out
* The course registration processing
* The school filling system

**3.2.3 Evaluation and Inspection of Documents**

Close examination of some documents was carried out and it proved to be an important method in the course of the investigation. Through the inspection, some deductions and inference, which are of immense benefit to this research, were drawn.

**3.3 ANALYSIS of the Existing System**

There is the need to present a clear picture of the problems which calls for the design of a new system; these are invariably the problems of the old system. In most educational institutions fund raising is done manually. It is not only time consuming, but it is also unsecure and unreliable and it can be led to money laundering among corrupt student officials. Some institutions use manual paper fund raising sheets for funds collection while this will be difficult for record keeping and also to keep track of the large number of students donating towards a particular project, so it is not reliable. Also, it was observed that corrupt individual can make away with the contributed money. These problems call for the need for a more efficient of the process of donation through a method of automation.

**3.4 Analysis of the Proposed System**

With the investigations identified various operational and logical problems, the research therefore concludes that it is necessary to set up a new system.

The proposed system must be able to fulfill the under listed expectations.

* **Functionality:** It must successfully support the user’s requirements. Specified hardware, software and business routine must enable the staff effectively undertake their processing tasks.
* **Accuracy:** The problem of inaccuracy and data entry error should be easily checked and remedied
* **Efficiency:** It must be able to meet functional requirement within a specified time.
* **Elimination of duplication error:** The new system should provide room to eliminate the duplication problem, which the current system is known for.
* **Economical:** It should be highly economical, demand minimum storage and minimize redundant data stored by the system in order to reduce the problems associated with data redundancy.
* **User friendliness:** The system should provide comfortable environment for work.
* **It should produce a comprehensive** **output**. The new system should be able to eliminate the voluminous paper work of the existing system and produce timely management report. It should have a clearly defined content of the past records of every student. Furnished information which on analysis and combined with comparative studies will improve the quality of the accommodation policy

**3.4.1 Objectives of the New System**

The new proposed system is expected to provide computerized processes for online fund donation for Information Management Technology department by doing the following:

1. **Ensuring a reliable donation system:** Users can sign up and make donations. The total donations will be displayed to all users.
2. **Ensuring real time system:** Theapplication will ensure that donations are uploaded in real time.
3. **Ensuring an error corruption free system:** Due to the corrupt nature of some people, the system is access protected. Only authorized users can gain access to the system and no user can manipulate the donated amount, even the admin

**iv. Ensuring database maintenance for the students’ records:** The

application ensures connection of students records with the database and update thereof.

1. **Ensuring Data Integrity:** The application program ensures the each of the administrators have a unique identity specified during login and has no access to another’s account.

**3.5 System Design**

Conceptualizing a system design is done in two modeling phases:

1. **Data Modelling**: This phase involves detecting the various data entities of the system and analyzing its attributes and the relationship amongst the data entities.
2. **Function Modelling**: On the other hand, this phase describes how the data entities are to be processed to achieve a desired solution on the path of solving the identified problem.

The purpose of the system design is to effectively divide the overall problems into small and more manageable problems that can be easily handled by separate program modules. The separate program modules will later be integrated forming the entire system.

