The Numbers Behind Celebrating More Birthdays: An Analysis of the American Cancer Society’s Relay for Life

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Abstract

Despite all of the medical technological advances society has experienced, and is still experiencing, there has not been an ultimate cure for cancer found. Non-profit organizations like the American Cancer Society have been working for 100 years to raise funding and awareness for this issue and although great progress has been made since their founding in 1913, there is still more work that needs to be done to make cancer a disease of the past. This study first focuses on the structure of non-profit organizations, their role in society, and the techniques and procedures they follow when looking for donors. Information was collected through a literature review of books and articles summarizing different strategies and business models that non-profit organizations implement as well as economic and social factors that affect the success of these organizations. The second part of this study focuses specifically on the American Cancer Society’s special event fundraiser, Relay for Life. An initial analysis of similar fundraisers hosted by non-profit organizations affiliated with research and awareness for a specific disease was performed to gain insight into how these fundraisers are typically planned to maximize donations collected. Based on the conclusions found from this case study analysis, I created a survey to administer to colleges and universities in New England that host a Relay for Life event. The results from this survey of twelve participating schools, along with data on all 54 schools in New England that host a Relay for Life (obtained from the American Cancer Society) were analyzed to find conclusions about which independent variables are most influential in hosting a successful Relay for Life event. Success was measured based on the total funds raised by each college or university, as well as average funds raised per participant. From the results of this study, informational material has been created and will be made available to all colleges and universities in the United States that host a Relay for Life so adjustments to marketing techniques and other event planning strategies can be made to increase fundraising levels. An increase in fundraising levels at the college level will greatly increase the net funds raised by the American Cancer Society and hopefully speed up the process of finding a cure for cancer.
Introduction

Try to find someone that has not been affected by cancer. I bet you can’t. We live in an extremely technologically advanced world but unfortunately there is not yet an ultimate cure for this disease. Countless organizations hold fundraisers year-round that focus on raising money for cancer research in hopes to find a cure. The American Cancer Society is a powerful force in the fight against cancer and their biggest and most successful fundraising event is Relay for Life. Many colleges and towns host a Relay for Life every spring and what is commonly referred to as “Relay season” is a very important time of year for the American Cancer Society. Through these events, they are able to raise awareness about cancer and money that goes towards cancer research and helping cancer patients and their families.

Relay for Life is an overnight event held at track complexes that represents the struggle that cancer patients go through while they undergo treatment. The event has three stages: celebrate, remember, and fight back. The first lap is led by all of the cancer survivors in attendance and represents a time to celebrate those who have fought the disease and won. Once the sun sets, the event shifts focus and participants remember loved ones who have lost their battle with cancer. The track is lit by luminaria bags that are decorated by participants in honor of people who have been personally affected by the disease. The struggle that participants go through to stay awake and keep walking even when they get tired throughout the night represents the exhaustion that cancer patients go through while they are undergoing treatment. No matter how tired you get, you just have to keep fighting to make it through the night to see the sun rise. Right before sunrise, the event shifts one last time and participants focus on fighting back against cancer by making a pledge to lead a healthy life and to continue the efforts to raise money and awareness with the ultimate goal to find a cure for cancer.

Since Relay season is such an important time for the American Cancer Society, I have researched and analyzed how awareness and fundraising can be optimized by Relay for Life events. Certain factors make community service events successful and it is important for the American Cancer Society to be aware of any changes they should make to their advertising and event logistics in order to maximize the donations collected at each and every Relay for Life. The research question that I examined is: what makes for the most successful Relay for Life at the college level in New England?

Success is measured based on the total fundraising levels achieved at each event. I analyzed Relay for Life events from colleges and universities in New England and looked at factors that influence the
success of each event. Some examples of the areas I researched are: the number of students in attendance, the demographics of the college hosting the event, advertising techniques used to raise awareness and money, dates which the event is held, whether the event is indoors or outdoors, and if it is outdoors what the weather conditions were on the day of the event. Based on certain trends that I discovered from my research I was able to determine what factors result in the most successful Relay for Life.

**Literature Review**

Before collecting information specific to the American Cancer Society and Relay for Life, it was important to research fundraising techniques in general and other non-profit organizations. The fundraising tactics utilized from one organization to another appear to be generally the same to the public: an email list, mass mailing every year, and a Facebook page used to collect donations, but there is actually a lot more that goes on behind the scenes than people realize. Every non-profit has their own unique way of promoting their cause and fundraising to support their overall mission and although the goal of each cause-based organization is typically the same, there are countless different ways to get to the end result. Some organizations focus on large public events to attract participants who will then donate money, while other organizations do not host any events and rely on indirect communication channels to entice donors and retain them from year to year. For this study, the research will focus on those organizations that host events to raise awareness and money for the causes they support since that is the purpose that Relay for Life serves for the American Cancer Society. The first, and most important, question for any non-profit organization to answer is why people donate. When these reasons are understood, it is much easier to design a fundraising system that appeals to the most likely potential donors. An analysis of the variety of reasons that people are inclined to donate to charity will be discussed in the following sections.

**The Role of Non-Profits in Society**

In today’s society, non-profit organizations are very visible at both public and private events and venues. The notion that people have a duty to make the world a better place encourages individuals to be a part of an organization that is making a difference. In his book, *The Art of Planned Giving: Understanding Donors and the Culture of Giving*, Douglas White discusses how charities are intended to provide a service that the public is not willing to pay a market rate for and the services provided by these charities are deemed to be beneficial to society by the government. The growth of the non-profit presence in society has transformed the classic model of society where there were only businesses and
the government. Now, we have businesses, government, and a philanthropy sector. Philanthropy is defined as, “altruistic concern for human welfare and advancement, usually manifested by donations of money, property or work to needs persons, by endowment of institutions of learning and hospitals, and by generosity to other socially useful purposes” (White 1995). As long as there is a societal and human need for philanthropic services, there will be non-profit organizations with the mission of providing these services to those in need.

In order for non-profit organizations to be successful and well-respected, they must fulfil certain characteristics. People are not willing to donate their time or money to an organization that does not appear to be reputable. Therefore, according to Eugene Tempel’s book *Achieving Excellence in Fundraising*, non-profits need to have a mission statement that describes each piece of the keys to success (defined using the acronym SMART). When an organization is attempting to communicate their mission to the general public, they must educate people on why their services are important using the following guidelines (Tempel 2011):

- **Specific** - people must understand exactly what the purpose of the organization is
- **Measurable** – people must be able to see that their contributions are making a difference
- **Achievable** – goals must be reasonable enough that people believe the organization will be able to reach them eventually and that it is not a hopeless cause
- **Results-oriented** – organization must pride themselves on the milestones they are able to reach with the help of donors
- **Time-measured** – goals and results must have a timeline that is appropriate for the organization

If organizations can incorporate each piece of the SMART guidelines into their mission statement and describe each in detail, they are likely to experience more success than a non-profit that does not clearly communicate their role in society. “Mission is what gives us the privilege to ask for philanthropic support” (Tempel 2011).

The validity of non-profit organizations can be communicated through their mission statement but the original piece that sets successful organizations apart from the rest is the members that run the organization along with the people that are donors and volunteers. The key to influencing society to support an organization stems from the people that are going out asking for donations of money and
time. If the members of the organization do not have passion for the cause they are supporting then they will not have much success recruiting fellow volunteers and donors. There are a variety of reasons that people are involved with non-profit organizations but it is the way that they portray their passion for the cause to the public that defines how successful they will be. Non-profit organizations are generally supported by the individuals that feel a personal connection to the organization or are looking to feel that they have a meaningful impact on a good cause.

**Donor Info – who donates to non-profit organizations?**

Non-profit organizations that function as a result of volunteers and monetary donations all need to focus on how to get these people to show a desire to help their organization. Non-profits must consider how and why people are motivated to give their time and money and capitalize on this by using effective marketing and communication techniques to encourage societal participation and support. As examined in the previous section, non-profit organizations will not exist without the people that have a passion for the cause being supported. One of the main reasons why non-profit organizations have become prominent in today’s society is because of the increase in people’s awareness of their philanthropic duties. As individuals and businesses start to partner with non-profit organizations, other individuals and businesses believe that they have to do the same thing in order to prevent themselves from falling behind. It has become a norm in society for businesses to support charities as part of their social responsibility and individuals are beginning to take this approach as well. Similar to peer-pressure, individuals and businesses do not want to be known as the only ones that are not supporting a charitable organization because they believe that it makes them look bad. People are always trying to get ahead in society and they do not want their lack of participation with a non-profit organization to hold them back.

Aside from those who simply feel pressured to be involved with charities, there are those individuals and businesses who are associated with a particular cause because of a personal connection they have or just a genuine passion for helping others. These individuals often take on prominent roles in non-profit organizations because they are truly committed to making a difference and are not just doing it because they feel that they are obligated to. The following section will outline why individuals are involved in non-profit organizations along with the ways to increase participation.

Individuals give to non-profit organizations to help other people. Their gifts are often made based on their relationship to the people that are asking them for money. For example, if someone’s friend is
asking them for a donation to the American Cancer Society, they are more likely to donate money than if a random stranger asked them to support the charity. This is the reason why the people who have the closest relationship to the organization must set the pace for donations and participation. If someone involved in the organization is not dedicated to going out and asking people for help then the organization will experience much more success than if the key participants in the organization are only moderately promoting the cause. If the people who are promoting the organization are not passionate about it and do not donate any money then it is hard to expect anyone else in the community to be passionate or to donate their time and money (White 1995).

Individuals who are making the decision about whether or not to donate to charities are often looking for certain qualities in the people promoting the organization, and the organization itself. It has been suggested that participation rates in donating to charity are very low because people are greedy and want to keep their money instead of using it to help others. “Although most of us will hold doors open for others and in general try to get along with people even without a financial incentive to do so, being merely mannerly is quite different from being charitable” (White 1995). A lot of people are too concerned with saving and about their own household budgets to be able to donate to charity and even people who have benefited from charity in the past do not always see the need to donate to help others who are in need. People who are closest to the charity and directly involved in the non-profit’s efforts are expected to donate to charity – the rest of the people need to be motivated to donate. This need for motivation means that organizations have to take certain measures when attracting donors in order to maximize the money collected and the ability to create relationships with these donors so that they will give money in future years.