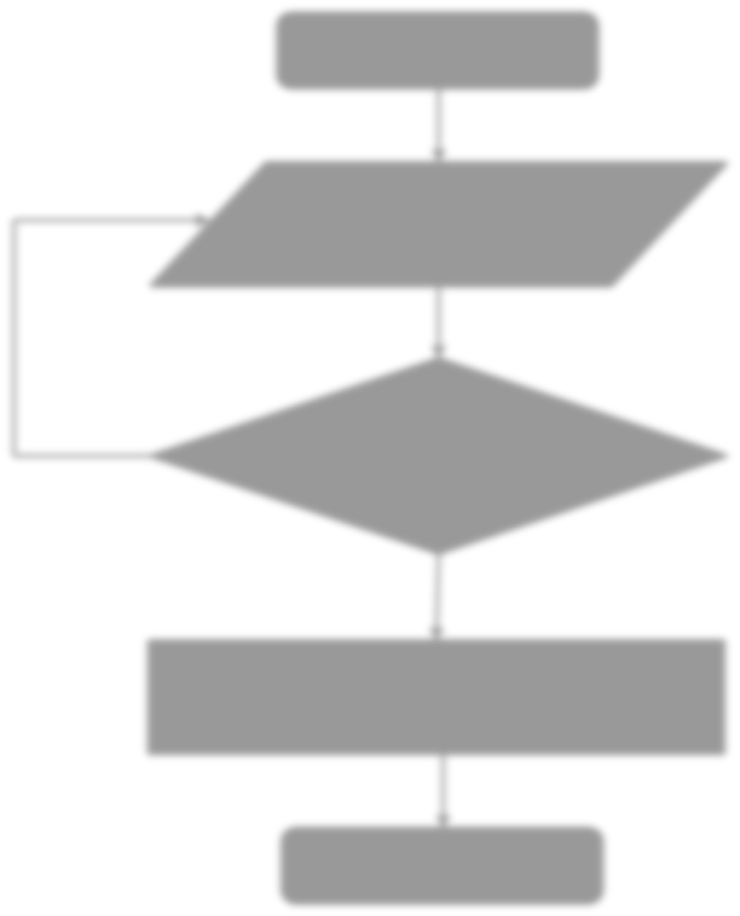
**3.5.1 Program Design**

The program design does the work of identification of all modules of its software and the relationship that exists between them and also solution statement and coding. The Top-Down-Design method of modular programming would be adopted. The Top-Down-Design therefore is a design process whereby a software designer begins from a top most module to break the system into subsystems by taking each system in turn and breaking them into program modules. The major idea in top-down design is that the design must progress from the general purpose, each program module being progressively designed. Modular programming is simply the art of writing programs in independent modules, the central idea in modular programming is to sub-divide the system into smaller units that are independently testable and which can be integrated to accomplish the overall program objectives.

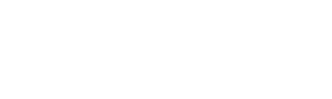
**USER FOUND?**



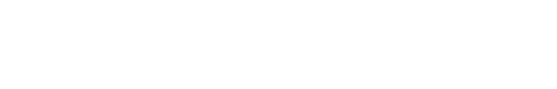
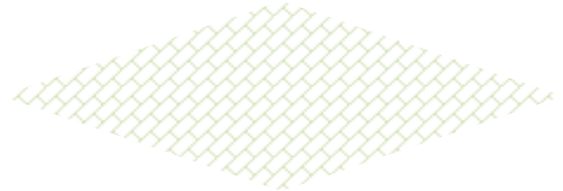
YES



**START**



**INPUT LOGIN DETAILS**



**DONATE**



**STOP**



NO



Fig 4.3: Base Record Setup

**General Flowchart of the Proposed System**

**3.5.2 Program Specification**

Program specification flowchart can be defined as a diagrammatic representation that illustrates the sequence of operations to be performed to get the solution of a problem. The flowchart is a means of visually presenting the flow of data through an information processing, the operations performed within the system and the sequence in which they are performed.

A program flowchart plays a vital role in programming of a problem and quite helpful in understanding the logic complicated and lengthy problems. Once the flowchart is drawn, it becomes easy to write the program in any high-level language.

The advantages of using a program specification flowchart are:

1. **Communication:** Flowcharts are better way of communicating the logic of a system to all concerned.
2. E**ffective Analysis:** With the help of flowchart, problem can be analyzed in more effective way.
3. **Proper Documentation:** Program flowcharts serve as a good program documentation, which is needed for various purposes.
4. **Efficient Coding:** The flowcharts act as a guide or blueprint during the system analysis and program phase.
5. **Proper Debugging:** The flowchart helps in debugging process.
6. **Efficient Program Maintenance:** The maintenance of operating program becomes easy with the help of flowchart. It helps the programmer to put efforts more efficiently on that part.

**4.6.2 Program Modules**

The proposed campus donation system will contain the following modules:

* **Login Page:** This page provides fields for the login details of the user. The various accounts that the system operates are differentiated with the login details; username (e-mail address) and password respectively. Here, both the admin and the donator logs in through this page. The redirected page will now depend on the login details of the user.
* **Admin Page:** This page gives access to creation of donation packages, shows details of the
* **Donation Page:** This page presents the donation packages. The user selects his desired package and donates a particular amount.

**4.7 Database Specification**

The database was designed with MySQL using the developed data flow diagram. The database contains information of the entities of the donation system. It organizes and manages the information to obtain the report required to support the application relational database where a common field relates to different tables of data to each other.

**4.8 Data Dictionary**

In the database specification, the following database tables below are used.

Table 4.1: Academic Session

|  |  |  |
| --- | --- | --- |
|  | **user** | |
| **COLUMN NAME** | **DATATYPE** | **DESCRIPTION** |
| **id** | Integer | Primary key of the table |
| **username** | Character varying | Beginning of session |
| **User type** | Character varying | Name of Session |
| **password** | Character varying | End of session |
| **department** | varchar | Department of donator |

**Table 4.2: User Country**

|  |  |  |
| --- | --- | --- |
|  | **country** |  |
| **COLUMN NAME** | **DATATYPE** | **DESCRIPTION** |
| **id** | Integer | Primary key of the table |
| **name** | Character varying | Nationality of the user |
| **code** | Character varying | Country code |

**Table 4.3: Course**

|  |  |  |
| --- | --- | --- |
|  | **donation** |  |
| **COLUMN NAME** | **DATATYPE** | **DESCRIPTION** |
| **id** | Integer | Primary key of the table |
| **Donation name** | Character varying | Course Title |
| **Donation code** | Character varying | Course Code |
| **Donation package** | Varchar | Course Credit Unit load |
| **Donation objective** | Character varying | Objective of course |
| **Donated amount** | int | Amount already donated |
| **Hosted by** | varchar | Department of ownership of  course |
| **Donation amount** |  | Total donation needed |

**CHAPTER FOUR**

**SYSTEM IMPLEMENTATION**

**4.1 INTRODUCTION**

This section describes implementation requirements of the software, hardware, operating systems and memory requirement for installation of the software as well as detailed implementation arrangement. The new system was implemented using PHP programming language. This is because the programming language has the advantage of easy development, flexibility and it has the ability of providing the developer/programmer with possible hints and it produces a graphical user interface.

**4.2 CHOICE OF PROGRAMMING LANGUAGE**

PHP: Hypertext Preprocessor (or simply PHP) is a [general-purpose programming language](https://en.wikipedia.org/wiki/General-purpose_programming_language" \o "General-purpose programming language) originally designed for [web development](https://en.wikipedia.org/wiki/Web_development" \o "Web development). It was originally created by [Rasmus Lerdorf](https://en.wikipedia.org/wiki/Rasmus_Lerdorf" \o "Rasmus Lerdorf) in 1994; the PHP [reference implementation](https://en.wikipedia.org/wiki/Reference_implementation" \o "Reference implementation) is now produced by The PHP Group. PHP originally stood for Personal Home Page, but it now stands for the [recursive initialism](https://en.wikipedia.org/wiki/Recursive_initialism" \o "Recursive initialism) PHP: Hypertext Preprocessor. PHP offers a number of advantages to developers.

1. **PHP is simple:** PHP was designed to be easy to use and is therefore easy to write, compile, debug, and learn than other programming languages. The reason that why PHP is much simpler than others is because PHP uses automatic memory allocation and garbage collection where else C++ requires the programmer to allocate memory and to collect garbage.
2. **PHP is object-oriented:** PHP is object-oriented because programming in PHP is centered on creating objects, manipulating objects, and making objects work together. This allows you to create modular programs and reusable code.
3. **PHP is distributed:** Distributed computing involves several computers on a network working together. PHP is designed to make distributed computing easy with the networking capability that is inherently integrated into it. Writing network programs in PHP is like sending and receiving data to and from a file. For example, the diagram below shows three programs running on three different systems, communicating with each other to perform a joint task.
4. **PHP is secure:** PHP is one of the first programming languages to consider security as part of its design. The PHP language, compiler, interpreter, and runtime environment were each developed with security in mind.
5. **PHP is robust:** Robust means reliable and no programming language can really assure reliability. PHP puts a lot of emphasis on early checking for possible errors, as PHP compilers are able to detect many problems that would first show up during execution time in other languages.
6. **PHP is multithreaded:** Multithreaded is the capability for a program to perform several tasks simultaneously within a program. In PHP, multithreaded programming has been smoothly integrated into it, while in other languages, operating system-specific procedures have to be called in order to enable multithreading. Multithreading is a necessity in visual and network programming.

**4.3 SYSTEM REQUIREMENTS**

This is for the implementation of the web application software. For effective and efficient functioning of the system, the following hardware and software specifications are recommended.