Before the process of collecting donations starts, organizations have to figure out who their donors will be. Often times the most likely donors are individuals, corporations, foundations, and government agencies and out of these three groups, individuals contribute the largest portion of all funds collected. Within these groups, the organization must evaluate the people based on their linkage to the organizations, the ability to donate, and their interest in the organization. The best prospective donor is always a current donor or a donor who has donated to the organization before because they have already shown an interest and they are likely to consider giving another gift. Unfortunately, it’s not as simple as returning to prior donors to ask for another gift that will make an organization successful – they must go out and find new donors to increase their fundraising.
There are certain emotions that contribute to people donating to charities and organizations should capitalize on these emotions in order to solicit more donations from individuals. It is often not enough to motivate people to donate based on their passion for the cause because there are other factors that go into their decision making process. Sympathy is one emotion that can be tapped into because if people are sympathetic towards the individuals who are suffering that the organization is aiming to help, they are more likely to donate because they believe that their donation will make a difference. As discussed previously, some individuals donate based on fear, pity, or guilt because they see that other people are donating to a particular cause and feel that they should do the same or else they will be looked down upon in society. The use of invoking these emotions is typically strong enough to get people to give a gift but not too strong that they are turned off from donating.

Social justice is another emotion that comes out in people that could lead to a donation because if they believe that individuals are suffering for an unjust reason they feel that their money can help put an end to it. Finally, empathy will often result in donations when people are told to imagine how the suffering person feels. Charitable organizations are no different than any other business that aims at making profits, the only difference is that the profit made by charities is donated to help their stated cause. This being said, the marketing and promotion techniques and strategies used by charities do not differ that greatly from those used by other big businesses. Just as businesses have to look at the benefits that people get out of their product in relation to the price they pay for it, charities have to make the social profit level obtained by donors seem worthwhile in order to receive donations. Social profit is defined as the amount of social and humanitarian benefit gained as a result of investing in the well-being of others and charities need to be able to maximize this social profit for donors in order to increase their fundraising levels.

**Fundraising Strategies**

Once organizations have figured out exactly who to ask for money, they must go about it in a respectful and efficient way in order to collect the most donations possible. Asking people for money is always somewhat of a sensitive subject so it is crucial that non-profit organizations take care when performing this step in their business process.

The first step in any business process is to set goals for the organization. If the organization has done fundraising in prior years it is helpful to go back and summarize what the old gift amounts were in order to reasonably predict what the new gift potential is. Once old and new gifts are summarized, the
organization should set a specific goal that they want to reach. This goal should be a bit of a stretch to accomplish but not so much of a long shot that it is impossible to reach. For example, if an organization raised $1,000 last year from their fundraising efforts, they might want to increase their goal to $2,000 or $3,000 but not $50,000. It is easy to get discouraged when goals are not met and very important that members of non-profit organizations continue to stay motivated to make a difference and show a passion for the cause they are supporting. If the goals that are being set are too outrageous, loyal volunteers and supporters might be less inclined to donate because they realize that the goal is unreachable. People love to donate to organizations when they believe that their donation is making a difference and if they do not believe this then the organization will lose numerous potential donors and significant amounts of money.

When creating a goal, it is beneficial to perform a feasibility study to obtain information about how reachable the goal that has been set actually is. This will help organizations understand how reasonable their goals are as well as how likely people are to donate and support them in their efforts. The feasibility study can contain information from comparable non-profit organizations to get an understanding of fundraising norms in society as well as donor behavior and various ways to go about raising money in the community. These comparative statistics will likely prove to be beneficial to all sectors of the organization if used correctly.

While comparing one non-profit organization to another will supply management with useful information about donor behavior when donating to comparable charities, it is also important to understand what the specific giving trends in recent years have been. If an organization can truly understand what is influencing donors, they will be able to adjust their strategy to maximize donations.

Once the background research has been completed, it is time for the organization to go out into the community and market their organization by sharing the purpose and goals with the public in an attempt to gain support. The most important quality for marketing materials to have is the ability to effectively communicate the organization’s mission to everyone. If people do not understand what a given charity is trying to accomplish then they will not want to support it. Marketing mediums should have three key qualities in order to be effective. First, it is important to evoke emotion from viewers and show them the ways that the world will be a better place as a result of the organization’s efforts. Second, show people a reason to donate by utilizing statistics that demonstrate the success that your
organization has had in the past. Finally, display organizational credibility by employing a strong staff and volunteers who have a history of success with fundraising and promotion of charitable organizations and causes. Inefficiency in fundraising often can be attributed to cause delivery and the inability of the organization to make the “good work” they do easy to judge so people don’t really know where their money is going and how it is helping.

Implementing effective marketing techniques across multiple different mediums and forms of communication can be difficult at times because it is important to have a uniform appearance across all advertisements. A print ad in a magazine cannot have a totally different color scheme and message than a sidebar ad on a website because it will create confusion, and confusion among potential donors discourages donations. This is the concept of creating a recognizable brand (branding) for organizations and using that brand to effectively segment and position marketing of the organization to the target audience of the most likely potential donors. The ultimate goal of marketing and advertising is to create a campaign that displays obvious similarities across all mediums of communication that the organization has with society. Regardless of the marketing materials utilized, in order to be successful, organizations must promote their cause year-round and not just during the months surrounding a large event. Even if there is a specific time of year that organizations implement a big fundraising push, they must promote their organization consistently throughout the entire year in order to stay visible and get better results.

Today’s culture is very technologically focused so it is beneficial for non-profit organizations to capitalize on the amount of people that will be exposed to advertisements that are transmitted electronically. Organizations should carefully choose the forms of marketing that they want to utilize and perform research on each method before releasing their advertisement because there are many different factors that contribute to the success of marketing campaigns. Especially in the last decade, the use of online marketing has increased greatly and has been very successful especially in regards to non-profit organizations.

The introduction of Facebook in 2004 and Twitter in 2006 provided non-profits with a variety of new ways to promote their purpose to the public and online giving took off all over the country. As with any strategy, the first movers experienced the highest level of success as a result of breaking into these new marketing strategies. Non-profit organizations that were not ready for such a big shift in fundraising strategies fell behind larger non-profits that were able to utilize online marketing
effectively. Large non-profits that were successful with this new way of fundraising enhanced their online giving interface and developed stronger policies for managing their money. Convio Online Marketing Non-Profit Benchmark Index Study, a study done in April of 2012 that examined online marketing strategies used by non-profits found that “the next generation of donors is increasingly green conscious” (Hogan 2012). The ability to make a donation online without creating any paper waste appeals to people who are trying to make a difference in the efforts to “go green” and protect the environment. People are also attracted to online giving because it is easy. Non-profit organizations typically have their donation button located very visibly on their homepage so simply going online and entering a credit card number, an address, and an email appeals to people much more than taking the time to write out a check and either hand deliver it or send it in the mail.

Other studies have found that the donation amount from online donors tends to be higher than that of offline donors (Sargeant 2010). It was found that online donors begin their donation amounts at a much higher level than individuals contacted through other means of advertising and that online donors are more likely to give an additional gift in subsequent years or to sign up as an automatic gift giver where their credit card will be charged on a monthly, semi-annual, or annual basis for a designated amount specified by the donor.

Beginning in 2010, the American Cancer Society implemented a donation badge that Relay for Life participants could put on their Facebook pages. The buttons link directly to the participant’s personal fundraising page and provide users with a quick and easy way to donate money to support participants. When this option for a Facebook button was offered for the first time in 2010, 1,000 of the 5,000 Relay for Life events in the United States used this new fundraising tool. “[Relay for Life] participants brought in over $800,000 through the badges, and people taking part in the [American Cancer Society’s] other events raised an additional $1 million using them.” (How Three Groups are Raising Money Online 2010). Since the inaugural year was such a success, these badges were made available to all participants in every event hosted by the American Cancer Society in 2011.

Since it has been found how successful non-profit organizations can be as a result of having an online presence and an online donation option, it is critical that these organizations understand how to properly manage their online presence. When designing a webpage for a charity, the mission of the charity must be clear to all visitors because there will almost certainly be a variety of people visiting the website once it is made live and promoted to the public. While it is likely that current donors and
supporters will visit the site, people who have never even heard of the charity will also visit the site when they see the URL posted somewhere simply out of curiosity. For this reason, it is important that the mission be made clear on the homepage, as this is the first thing that site visitors will see. Along with a mission statement, the website should contain information about upcoming fundraisers and events that the charity will be hosting because a lot of visitors will be looking for ways they can get involved. While all of these strategies will spark interest in site visitors, the ultimate goal of non-profit organizations is to increase fundraising so it is especially important that the button for visitors to make a donation is visible not only on the homepage but on every page of the site. As visitors become familiar with the mission of the charity, it is important for them to see the option to donate right away because it is likely that if they leave their computer they might forget to go back online and make their donation. The visibility of the donation button is also important because some people will visit the website with the sole intention of giving a donation and if they are not interested in reading everything else on the site, they want to be able to efficiently give their gift without being hassled or confused in the process. If the donation link is too difficult to locate, potential donors might get frustrated and choose not to donate which means that the organization is losing money.

Once donors choose to give a gift online, the next step is to make sure the organization is collecting all of the important information needed that will lead to future gifts from online donors. Organizations need to collect donors’ email addresses and home addresses so that they can stay in touch with them after their donation is received to thank them and then to keep donors updated regularly and continuously give the option for them to give an additional gift. It is also useful to collect information about why donors are giving a gift to understand which target audiences are most beneficial to direct future marketing campaigns at. Along with giving the option to make a recurring gift, give donors the option to make donations in honor or in memory of a loved one. This adds a personal touch to the gift giving process and appeals to a lot of donors who are supporting a certain organization based on a personal connection they have to the cause it is supporting. Another advantage of giving donors the option of giving an online gift is the ability to create gift options that start at a slightly elevated level. Instead of having donation options starting at $5, organizations should start their donation amounts at $15 or $20. Of course, there should always be an option for donors to write in their own amount in case they are not comfortable with the starting amount or would like to choose their own amount, but most donors will choose the options already given rather than making up their own.
The most important phase of collecting donations online is what the organization does as soon as the gift is made. Charities must thank their donors and the sooner this is done after a donation is received, the better. Organizations must have a plan in place to thank donors once they have given their gifts because future donations will always depend on how the organization handled the first gift that was given. This does not have to be an outrageous gesture – simply an email or a postcard to the donor thanking them for their contribution and making it clear that their gift is appreciated and will be put to good use. If donors feel that they are making a difference, they will feel good about their donation and in turn, be more likely to donate again in the future.

It is apparent that society is making the shift to paperless charity donations. However, it is still important for non-profit organizations to consider that there are still people who would prefer to give offline donations. For this reason, charitable organizations must put a significant amount of focus on ways to collect gifts and increase their donor base in more traditional ways. When considering the most effective offline ways to raise money, organizations should look into the cost effectiveness and make projections of how much money they think they can make from each strategy. Unless the organization is run on an entirely volunteer basis (which is highly unlikely), there will be expenses involved in each fundraising strategy used. Employees putting time into fundraising will likely require compensation and there are costs involved in designing, printing, and distributing materials.

A study was done to determine exactly how costly each form of offline marketing is to a non-profit organization (Weinstein 2002). The results are summarized in Figure 1 below.

<table>
<thead>
<tr>
<th>Fund Raising Model</th>
<th>Typical Expense Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct mail acquisition</td>
<td>$0.95 - $1.25 per $1 raised</td>
</tr>
<tr>
<td>Direct mail renewal</td>
<td>$0.25 - $0.38 per $1 raised</td>
</tr>
<tr>
<td>Telephone acquisition</td>
<td>$0.90 - $1.20 per $1 raised</td>
</tr>
<tr>
<td>Telephone renew and upgrade</td>
<td>$0.27 - $0.40 per $1 raised</td>
</tr>
<tr>
<td>Special events</td>
<td>$0.45 - $0.55 per $1 of gross proceeds</td>
</tr>
<tr>
<td>Grants: corporate and foundation</td>
<td>$0.03 - $0.20 per $1 raised</td>
</tr>
<tr>
<td>Planned giving</td>
<td>$0.05 - $0.25 per $1 raised</td>
</tr>
<tr>
<td>Major gift personal solicitation programs</td>
<td>$0.02 - $0.15 per $1 raised</td>
</tr>
<tr>
<td>Capital campaigns</td>
<td>$0.03 - $0.10 per $1 raised</td>
</tr>
</tbody>
</table>

Figure 1 – Cost of different fundraising methods

These statistics can be extremely beneficial if used correctly by non-profit organizations. As is clear by the table, the expenses related to gift renewals from previously established donors are much lower.
than those related to the acquisition of new donors. Obviously it is not in the organization’s best interest to spend more money collecting donations than the amount of donations they actually receive. At the same time, there is the concept that the expenses might have to outweigh the benefits for the first few fundraising campaigns in hopes that this will benefit the organization in the long term. This can be explained by the concepts of economies of scale and economies of learning: when an organization is just starting, they will be less efficient than an organization that has been around for a long time. Once an organization has more experience and becomes more efficient, the cost per unit of production (in the case of non-profits, the cost per $1 of donations collected) will decrease which will result in a higher profit per unit. Organizations should complete a thorough analysis before deciding which fundraising strategies they should use when they are just starting and create a long term plan with fundraising projections for at least five years to determine their breakeven point as well as the levels of success they will be able to reach.

Figure 1 shows that organizations will see high levels of profit from fundraising strategies that focus on previous donors. There is a high profit margin for donors that set up a planned giving schedule with recurring gifts throughout the year as well as donors that are sent mail requesting them to renew their gift in the year following their subsequent gift. These two methods are important because the organization is able to encourage donors to give more money to the organization and provide them with the option to increase their donation from the prior year. The reason that returning to prior donors is typically so successful is because they have already shown interest in the organization and require less explanation and encouragement to donate than people who have never heard of the organization before or have just never been interested in donating. While the table above shows a variety of different offline fundraising strategies, there are other techniques not touched upon.

Some more useful media that can be used to get people engaged in the mission of a non-profit organization are brochures, posters, and videos. All three of these are visual aids that can easily display the general purpose of the organization in order to get peoples’ attention. Brochures and posters can be distributed and hung in a variety of different public venues which means that they will reach a variety of different people. When using video messages to promote an organization, the video must be inspirational and be able to reassure donors that their money is going to a good cause that they can feel happy about. The video should not be too long because people will lose interest and be less likely to donate. It should get to the point quickly while still communicating the key messages of the organization and the cause it is supporting.
Organizations that put on special events have an advantage in that they are able to get event participants to do their own fundraising at no cost to the organization. Though there are costs involved in putting on the event, eliminating some employee wages is very helpful. There is also the ability to charge participants a registration fee that will cover most of the event costs and often times there are a significant amount of donations from companies that are either monetary or physical donations that eliminate the need for spending on things such as food, entertainment, prizes, etc. Just as people are inclined to donate to charity to help other people, businesses are typically willing to donate some of their products or services to help support fundraising events. When an organization does not have to pay hundreds or thousands of dollars for event necessities such as food to serve to event participants, this translates into more money going directly back to the cause the organization is supporting.

When individuals are going out into the community asking for donations, it is a good idea for the organization they are supporting to give some basic guidelines regarding the best ways to ask for money, and the best ways to respond when receiving money or getting rejected by a potential donor. Non-profit organizations are certainly well versed on how to deal with rejection from potential donors because it happens so frequently, but individuals might not take it so easily and it is disappointing if they get discouraged too easily and miss out on potential donations. Just as organizations understand this, it is important for individuals to understand that donating is voluntary and not to get discouraged if potential donors turn you down. Just as philanthropy for participation in non-profit organizations needs to be voluntary, donating also needs to be voluntary or else organization members and donors will not be as passionate about what they are doing if they feel that it is being forced upon them.

**Trends Affecting Fundraising**

As in all things in life, even if all the preparations for success have been considered and implemented, there are always factors outside your control that can influence the outcome of any plan. This applies to non-profit organizations in the sense that there are economic, social, and psychological factors that influence whether or not potential donors are willing to give a gift as well as how much the gifts donors are giving amount to. The following section will outline a variety of different factors that are outside the control of charitable organizations’ that influence the amount they are able to fundraise.

A PEST Analysis (Sargeant 2010) can be used in order to determine the factors that will most likely influence the performance of non-profit organization under different circumstances. Figure 2 outlines the four areas of observation.
Political

Can affect how non-profits are run and sometimes the nature of fundraising rules and regulations in general

Economic

Trends in wealth, employment tax, consumption, and disposable income affect donor behaviours

Sociocultural

Differences in behavior and values between races, religions, and families in general will influence the level of gifts people are willing to give

Technological

Impact of advancing technology will change the way non-profits function

| Figure 2 – PEST Analysis |

It is important to note these factors and take into consideration how they might change when organizations are deciding how, when, and who to ask for money. The following analysis is aimed to address specific components of the PEST Analysis and go into greater detail about the most prominent factors affecting fundraising today.

Generational transitions change the mindset of the primary donors of an organization. As was examined in the previous section dealing with fundraising strategies, the increase in online donors is due to the fact that technology is becoming more advanced and the younger and middle aged generations are handling more of their transactions online. The change in generations not only affects the way that donors are making their gifts, but also the amount that they are giving to non-profit organizations. With the baby boomer generation aging, there will be a high increase in the number of retired Americans which has historically shown that these people have more time to devote to volunteer work. This will greatly benefit non-profits because an increase in volunteers is inversely related to the wage expenses they are responsible for paying. With fewer expenses, non-profit organizations will be able to distribute more funds to the cause they are supporting rather than using the money to cover their costs of business. Since members of organizations are typically the ones that demonstrate the most passion toward the cause, these retirees that are beginning to volunteer will also become more likely to donate money. While the baby boomer generation will have a positive impact on non-profit organizations in the next decade or so, it is no secret that these people will not be around forever. Charitable organizations that enjoy the benefits of an increase in volunteers and donations will need to construct a plan to promote the participation and support of younger generations in supporting their cause once the elderly population declines.
The number of retired Americans is the largest it has ever been because of the baby boomers aging. “The group of retired Americans will transfer from $8 to $12 trillion to the next generation in the next 15 to 20 years. With this huge intergenerational transfer of wealth, not-for-profit organizations are investing more of their resources in planned giving programs” (Weinstein 2002). It is common for charitable organizations to have programs where donors can set up automatic donations throughout the year as well as informational resources regarding how to set up your will to include a clause about donating money to the organization. If non-profits can spark interest in both of these programs among the elderly, there will be an extreme increase in fundraising. Although it is more common for people to gift their money to their relatives when they die, there is becoming more interest in gifting a portion to charity as well. This is especially true for people who are historical supporters of a particular organization and believe that a final donation is the perfect way to leave their mark after their death.

The counter-argument for the baby boomer generation aging is that there will be an increased need for spending by charitable organizations to support those individuals who are suffering from diseases. In the American Cancer Society’s case, there are certain types of cancer that typically occur in people over 50 years old which will mean that there will be an increase in people getting diagnosed with cancer as they are aging. With the size of the aging population, this number will be higher than numbers that have been seen in prior years so while some baby boomers will have more time and money to give to charities, there will also be an increase in the number of people in need of support. Hopefully those individuals who are aging and turning to volunteer work to pass their time will greatly outnumber the amount of people who are diagnosed with illnesses and need support from charities.