**4.3.1 Software Specifications**

Minimum of the following Operating System

1. Microsoft Windows XP Home and Professional Edition (Professional Service Pack 2, 3)
2. Chrome or Mozilla browser
3. Xampp or Wamp server
4. minimum of 600 MHZ Pentium processor.

**4.3.2 Hardware Requirements**

1. Minimum RAM requirement is 1GB but 4GB is recommended for flawless execution. This is because all connection to the server will use memory on the RAM for processing of request.
2. minimum of 20GB of Hard disk space available. The user may be able to make more space available by removing temporary files on your computer, including temporary files created when you decompress some of the software for installation

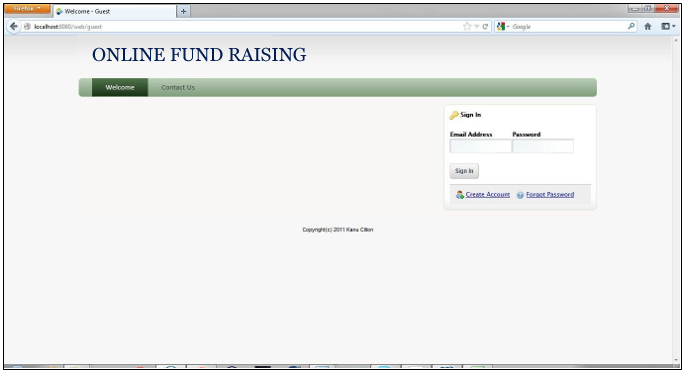
**4.4 INPUT / OUTPUT DESIGN**

Data and storage are considered to be the heart of any information system. The computer cannot accept data in human readable form, such as speech or a hand written document. It is necessary therefore to present data to the computer in a way which provides easy conversion into its own electronic pulse-based forms. This is achieved by supplying data using input devices such as a keyboard, which converts it into machine sensible form and also produces output through monitor and printer.

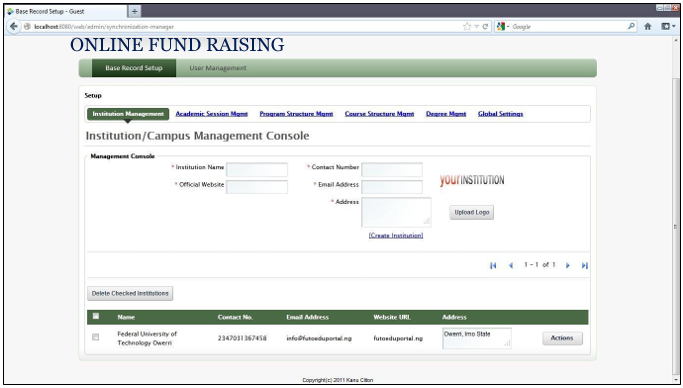
**4.4.1 Input Specifications and Design**

The input to the new system is derived from student’s registration form, and donation form. These forms contain relevant information concerning student personal and donation records. The inputs are the processed to obtain the desired outputs. The input forms are designed as follows:

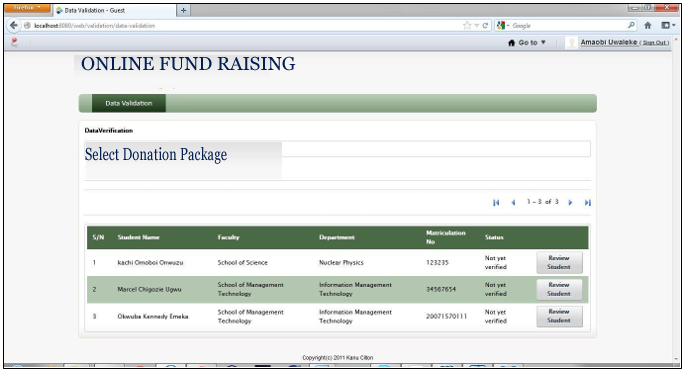
**WELCOME PAGE**



**Enrolment Page**



DONATION PAGE



**4.4.2 Output Specifications**

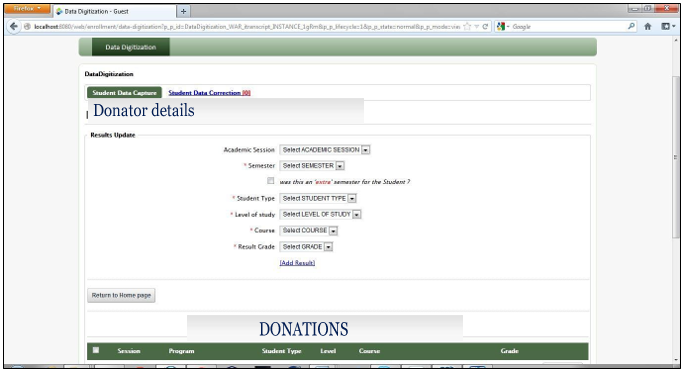
The output design was based on the inputs. The report generated gives a meaningful report to the management. The system designed generated the

following reports.

1. Students details
2. Donation packages
3. Donation History
4. Donated Amount

These outputs can be generated as soft copy.

DONATIONS



**4.3 File Conversion**

File conversion plans must be prepared and arrangements made for parallel runs before phasing out the old system. The files in the manual process should be input into the new system database using Postgres Plus.

For this product software, I recommend a test-run on the process using test-data which can be readily generated from previous result. This should be done at least one month before the new academic semester so that any error noticed can be readily corrected before switching fully to the new system.

**4.4 Training of Operators and Users**

There is the need to train the potential users of this application (course advisers, head of departments and students) on the mode of operation of the new system. The training of the officials will be based on their interaction with the system. For example, the enroller will be taught how to use the functions available to him/her as the due to the complexity of the tasks. The software is designed to be more user friendly for easy access to all the user and operators that have the administrative privileges/permissions.

**4.4.1 Run/Operate the Software**

In order to run or operate this application software, be sure to pay careful attention to the software requirements relative to the prerequisite programs listed earlier that must be installed prior to proceeding installing the application.

**4.5 Detailed Implementation Plans**

The full implementation of this project is to eliminate the old manual system and its deficiencies and run a full automated online donation system to improve the overall effectiveness and efficiency of the donation process.

**4.6 Changeover**

The kind of changeover to be implemented in this case is a direct changeover as both the old process and new process cannot run concurrently. Hence detailed planning must be effectively implemented to avoid a failed implementation.

**4.7 TESTING**

Before an application or website can be deployed it has to be tested to satisfy the requirement specifications. They are many types of test to carry out on a web application such as performance, functionality, database loading time, response time, server time handling, user’s actions and many others. During the implementation of the website owners and end-users were able to follow the development on the temporal website by the courtesy of MDH University. This facility enables end-users to test the functionality of the application online. A final presentation was shown to the owners and they were able to test system functionalities. The following tests below were noted during the testing.Does the website represent the organization’s purpose?

**Browser check:**

* A web page describing the organization. IE, Firefox and Google
* Load the website on above browsers.
* Registration on the website using the above browsers and registration  
  confirmation by e-mail.

**Functionality check:**

* Members can create a photo album and upload pictures.
* Members can make donations via PayPal.
* User can send messages to the administration via the Contact page

**Administrative section**

* Allow access to only the administrative members.
* Administrator can create content.
* Administrator can publish content on the web page.
* Simple WYSIWYG editor for entering content
* Administrator can administer users’ profile and donations.

**CHAPTER FIVE**

**SUMMARY, CONCLUSION AND RECOMMENDATIONS**

**5.1 Summary**

This research work focuses on the use of computer system with reference to campus online fund donation. The work covers the manual system of operations as regards the problems identified, stating the aims of the new system, stating the various specifications and then implementing the programs. The work was successfully developed using PHP programming language, a user- friendly programming language, and the package was tested and improved upon which yielded an automated funding which curbs the errors associated with the manual method.

The project work cannot be said to be perfect, but however, its benefits cannot be overemphasized. It has led to the improvement in the speed of processing operation, efficiency, accuracy and improved storage of data.

**5.2 Conclusion**

Realizing a project of this nature is very exciting. However, the students encounter a lot a problem which I believe if looked into, will go a long way toward reducing the tension associated with the design implementation and construction of the project. In spite of the constraints encountered during the implementation of this project, the aim of my project is well accomplished. Moreover, an attempt to accomplish this project has taken care of the manual fund donation errors with minimum mistakes. This has also forced me to learn, practically, what is involved in the design and implementation or computerization of project (existing or non-existing).