Another generation that is providing hope for non-profit organizations are people in their 20s and 30s who are looking to live more balanced lives by getting involved in charity work. The push for balance between work, socializing, faith, and giving back to the community is something that is being heavily promoted in society. Younger generations are looking for something more meaningful in their life than just their jobs and material possessions. Becoming volunteers or donors to non-profit organizations seems to fill this desire to help others. There is also a greater understanding and concern about how the actions of people today will impact future generations. This can be seen by the push to “Go Green” and improve the environment and the hope that fundraising will be used to find cures to the countless diseases that are not yet treatable. It is becoming more common for people to think about how their kids and grandkids will be affected by the events happening today.
Society has seen an increase in entrepreneurs who are straying away from the corporate world and choosing to start their own businesses. This is something that can hurt non-profit businesses because a lot of people are using their money to invest in their own companies rather than donating their money to charity. This is especially true as start-up companies are in the early stages of development and there is not a lot of extra funding to invest anywhere besides business needs and personal expenses. The increase in entrepreneurs does not have an entirely negative effect on non-profits because of the notion of corporate responsibility. Businesses are under a lot of pressure to give back to the community in order to improve their image and maintain or increase sales. The interest in donating to charity has become the “right” thing for businesses to do since the 20th century so even though it is not always out of a pure interest to better the community, non-profit organizations will still benefit from this. Along with the positive image that charitable gifts provide for corporations, they also receive tax benefits for them which is another incentive for non-profit involvement at the corporate level. If a corporation is partnered with a non-profit organization, or even just involved through donations or participation in events, it is beneficial to their image as well as the charity. “The development of regular giving programs by companies began in 1936 with what Hayden Smith refers to as the modern era. It was in 1935 that the Internal Revenue Code was amended to allow for deductions by companies for charitable gifts supporting the promotion of business purposes” (Weinstein 2002).

Economic factors play a significant role in the way consumers behave which impacts the amount donated to charity. “When adjusting for inflation, giving usually increases in non-recessionary years (over the last forty years, giving has grown an average of 4.3 percent per year in non-recessionary years) and slightly contracts in recessionary years” (Weinstein 2002). In times of recession it is important for organizations to focus heavily on their mission, creativity in fundraising, and engaging members within the organization in hopes of staying afloat during tough times. It is crucial to take the phrase “any amount of money (donation) helps” very literally because non-profits will see the typical $50 household donation decrease to $25 in times of economic downturn. Understanding that everyone is suffering and adjusting their habits during a recession or tough economic times will help non-profits remain optimistic throughout the period of declining donation amounts and total fundraising levels. If charities can focus on not asking people for an outlandish amount of money, people will not be as turned off from donating and will be likely to comply with the organization’s wishes for a smaller donation amount (Weinstein 2002).
Just as all businesses try to stay alert and aware of factors that influence business functions, this is no different for non-profit organizations. Using the PEST analysis (Sargeant 2010) along with other techniques and research, non-profit organizations should be able to get a concrete understanding of the threats that are relevant to them and be able to react in ways that foster success. Assuming that charity organizations take the time to make and implement contingency plans for changes in factors such as the economy or the political regulations in the country, they will be able to maintain interest in the organization and keep encouraging donors to give gifts. Future planning is imperative to the success of non-profits and the ability to employ dedicated workers and volunteers will help ensure that any major changes in society do not lead to the downfall of the organization.

**Event Specifics**

Non-profit organizations tend to have a lot of success when they host special events relating to their cause because it creates a lot of interest at once and usually brings in a significant amount of money. There are certain steps to take when organizing and promoting an event to maximize the fundraising achieved. Aside from fundraising, non-profits also focus on the amount of participants present at the event and hope to maximize this as well. Contrary to the act of regular fundraising promotions, special events aim to spread awareness about the cause more than a poster or an email would provide. Non-profit events are an excellent way to gain supporters and a fun way for them to get involved so it seems more like a recreational activity than work to participants. If the event is able to become a social gathering then people will be more apt to bring their friends and family.

The marketing involved in promoting a special event is very similar to the techniques used in promoting the organization in general that were outlined in the Fundraising Strategies section of this study. The only difference is that the message being communicated is more specific because while the materials will be stating the mission of the charity, then going into further detail by explaining the special event and encouraging participation. Having a good balance in all forms of advertisements between the mission of the organization as a whole as well as the details about the event will make people want to participate. People will not participate if they do not understand the cause and people will not participate if they do not understand what the event is, so in order to get participation in the event, both issues need to be addressed in all forms of advertising.

Special events require volunteers to run them and make sure everything is going smoothly. In order for this to be successful, the volunteers must know all the event details and understand what they are
supposed to be doing and saying before the event to prevent confusion among participants. This requires proper communication and training. While most of the donations are typically collected before the event, volunteers have to understand that the image portrayed by the event itself and the way in which it is run will influence on-site donations as well as future donations from event participants and their donors.

The media is a great way to promote special events because the advertisements are able to reach so many different people. Although segmentation and targeting techniques are used to determine who the main participant and donor groups will be made up of, it is hard for an organization to know exactly who will be interested in participating in a special event. Events involving athletics, such as a cycling fundraiser, will likely aim their advertisements at established bikers and other groups of athletes. This will probably be where the majority of their participants come from but it is impossible to know if someone who has never even ridden a bike before would be interested in learning and working toward a fitness goal would be interested in getting involved too. Non-profits should try to get news sources to promote their event and say good things about the organization in a medium where a lot of people will see it and feel inclined to participate or donate. The message must be portrayed clearly especially since it is being relayed through other people and not directly from the organization itself and any press releases given to the general public should be well written and free from errors. It is usually harder to attract attention to a non-profit’s ad than to another company’s so it is crucial that the message is concise and people are drawn to it.

Events involve a significant amount of planning. The easiest way to tackle this is to have lists of everything that needs to be accomplished and to delegate specific tasks to different people or groups to make sure everything gets done. Some of the main things to consider are the location, any food that will be served, employees or service people needed, a reception area, and the specific schedule about how the event will run. The location of the event should be one that can accommodate all the participants and is accessible to everyone. When planning the food to serve, organizations need to take into consideration that there will be vegetarians, and people with allergies and other food specifications in attendance. It would be a shame to lose participation in the event simply because there are no vegetarian options for people to eat. The reception area should be easy to find and well organized. If everything appears to be running efficiently, people will not get discouraged by waiting in line too long or given the impression that the event is not well planned. The people working at the
check-in area should understand and be able to effectively communicate every aspect of the event because participants will have a lot of questions when they check in.

The staff of the event will set the pace for the entire day so they must maintain a positive attitude the entire time. The success of the event will relate directly to how the leaders of the event are acting and whether they are keeping people excited about what’s going on and keeping everything on schedule. Just as the people closest to the organization have to show the most passion for the cause to make people want to donate, the people in charge of the event have to show the most enthusiasm about the cause and what the event is hoping to accomplish to keep participants engaged and willing to stay for the duration of the event. Participants should leave the event feeling impressed by the food, events, activities, staff members, and any give-away items that they received. It is always a good idea to offer participants freebies like t-shirts, water bottles, pens, etc. because it will give them something to remember the event by and an item in return for their help as a participant and fundraiser. In addition to a favor, all participants and donors should be thanked in some way following the event. Non-profits need to remember that these people gave up their time and money to support the cause so it is important to make sure they know that they are appreciated. This appreciation is the first step in getting people to return to the event next year and continue making donations to support the organization.

Events that are hosted annually are usually attended by repeat participants who encourage other members of their family and friends to attend the event with them every year. Even if an event starts very small the first year, the non-profit should not give up because these participation and fundraising numbers will grow exponentially from year to year if the same original participants come back and bring more people with them while also increasing their fundraising goals yearly.

The next section will discuss specific events that have been held by charity organizations that are similar to the American Cancer Society in the sense that they are health oriented non-profits with the goal of finding a cure for a particular disease. The special events hosted by these organizations are similar to Relay for Life and the research and conclusions drawn from the following case studies can be applied to the research I have done in this study.
Case Studies of Special Event Fundraisers for Disease Focused Non-Profits

Avon Breast Cancer 3-Day Walk

The Avon Breast Cancer walk is a three day event where participants walk 160 miles to raise money for breast cancer research. The relationship between Avon and this breast cancer walk is a prime example of corporate cause-related marketing. “Corporate cause-related programs that include consumer participation first began to evolve in the 1980s, and became known as cause-related marketing” (Edwards 2008). Typically events that are partnered with a large company are more successful if the company’s mission and the mission of the non-profit event coincide. “Avon’s Breast Cancer Crusade is a clear instance in which the cause and the company are easily linked, in part because the relationship clearly makes sense – a ‘company for women’ and a ‘women’s issue’” (Edwards 2008).

This event requires more than just half-hearted participation interest. Walkers make a significant commitment to walk 160 miles when signing up for the 3-Day and this event is certainly not for the faint of heart.

“Walkers volunteer their bodies, physical stamina, and their fundraising capabilities; they spend months preparing to walk in the name of breast cancer, for Avon. Training in Avon t-shirts and wearing ‘Ask me about the 3-Day buttons, walkers become spokespeople for the event, breast cancer, and Avon” (Edwards 2008).

Using the participants as marketing tools is something that many non-profit organizations are beginning to do because of how effective this method is at gaining interest in the event and also increasing participation numbers. By simply providing each participant with a t-shirt or a button advertising the event, Avon is able to save a lot of money on other advertising materials because the walkers are promoting the event without much effort.

The study done on the 3-Day walk examined the reasons that people sign up for the event and also how they go about collecting their donations and what donors are thinking when they decide to give money.

“[Walkers’] consideration about whether or not to walk; their assessment of their physical capabilities; their decision to register; frequently, a months-long process of training and raising money; the 3-Day Walk itself; and finally a ‘looking back’ on the Walk and discussing it with others were all part of the 3-Day Walk experience” (Edwards 2008).
This event is an example of how planning is crucial from start to finish because of the impact that the event has on participants. Walkers value the entire experience of the 3-Day Walk so Avon and the planning committee have to pay special attention to even the smallest details to ensure that the 3-Day is more than just an event, and that it is an experience that walkers will never forget and be proud that they participated in.

All participants in the 3-Day walk are encouraged to fundraise for the cause they are supporting and this study examined the types of donors that were likely to give to walkers and the main ways walkers found success while fundraising. When interviewed, the general consensus among walkers was as follows:

“Do donors give money to support the cause? To support the walker? Both? Or do they donate for some other reason?...walkers believe their friends and family are supporting them as individuals, while others are supporting the cause through them...walkers see themselves as both raising money so they can participate in the physical challenge of the 3-Day Walk, and raising money to support breast cancer” (Edwards 2008).

As is common with athletic based non-profit events, participants are more likely to join and fundraise because they are getting some sort of benefit out of the event while raising money for a good cause. As can be seen in the following analysis of the Lance Armstrong Foundation cycling events, different people are drawn to different aspects of non-profit athletic fundraisers: some participants simply want to participate in the athletic challenge, others are in it to support the cause associated with the event, and others participate for a combination of both of the subsequent reasons to raise money for a great cause and benefit from the event physically as well.

*Lance Armstrong Foundation Cycling Events*

Just as the Avon 3-Day Breast Cancer Walk’s main focus was providing participants with a well-rounded experience, the Lance Armstrong Foundation strives for the same thing with their cycling events. These events are another example of a non-profit special event that requires physical ability and not simply participation. The article “It’s Really Not About the Bike: Exploring Attraction and Attachment to the Events of the Lance Armstrong Foundation” examines the reasons people choose to participate in these special event fundraisers. The data collection process included interviews with participants regarding their reasons for participating in a specific Lance Armstrong Foundation event. The article comes to four different conclusions about why people participate in special event fundraisers.
The first reason found in this analysis why people participate in special event fundraisers is because people want to participate in a social event with the opportunity to meet other people and have fun with friends and family. “Really, I’m looking forward to the entire weekend. I mean, it’s a really fun weekend. I take my kids out to the kid’s event, we go to the Expo, we get up early and go to the ride. Meeting people and making an entire weekend out of the event,” (Filo 2008) remarked one participant when asked his reasons for cycling in a Lance Armstrong Foundation event. While some participants use the event to spend time with loved ones they already know, some use it as a networking opportunity to connect with people they have never met before based on their shared interest of cycling, the fight against cancer, or both. One participant said, “I don’t know a lot of people and that’s one of the reasons I want to do this event. I want to meet people that have the same values and interests that I have” (Filo 2008).

Another reason people participate in special event fundraisers is because they believe that getting involved in community service opportunities will make them a better person and give them goals to work towards. Not all of these goals focus on the actual fundraising done for the non-profit. Sometimes people participate in these special events that are athletic to get in shape. One participant remarked:

“A sense of getting off your butt out of the chair and sofa...but when you see people doing that, you know, for these events, you have to do a lot more than just sit on your sofa, you’ve got to get up and do something. There are plenty of people out there who think ‘just tell me how much money you want and go away.’ And a lot of people we go ask for money say the same thing, but at least I’m doing something besides raising money, we want to do something else and be active” (Filo 2008).

Participating in a special event provides people with the feeling that they are getting something out of their efforts to raise money. People are also influenced by the physical challenge that special athletic events provide because it brings out a competitive edge in participants and becomes a game that people are engaged in.

The idea of reciprocity is a factor that influences people to participate in events for specific non-profit organizations that they feel a connection to. If someone has been affected by a certain disease, they are more likely to participate in fundraising activities that benefit an organization that is focused on providing funding for research and other resources dealing with the disease. If someone has been personally affected by the disease, they believe that they owe the organization their time and
fundraising efforts as gratitude for assistance they received. One participant that was a cancer survivor states, “my family has actually seen benefit from the money that the Lance Armstrong Foundation has spent for an organization, Wonders and Worries. So the Lance Armstrong Foundation, I believe, is really doing well with the money we are raising for them” (Filo 2008). The participant shows their support and thanks for the Lance Armstrong Foundation through his participation in their events and his fundraising efforts to support the organization because he has seen direct support through funds raised by the foundation.

The final participation reason that was found through the study of the Lance Armstrong Foundation is the fact that special events in support of research and funding for a particular disease give survivors of the respective disease an outlet that helps them cope with their experience. When people feel surrounded by others who have fought, or are fighting, the same battle as they are, connections are formed and people are reassured that they are not alone in their battles. One woman, a cancer survivor, participated in the Lance Armstrong Foundation events to cope with her cancer experience:

“I somewhat blocked out my cancer experience psychologically and didn’t want to deal with it. But participating really helped me kind of face it and deal with it. So, I guess it’s really helped me talk to other people about it...I think it’s a good thing, personally, to talk about it, and this event provides an outlet for this” (Filo 2008).

Support groups for people battling diseases exist across the country, but sometimes it is more therapeutic for people to cope with their diagnosis in a public setting where an event is taking place to divert their focus away from their disease and the negative things. Focusing on the positive outcomes special events bring like providing a fun and relaxed atmosphere to interact with people who share a common battle in their lives helps people cope with their cancer experiences.

Overall, the trends found by research on the Lance Armstrong Foundation’s special cycling events are trends that can be seen in most fundraising events of similar nature. The advantage of hosting events that provide a variety of different opportunities for participants is that people of diverse backgrounds are likely to participate. Using the Lance Armstrong Fundraisers as an example, these events are able to draw in people passionate about the fight against cancer and people who are interested in cycling. Some people’s purpose for participating is to ride in a bike race and others are focused on the fundraising aspect. Regardless of where the interests of participants lie, the most important thing is that special events hosted by non-profits are benefitting from high participation levels because as participation increases, so does fundraising.
The article, “The Meaning Behind Attachment: Exploring Camaraderie, Cause, and Competency at a Charity Sport Event” also partially focuses on the Lance Armstrong Foundation’s cycling special event fundraisers. In general terms, the article discusses special event fundraisers as a whole and comes to conclusions such as, “the rise in popularity of charity sport events has coincided with record highs in charitable giving in the United States. Individual donations reached an all-time high in the US in 2004” (Filo 2009). The article lends this rise in donations to non-profit organizations through special events because donors are more inclined to donate when they have a connection to someone participating in a special event. For example, if someone’s neighbor is participating in a non-profit special event, they are more likely to donate to them as support than they are likely to donate to a charitable organization they have absolutely no connection to through mailing or phone campaigns. “Charity sport events have become valuable resources for charitable organizations. The most successful charity sport event in the world, The American Cancer Society’s Relay for Life, generated over $350 million in 2006” (Filo 2009). The article discusses an increase in special event fundraisers across the country due to the success that some organizations have experienced. Relay for Life has been around for almost 30 years and the American Cancer Society has brought in a total of $4.5 billion through all of the cumulative events held since 1985. The American Cancer Society, along with other non-profit organizations that host special events, has set a precedent for non-profit organizations today. With so many charities hosting special events, any non-profit organizations that do not include this tactic in their fundraising initiatives will not be as successful because donors feel less connected to the organization if they are simply writing a check and not participating in any type of event.

This article discusses three major themes that are related to the attachment people feel towards non-profit organizations. The author calls these themes the Three C’s: camaraderie, cause, and competency.

“Three themes related to attachment to a charity sport event emerged from the data. Camaraderie is represented by the solidarity and friendship highlighted by participants. Cause is characterized by the greater goals of participants to raise awareness and support the charity, as well as the inspiration derived from participation” (Filo 2009).

Camaraderie is defined by the article as the connection and relationships participants share through participation that reflects emotional meaning. “Well, everybody’s on a mission and everybody’s working together. And everybody is really supportive, extremely supportive. You know you go on
bike rides and people have different agendas, but here everyone seems to have the same agenda, which is great,” one participant of a Lance Armstrong Foundation cycling event said in regards to the bond he felt between his fellow event participants (Filo 2009).

Cause is defined by the author as the self expression, greater goals, and inspiration provided by event participation that embodies symbolic meaning. A lot of people would not normally participate in the bike ride if it were not for the cause but since participants know the money is going to a worthwhile place they are more likely to participate. The article contains an interview with a cycling event participant who states: “the inspiration provided allowed participants to push through the challenges presented during the event. Matt [participant of Lance Armstrong Foundation event] mentioned that the heat and weather conditions affected his performance in the event, but stated that he had to, ‘suck it up, and just deal with it,’ before adding, ‘I was sucking it up for people who aren’t here to suck it up anymore. I’m here for people who would give anything to be back here and dealing with minor things like the weather” (Filo 2009).

Competency relating to participation in special fundraising events is defined as the sense of achievement and physical challenge related to training and completing the event that has functional meaning. Basically, people participate because cycling is a healthy activity.

“Participating in the event, and the training the event required, was viewed as a physical challenge that was enjoyable and contributed to participant attachment. Individuals felt a connection to the physical activity, and participating in the event allowed them to take part in this activity, which contributed to attachment to the event” (Filo 2009).

In regards to charity sports events, and the Lance Armstrong Foundation’s events in particular, the three factors contributing to a successful event have been found by this article to be camaraderie, cause, and competency. With these three factors working together equally, it is assumed that special event fundraisers will be successful and that participants will feel fulfilled and be grateful for their experience in an event aimed at supporting a good cause.

**Segmenting Volunteer Fundraisers**

The article, “Segmenting Volunteer Fundraisers at a Charity Sport Event” discusses participation and success of the MS Society’s bike tours, another non-profit special event. The article’s analysis of non-profit organizations in society is such, “as charitable organizations typically operate within limited
budgets, the retention of organizations can cost considerably more to attract a new donor or fundraiser than it does to retain a current donor or fundraiser,” but “a person who has a desire to raise funds for a specific charity may be more attracted to an event that allows him/her to also engage in a personally meaningful activity” (Wood 2010). The article is based off of this concept that hosting special event sport fundraisers is extremely beneficial to charities because it increases the pool of possible participants.

This article discusses the fact that participants at special event fundraisers are choosing to attend the event because of their tie to the activity that is going on. “In the context of a charity sport event, people are motivated to raise funds and attend the event based on a related identity, namely a fundraiser identity or a sport identity” (Wood 2010). Just as participants in the Lance Armstrong Foundation cycling events stated that their interest in the sport played a role in their decision to participate in the event, participants of the MS Society’s bike tours feel the same way. Participants also feel a connection to the cause, which is another factor that influences participation. This type of devotion to a cause is classified as behavioral loyalty which is when people remain engaged in the sport and the charity for longer when the cause is something that the participant can relate to and they believe they can make a difference.

Participants are motivated by a number of different things, as the analysis of other special events has shown.