**5.3 Recommendations**

Based on the achieved objective of this project and the experiences gained during its designed and implementation, I wish to make the following recommendations for future improvement.

* Students should be exposed to serious practical exercise during the course of their studies. In this regard, the students of Information Management Technology department should be made to write at least a working program with veritable results before graduating. This could be accomplished by providing more computers qualified lecturers in the department.
* Tertiary institutions should computerize their funding processing system for greater efficiency, neatness, and reliability. This will go a long way to save the student all the trouble they go through donate to one package or the other.
* Finally, the students’ project should be closely supervised and monitored to achieve more success.

**REFERENCE**

He Liduo,Chen Yan. “Design and implementation of Web Content Management System by J2EE-based three-tier architecture -Applying in maritime and shipping business”, Proceedings of 2nd IEEE International Conference on  
Information Management and Engineering, ICIME 2010, vol. 2, pp. 513-517, 2010

. Hallikainen, H. Kivijärvi, K. Nurmimäki, "Evaluating Strategic IT Investments: An Assessment of InvestmentAlternatives for a Web Content Management System," hicss, vol. 8, pp.238b, 35th Annual Hawaii International  
Conference on System Sciences (HICSS'02)-Volume 8, 2002

McKeever, S. (2003). "Understanding Web Content Management Systems: Evolution,Lifecycle and Market." Industrial Management and Data Systems 103(9): 686-692.

Kvarnström, K. och Isaksson U, ”Content Management Systems – Effektiviserar Informationshanteringen?”, Institutionen  
För Programvaruteknik Och Datavetenskap,Blekinge Tekniska Högskola, 2002.

Last checked 2011-10-24URL:<http://www.ctg.albany.edu/> publications/guides /and\_justice\_for\_all?chapter=6&PrintVersion=2

Last checked 2011-10-24URL: <http://vandelaydesign> .com/blog /design/non-profit-organization-websites/

Ian Sommerville, “*Software Engineering*, 8th edition, Addison Wesley / Pearson Education”, 2007

[blackbaud] last checked 2011-10-24  
URL: <http://www.blackbaud.com> /files/resources/downloads /WhitePaper\_ MultiChannelGivingAnalysis.pdf

Last checked 2011-10-24 URL: http://en.wikipedia.org wiki/E-commerce\_ payment\_systems

Last checked 2011-10-24 URL: [http:/ /en.wikipedia.org/wiki/Mobile\_payment](http://en.wikipedia.org/wiki/Mobile_payment)

Mary Mathew, Balakrishnan N., Pratheeba S. “A Study on the Success Potential of Multiple MobilePayment Technologies”, 2010 IEEE

Last checked 2011-10-24  
URL: <https://www.paypal.com/cgi-bin/webscr>? cmd=xpt/ Marketing/general /what-is-paypal-outside

Last checked 2011-10-24  
URL: <https://checkout.google.com/seller/fees.html>

Bellinaso, “Marco, ASP.NET 2.0 website programming, Problem - Design - Solution”, 2006. p 48.

Spaanjaars, Imar, Beginning ASP.NET 3.5 in C# and VB, 2008. p 247.

Thakur, Vivek.” ASP.NET 3.5 Application Architecture and Design” 2008. p 12

W3Consortium. Introduction to html 4.http:/ /www.w3.org /TR/html401/I ntro/intro.html

Clark, Dave. “Content Management and the Separation of Presentation and Content.“*Technical Communication Quarterly*, 17.1 (2008): 35-60.

Miller, R. (2003). Content Management Case Studies. EContent.

Vipul K. Gupta, SrinivasanGovindarajan& Tonya Johnson (2001): Overview of Content Management Approaches and Strategies, Electronic Markets, 11:4, 281-287

1. [↑](#footnote-ref-0)
2. [↑](#footnote-ref-1)
3. . [↑](#footnote-ref-2)
4. The exceptions are festival tickets for which we control in the main analysis. [↑](#footnote-ref-3)
5. [↑](#footnote-ref-4)
6. [↑](#footnote-ref-5)
7. [↑](#footnote-ref-6)
8. [↑](#footnote-ref-7)
9. [↑](#footnote-ref-8)
10. [↑](#footnote-ref-9)
11. [↑](#footnote-ref-10)
12. [↑](#footnote-ref-11)