“A number of motives have been identified that include helping others, promotion of the cause, physical activity, socializing, and escape…rather than a subculture dedicated solely to the sport activity, or the charitable organization, event participants seem to align with a subculture that represents a hybrid of these elements” (Wood 2010).

The article discusses how charity sport events appeal to volunteer fundraisers because it provides them with “an opportunity to engage in two personally meaningful activities simultaneously” (Wood 2010).

The MS Society bike tours is a one or two day cycling event ranging in length from 30km in Toronto to 190km in Ontario. The marketing and promotion of these events is specialized to attract the widest variety of participants possible. The director of the bike tours believes that:

“If charitable organizations want to maximize participant numbers by attracting most target markets, events need to be designed to reach participants who do and do not identify with the
sport at hand. Event managers could accomplish this through the promotion of both sport and cause fundraiser identities” (Wood 2010).

When it comes to the actual design of the event, the MS Society bike tours pride themselves on the fact that participants can choose from a variety of different bike routes to accommodate their physical capabilities in order to get the highest participation rate possible. By providing routes of all different lengths, the MS bike tours appeal to more people than they would if there was only one route available to participants.

In order to keep participants coming back to the MS Society bike tours year after year, the top fundraisers are announced at the end of the event. When an event is organized in this fashion and fundraisers are rewarded for their efforts, participants are encouraged to raise more money and participate again in future years to strive towards a certain fundraising goal or a longer length route (Wood 2010).

Case Study Conclusions

As a result of research done on different special event fundraisers held all over the world, the most common themes that increase participation and fundraising is the fact that participants are provided with a dual purpose event – they can raise money for a worthy cause while participating in a sport that interests them. By providing varying opportunities that special event fundraisers do, a wider audience is attracted to the event. Another common theme is the fact that donors support participants of special events for different reasons which means that a wider range of donors can be reached than a non-profit would be able to reach with a more traditional fundraising campaign. Donors find motivation to support participants because they support the non-profit’s mission, they have a connection to a participant, or both. The keys to success of special events hosted by non-profits seem to be that they provide a variety of reasons for participation as well as donations. Participants feel as though they are benefitting from the event, and donors are confident in their support not only of a person they are connected to, but a cause that is worthy as well. In today’s society, so many non-profit organizations host special event fundraisers that it is hard to run a successful non-profit without also hosting a special event at some point throughout the year. The following section will discuss the history of the American Cancer Society and their main special event fundraiser, Relay for Life.
The Numbers Behind Celebrating More Birthdays: An Analysis of the American Cancer Society’s Relay for Life
Senior Capstone Project for Eva Mahan

History of The American Cancer Society and Relay for Life
Cancer is formed from normal cells in a process called carcinogenesis which allows the cancerous cells to grow. These cells have the capacity for unlimited growth and they do not necessarily grow faster than normal cells but they are immortal and steal the nourishment from normal cells in the body. The cancerous cells typically start their development on the outer or inner surfaces of organs. Cancer can be prevented if these cells are detected early enough but then often grow silently before becoming a tumor with noticeable side effects. Even small tumors can be fatal if they disrupt the function of a vital organ and the longer the cancer goes untreated, the more lethal it can be. If untreated, cancerous cells will continue to grow and form new tumors. The process of these cells travelling through the body, colonizing, and continuing to grow is called metastasis. Cancer is most curable before metastasis when the spread is primarily regional.

There are four different kinds of treatment for cancer including surgery, radiation which targets specific areas of the body, chemotherapy which are anticancer drugs that can be taken orally or by injection, and immunotherapy which is the process of strengthening the body’s immune system. Additional medical procedures can be done to assist in the functioning of these four main treatment options depending on the type of cancer the patient is being treated for. The most important part in the fight against cancer is the awareness that can be spread because if people are able to realize the first signs of cancer and seek out assistance from a doctor as soon as possible, there is a greater chance of curing the disease before it gets out of hand.

The idea of voluntarism is people coming together on their own free will to help each other. This is the concept that the American Cancer Society was founded on in 1913 by 15 men. The organization was originally called the American Society for the Control of Cancer and at the time it was founded, most doctors believed that cancer was incurable. As the years passed and the organization is now celebrating its 100th birthday, what seemed impossible back then is appearing to be more reasonable now.

People have many different reasons for volunteering in this organization but most stem from the common connection to cancer in some way. Volunteers usually include survivors, people who are currently fighting cancer, people who have lost loved ones to cancer, and physicians who want to see a cure. The organization is mainly funded by private donations and the fundraising is done by staff and volunteers, not by a professional exterior organization. The majority of donations come through
mail campaigns and the Relay for Life events held in the spring around the world every year. The American Cancer Society does not accept money from federal, state, or local government and other than certain special projects, there is no jointly funded research done with government agencies. Any special projects that are jointly funded are done in conjunction with the National Cancer Institute which is federally funded.

The president of the American Cancer Society is always a physician that serves a one year term and the Board of Directors typically stands at about 120 people that are a mix of physicians and professionals. There is a common misconception that the American Cancer Society is focused solely on research but they have a large task of educating the public about the risks and preventative measures associated with cancer. The organization aims to educate doctors on the latest symptoms, diagnosis, and treatment facts so that patients are always given the most up to date information. They also provide services and rehabilitation facilities and assistance to patients and their families.

The American Cancer Society prides themselves on being able to provide a variety of services to people who have been affected by cancer. The organization has a 24-hour phone number that people can call for any reason relating to cancer in order to request information about the organization, information about cancer, and counselling during a tough time. Calls do not have to be made solely by patients. Friends and family members who have been adversely affected by the diagnosis or death of a loved one are also encouraged to call with any questions they have and to get support while they go through a difficult time.

Aside from the 24-hour hotline, the American Cancer Society provides a variety of different services that reach all different types of people with varying ties to cancer. The following figure outlines the different services offered by the American Cancer Society and contains a brief description of what each service entails.

- Services offered by the American Cancer Society
  - Road to Recovery – a service where individuals can sign up to drive cancer patients to treatment if they do not have another ride available to them
  - Hope Lodge – lodging facilities located near hospitals that provide free housing to cancer patients and their families while they are undergoing treatment if they live too far away to commute back and forth to the hospital they are being treated at
Look Good, Feel Better – Initiative to help women who have lost their hair cope with their new appearance – wigs are provided as well as beauticians giving women make-up tutorials and providing patients with a bag of beauty items they can take home with them

Daffodil days – people can purchase daffodils to keep or gift to someone with all of the funds raised going to the American Cancer Society

Coaches vs. Cancer – NCAA basketball coaches and players participate in a week long initiative to raise awareness and funds for the American Cancer Society – this week can be identified by the coaches wearing sneakers with their suits during games instead of their normal dress shoes

Educational classes – aimed to educate people on techniques that can be used to prevent cancer or ways to detect the disease early

Support groups – sessions where patients and their families can go to meet with other people in similar situations to understand that they are not alone and to provide them with a coping mechanism to deal with this difficult time in their lives

Events hosted by the American Cancer Society

Making Strides Against Breast Cancer Walk

determiNation Marathons, Half Marathons, and Triathlons

Relay for Life

In today’s society, a lot of non-profit organizations do not actually donate as much of the funds raised to the cause they are supporting as people believe. The American Cancer Society celebrates the fact that $0.77 of every $1 raised actually goes towards the cancer programs listed above as well as cancer research (Charity Navigator 2012).

Relay for Life is the American Cancer Society’s largest fundraising event that is held annually in communities around the world and over 40% of the total fundraising done by the American Cancer Society each year is attributed to Relay for Life. The event was started by Dr. Gordy Klatt, a colorectal surgeon that had a passion for running marathons, in May of 1985. Klatt circled the track at Baker Stadium at the University of Puget Sound in Tacoma for 24 hours covering more than 83 miles. His family and friends donated $25 to walk or run with him for 30 minutes and he raised $27,000 to donate to cancer research. About 300 people came to support Klatt and after the event, he put together a committee to organize the first City of Destiny Classic 24-Hour Run Against Cancer. In the
following year (1986) 19 teams participated in the relay event and raised $33,000. Since then the concept of a 24 hour relay type event has turned into Relay for Life.

There are now over 5,200 Relay for Life events in the United States and more than $4.5 billion in fundraising has been done for the American Cancer Society through these events since the inaugural year in 1985. Relays for Life events are hosted on a track and participants spend time walking laps as well as participating in various activities throughout the day and night. Participants form teams of their friends and family and it is a very social environment where people can enjoy spending time together while doing work for charity. It is the goal of each team to have someone walking throughout the entire event to show their support for the fight against cancer. The event is broken up into three main parts that are universal to all Relay for Life events, no matter where they are located.

The event opens with the Survivor’s Lap where cancer survivors, and people currently fighting cancer, walk around the track together in their purple survivor t-shirts and celebrate their fight and victory over the disease. Caregivers are also welcomed to walk with the survivors in this lap that serves as the kick-off for Relay for Life. The Luminaria Ceremony is the second phase of the event which starts after dark and is used to honor people that have fought cancer and those who are still fighting. Candles are lit and placed inside of white paper bags that are decorated by participants and placed all around the track. The Fight Back Ceremony is aimed at inspiring participants to get involved in fighting back against cancer and showing a commitment to take action to protect themselves and others from cancer. Participants take a year-long pledge to inspire people to continue their passion for the fight against cancer beyond the Relay for Life event.

Relay for Life as a whole is symbolic of a cancer patient’s journey through the disease. The first segment is very hopeful and filled with lots of encouraging success stories but eventually, as the sun begins to set, participants start to get tired and doubt their ability to make it through the night. Just as people are at their breaking point, the Fight Back Ceremony provides a glimmer of hope as the sun is starting to rise that there will be an end to the journey through the fight against the disease and participants are rejuvenated to keep walking and supporting the cause. Most fundraising for Relay for Life is completed before the event date by participants asking for donations from the public. There are often on-site fundraisers that teams host by selling items or providing some type of a service to other participants.
Data Analysis

The purpose of this study is to measure both the quantitative and qualitative variables that play a role in determining how successful specific Relay for Life events are. Success will be measured by various different dependent variables that are all based on the total fundraising level achieved by the college or university. When raising money for a cause as prominent as the fight against cancer, the most important thing to result from events is the amount of money collected and awareness spread. Since it is nearly impossible to measure how much awareness of the disease increased as a result of a Relay for Life event, it only makes sense to measure success based solely on donations collected. If colleges and universities can implement changes in the way their event is planned, advertised, and run based on the results from the following data analysis hopefully they will be able to increase the fundraising level reached.

Data was collected in a variety of different ways. One set of data, which applies to all 54 schools in New England that host Relay for Life events, was obtained from the American Cancer Society. This data set contains event specific information including variables such as the 2012 fundraising goal, number of participants, number of emails sent to participants prior to the event, the percentage of online donations collected, etc. The second data set is information that is specific to each college or university that hosts a Relay for Life event. This data was compiled using statistics found from The College Board website. This data set contains information such as the graduation rate, total cost of tuition, average financial aid package awarded, demographics of the student body, percentage of students living on campus, etc. These two data sets contain information for all 54 schools in New England that host a Relay for Life event and regression analysis was performed for these variables using Intercooled Stata software.

The second method used for collecting data was performing surveys and interviews with Relay for Life committee members from various schools in New England. Statistics were collected this way for twelve schools and the data set contains both quantitative and qualitative variables. The quantitative variables in this data set were analyzed using regression analysis in the same way that the data from The American Cancer Society and the College Board were analyzed. The qualitative variables were analyzed using a case study analysis technique by comparing and contrasting variables from different schools in order to find patterns.
The following outline displays each of the independent variables obtained through the various data collection methods. This list also contains the relevant hypotheses made in relation to each independent variable before data analysis began.

- Independent variables pertaining to Relay for Life available for all New England colleges and universities that host a Relay for Life event obtained from the American Cancer Society (54 schools):
  - State event is held in
  - Date of event
    - Hypothesis – Events held later in the year will be more successful because committees will have more time to plan the event and encourage participants to fundraise.
  - Emails sent to participants from Relay for Life committee prior to event
    - Hypothesis – There will be a positive correlation with net funds raised if participants are more aware of the event details and fundraising strategies.
  - Amount of online donations
    - Hypothesis – There will be a positive correlation with net funds because it is easier for people to go online and donate rather than taking the time to write a check or get cash to someone.
  - Amount of offline donations
    - Hypothesis – There will be a negative correlation with net funds because this method of donating sometimes takes more effort on the part of donors which might make them less likely to donate money, or to decrease the amount of their donation.
  - Total number of participants
    - Hypothesis – There will be a positive correlation with net funds because if there are more participants at the event, they will likely raise more money.
  - Initial fundraising goal
    - Hypothesis – Schools with a higher fundraising goal will likely experience more success in fundraising than schools with a lower fundraising goal because the goals are based off of the funds raised in the prior year. If the school was able to raise a high level of funds previously, they are more likely to be able to raise a high level of funds in the current year as well.
• Independent variables pertaining to college specific statistics available for all New England colleges and universities that host a Relay for Life event obtained from The College Board (54 schools):
  o Undergraduate population
    ▪ Hypothesis – There will be a positive correlation to net funds because schools with a bigger undergraduate population will be able to draw a higher participation rate which should mean that they are able to fundraise more than schools with a smaller population.
  o Setting of college campus
    ▪ Suburban
    ▪ Urban
    ▪ Rural
  o Graduation rate (% of students who graduate within 6 years)
    ▪ Hypothesis - Schools with a higher graduation rate likely have students that are more passionate and involved in extra-curricular activities than schools with a lower graduation rate so it is likely that graduation rate has a positive correlation with net funds raised.
  o Average amount of financial aid received
    ▪ Hypothesis – Schools that offer greater financial aid packages will have lower net funds raised because if students need a high level of financial aid to be able to attend a school, they might not have enough disposable income to donate towards non-profit organizations.
  o Total cost of tuition
    ▪ Hypothesis - There will be a positive correlation with net funds raised because if students are able to afford to go to a school that is more expensive, they are likely to have extra money that they can donate towards non-profit organizations.
  o % male students versus female students
  o % of out of state students
  o % of white students
  o % of black students
  o % of Asian students
  o % of Hispanic students
The Numbers Behind Celebrating More Birthdays: An Analysis of the American Cancer Society’s Relay for Life

Senior Capstone Project for Eva Mahan

- % of students that live on campus
  - Hypothesis – There will be a positive correlation with net funds raised because if more students live on campus they will be more exposed to campus events and will be more likely to participate which will lead to a higher level of fundraising.

- Greek life activity on campus
  - Hypothesis – There will be a positive correlation with net funds raised because of the philanthropic requirements of Greek Life organizations.

- Division classification of athletic program

- % of part-time undergraduate students
  - Hypothesis – There will be a negative correlation with net funds raised because part-time students are probably not as involved with events on campus as full-time students are.

- Independent variables specific to schools that were surveyed and interviewed (12 schools):
  - Event venue (indoor or outdoor)
    - Hypothesis – Outdoor events will have a higher net fundraising level because the event is able to be more active and if the weather is nice there will be a high level of participation which typically leads to higher funds raised.
  - Recent cancer impact on campus (faculty, staff, or students recently diagnosed or passed away)
    - Hypothesis – There will be a positive correlation with net funds raised because if people have been directly affected by cancer, they are more likely to want to make a difference by participating in Relay for Life and fundraising in hopes to find a cure for the disease.
  - Number of years the school has hosted Relay for Life in the past
    - Hypothesis – There will be a positive correlation because schools with more experience hosting an event will have experienced economies of learning by being able to improve the planning and execution of the event year to year once they have experience running it and have seen possible things that can go wrong.

- On-site fundraisers hosted at the event
The Numbers Behind Celebrating More Birthdays: An Analysis of the American Cancer Society’s Relay for Life
Senior Capstone Project for Eva Mahan

- Hypothesis – Schools that allow on-site fundraising to be done will be able to raise more money because a lot of funds will be donated the day of the event to teams hosting bake sales, t-shirt sales, crafts, games, etc.
  - Early registration incentives
    - Hypothesis – There will be a positive correlation with net funds for schools that offer incentives by means of a reduction in registration fee will experience higher levels of fundraising because more people will sign up for the event when the price is discounted which means that there will be more people fundraising for the event.
  - Number of team captain meetings prior to the event
    - Hypothesis – There will be a positive correlation because if the team captains are well informed about how the event will be run and what needs to be done leading up to the event in preparation, more participants will understand what is going on and will be able to fundraise using strategies discussed in team captain meetings.
  - Month that planning of the event begins
    - Hypothesis – The earlier event planning begins, the higher fundraising levels will be because the committee will have more time to get people to sign up and start raising money before the day of the event.
  - Relay for Life compared in size to other campus events
    - Hypothesis – Events that are bigger than other campus events will be more successful than events that are smaller or of similar size to other campus events because if they are larger, it shows a greater participation interest and also a higher fundraising level among participants.
  - Size of committee
    - Hypothesis – Mid-size committees will experience the most success because they can split up the work that they have to do in preparation for the event more evenly than small committees and the planning will not be as hectic as it might be with a large committee.
  - Promotional materials used prior to the event
    - Schools were ranked as either strong, average, or weak based on the amount of marketing materials used on campus leading up to Relay for Life
- Hypothesis – Schools with strong or average marketing efforts will have a higher level of net funds than weak marketing schools.
  - Promotional events hosted prior to the event
    - Promotional events were measured based on the number of events hosted prior to Relay for Life that promoted the main event as well as the levels of attendance at each of these events
    - Hypothesis – Schools with a variety of promotional events and high attendance at these events will have higher net funds raised than schools with minimal promotional events or poor attendance at these events.

The dependent variables in the theoretical models tested will be:
- Net funds raised at each event
- Average funds raised per Relay for Life participant
- Average funds raised per undergraduate student
- Participation rate (event participants/total undergraduate population)

Another portion of data analysis will focus on participation rates, measured by the number of participants per undergraduate student at each school. The independent variable that will be focused on for this portion of analysis will be the marketing and promotional techniques utilized by the Relay for Life committee at each school. Information regarding marketing done by each committee is not available for all 54 schools so this analysis will be performed solely for the schools that have been surveyed or interviewed using a case study analysis approach.

**Data Analysis Using Stata**

Descriptive statistics for select independent variables were calculated and the numbers corresponding to the data used in the final model are displayed using charts, graphs, and brief explanations in the figures below. The results were obtained using Intercooled Stata software.

*Figure 3 - Net Fundraising $ Amount*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>netfunds</td>
<td>54</td>
<td>47461.28</td>
<td>32956.78</td>
<td>7591</td>
<td>149366</td>
</tr>
</tbody>
</table>
As seen in Figure 3, the average dollar amount of net funds raised through Relay for Life events is $47,461 with the lowest fundraising event bringing in $7,591 and the highest event reaching $149,366.

Based on Figure 4 and Figure 5, the average number of emails received by participants from either the Relay for Life committee or the American Cancer Society before the date of the event is 16. The school that sends the least amount of emails only sent their participants 1 email with event information and the school with the highest sent their participants 54 emails. Figure 5 shows a weakly positive correlation between the number of emails sent and the total dollar amount of funds raised.

On average, schools see 78% of their total donations come from online donations. This comes as no surprise because of the amount of people that use computers and the internet today. Also shown in Figure 6 is a minimum of 0% online donations collected, likely from a small school that only collects cash or check donations. The highest percentage is over 100% because the fundraising level measured is the net fundraising total, not the raw fundraising total which means that any costs incurred by the American Cancer Society in planning and executing the event have been taken out of the total. If close to all of the donations collected at this particular event were done online, it is likely that a portion of these online donations were used to cover some of the costs of the event which results in a percentage of online donations compared to the net fundraising level of over 100%.
Figure 7 - Number of 2012 Participants:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>participa~12</td>
<td>53</td>
<td>544.9434</td>
<td>360.9054</td>
<td>124</td>
<td>1881</td>
</tr>
</tbody>
</table>

As predicted and seen in Figure 7 and Figure 8, the number of total participants is positively related to the net funds raised by each event. The average number of participants in Relay for Life events at colleges and universities in New England was 545. The lowest participation was 124 students and the highest was 1881.

Figure 9 - % of undergraduate population registered for event

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>particip~te</td>
<td>52</td>
<td>.1177115</td>
<td>.0692937</td>
<td>.021</td>
<td>.336</td>
</tr>
</tbody>
</table>

On average, 11.77% of the total undergraduate population of students at schools in New England participates in their Relay for Life event. The lowest participation rate is 2.1% and the highest is 33.6%.

Figure 10 - Total undergraduate population

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>ug</td>
<td>51</td>
<td>5624.627</td>
<td>4361.616</td>
<td>1127</td>
<td>18306</td>
</tr>
</tbody>
</table>

As shown in Figure 11, the total undergraduate population is positively correlated to the net funds raised per school. This makes a lot of sense because schools with larger populations should be able to get more people to participate and donate than smaller schools are able to. Figure 10 shows that the average student body size is 5,625 students and the minimum observed is 1,127 while the maximum is 18,306.
Figure 12 - Breakdown of events by month

<table>
<thead>
<tr>
<th>Month of event</th>
<th>Freq.</th>
<th>Percent</th>
<th>Cum.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb</td>
<td>1</td>
<td>1.89</td>
<td>1.89</td>
</tr>
<tr>
<td>Mar</td>
<td>12</td>
<td>22.64</td>
<td>24.53</td>
</tr>
<tr>
<td>Apr</td>
<td>37</td>
<td>69.81</td>
<td>94.34</td>
</tr>
<tr>
<td>May</td>
<td>3</td>
<td>5.66</td>
<td>100.00</td>
</tr>
<tr>
<td>Total</td>
<td>53</td>
<td>100.00</td>
<td></td>
</tr>
</tbody>
</table>

Figure 12 shows the amount of events held from February to May. 69.81% of Relay for Life events at colleges and universities in New England are held in April and only 1.89% are held in February. In the final model the months are classified individually as dummy variables but for simplification purposes they are combined in this table.

Figure 13 - Campus Setting

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
</tr>
</thead>
<tbody>
<tr>
<td>suburban</td>
<td>29</td>
</tr>
<tr>
<td>urban</td>
<td>12</td>
</tr>
<tr>
<td>rural</td>
<td>10</td>
</tr>
</tbody>
</table>

Out of all of the schools in New England that host a Relay for Life event, the majority are located in a suburban setting and the other half are divided similarly between urban and rural settings.

Graduation Rate

When examining the relationship between net funds raised based on the graduation rate in Figure 14, there is a slight parabolic relationship between the two variables. This suggests an exponential relationship and it can be seen in the graph that as graduation rate increases, the amount of schools with higher levels of net funds raised increases as well.

Greek Life

Greek life on campus often has a positive impact on the participation and fundraising at Relay for Life events because of philanthropic requirements of fraternities and sororities. The following chart displays the number of schools that have a Greek life presence on campus and the schools that do not.
Figure 15 – Greek Life Presence on Campus

<table>
<thead>
<tr>
<th>Greek life</th>
<th>Freq.</th>
<th>Percent</th>
<th>Cum.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>22</td>
<td>43.14</td>
<td>43.14</td>
</tr>
<tr>
<td>1</td>
<td>29</td>
<td>56.86</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Figure 15 shows that 22 schools do not have Greek life and 29 schools do. Out of the 54 total schools that host a Relay for Life event, three events do not have information regarding Greek life presence on campus.

FINANCIAL AID AND TUITION INFORMATION

Figure 16 – Average financial aid per student

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>finaid</td>
<td>51</td>
<td>25420.75</td>
<td>10321.82</td>
<td>3597</td>
<td>44053</td>
</tr>
</tbody>
</table>

Figure 16 and Figure 17 display the average financial aid awarded by each school and total cost of tuition at each school. The data reveals that the average financial aid awarded across all schools in 2012 was $25,420.75 with the minimum amount as $3,597 and the maximum as $44,053. The total cost of tuition at each school on average was $35,363.45 with the lowest tuition cost of $14,192 and the highest tuition cost of $57,235.

CORRELATION BETWEEN DATA VARIABLES

Figure 18 – Correlation Between Data Variables
In order to test for colinearity among regressors, a correlation test was performed using all of the variables observed for all the schools in New England with the exception of any dummy variables as correlation cannot be tested for this type of variable.

This correlation chart shown in Figure 18 was utilized to help determine the variables that should be included in the final empirical model. When examining correlation between regressors it is important to not include any two independent variables that are correlated to each other when making data models. Any variables that had over 50% correlation with the dependent variable of average funds per participant were considered for use in the final model. Any two independent variables that had higher than 50% correlation were not included together in any models tested. When independent variables are correlated to each other, the two variables are both explaining the same trend which can lead to confounding results which makes the results of the empirical model less valid.

**Empirical Models**

Three final empirical models were found for this data set. One model contains quantitative data collected from the American Cancer Society for all 54 schools in New England that host a Relay for Life event. The second model contains data relating to each individual college that was collected from the College Board. The third model is based on the quantitative data collected through surveys and interviews with Relay for Life committee members from twelve schools. The qualitative data collected from these institutions was analyzed on a case study basis and will be analyzed separately from all of the quantitative data.

The functional form of the final models used based on the American Cancer Society data and the College Board data contain a logarithmic dependent variable as well as both linear and logarithmic independent variables. Regression analysis was completed many times before the final model was decided on based upon the adjusted R-squared and the statistical significance of the variables used in each version of the model. The dependent variable of the net funds raised per event was presented in logarithmic form for the American Cancer Society and College Board data because it makes more sense to analyze the increase in funds as a percentage than by $1 incremental changes. Experimentation was done by changing which variables were included, or not included, in the model to ensure that only the most influential and significant variables were used in finding the impact on net funds raised per school. The following section will discuss which models were tested and rejected and how the final model was ultimately decided upon.
Empirical Results

The final model chosen based on the American Cancer Society data is as follows:

\[ \text{Ln(netfunds)} = \beta_0 + \beta_1(\text{emails}) + \beta_2(\%\text{online_donations}) + \beta_3(\text{online_donations}) + \beta_4(\text{participation_rate}) + \beta_5(\#\text{participants}) + \beta_6(\text{ln(school_population)}) + \beta_7(\text{february}) + \beta_8(\text{march}) + \beta_9(\text{april}) + U_t \]

A few of the rejected similar models are as follows:

\[ \text{(2) Ln(netfunds)} = \beta_0 + \beta_1(\text{emails}) + \beta_2(\%\text{online_donations}) + \beta_3(\text{participation_rate}) + \beta_4(\text{school_population}) + \beta_5(\text{february}) + \beta_6(\text{march}) + \beta_7(\text{april}) + U_t \]

\[ \text{(3) Ln(netfunds)} = \beta_0 + \beta_1(\text{emails}) + \beta_2(\%\text{online_donations}) + \beta_3(\text{participation_rate}) + \beta_4(\text{ln(school_population)}) + \beta_5(\text{february}) + \beta_6(\text{march}) + \beta_7(\text{april}) + U_t \]

\[ \text{(4) Ln(netfunds)} = \beta_0 + \beta_1(\text{emails}) + \beta_2(\%\text{online_donations}) + \beta_3(\text{online_donations}) + \beta_4(\text{participation_rate}) + \beta_5(\text{ln(school_population)}) + \beta_6(\text{february}) + \beta_7(\text{march}) + \beta_8(\text{april}) + U_t \]

The following table (Figure 19) summarizes the regression results of the four models shown above. The numbers in the first row of the table correspond to the numbered models above, starting with the final model (1) with the rejected models, (2), (3) and (4) following.
Figure 19 – Comparative regression results

<table>
<thead>
<tr>
<th></th>
<th>(1) lnfunds</th>
<th>(2) lnfunds</th>
<th>(3) lnfunds</th>
<th>(4) lnfunds</th>
</tr>
</thead>
<tbody>
<tr>
<td>emails</td>
<td>0.0008346</td>
<td>-0.00000460</td>
<td>0.000805</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.68)</td>
<td>(-0.00)</td>
<td>(0.43)</td>
<td></td>
</tr>
<tr>
<td>online</td>
<td>-0.1542</td>
<td>0.228</td>
<td>-0.166</td>
<td>0.320*</td>
</tr>
<tr>
<td></td>
<td>(-1.46)</td>
<td>(1.08)</td>
<td>(-1.05)</td>
<td>(2.11)</td>
</tr>
<tr>
<td>onlinereg12</td>
<td>0.0000102***</td>
<td></td>
<td></td>
<td>0.00000678***</td>
</tr>
<tr>
<td></td>
<td>(8.30)</td>
<td></td>
<td></td>
<td>(6.73)</td>
</tr>
<tr>
<td>particip~e</td>
<td>2.727**</td>
<td>3.062***</td>
<td>1.257**</td>
<td>2.673***</td>
</tr>
<tr>
<td></td>
<td>(8.03)</td>
<td>(6.80)</td>
<td>(3.05)</td>
<td>(6.49)</td>
</tr>
<tr>
<td>participa~12</td>
<td>-0.0006179</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-4.69)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ug</td>
<td></td>
<td>0.0000574***</td>
<td>0.0000199*</td>
<td>0.0000450***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(7.26)</td>
<td>(2.54)</td>
<td>(6.60)</td>
</tr>
<tr>
<td>Lnschoolpop</td>
<td>0.6897856**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(8.04)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>feb</td>
<td>0.0917442</td>
<td>-0.450</td>
<td>-0.168</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.81)</td>
<td>(-1.93)</td>
<td>(-1.01)</td>
<td></td>
</tr>
<tr>
<td>mar</td>
<td>-0.0308</td>
<td>-0.105</td>
<td>-0.0835</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-0.54)</td>
<td>(-0.89)</td>
<td>(-1.02)</td>
<td></td>
</tr>
<tr>
<td>apr</td>
<td>-0.0545</td>
<td>-0.143</td>
<td>-0.0870</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-1.03)</td>
<td>(-1.31)</td>
<td>(-1.14)</td>
<td></td>
</tr>
<tr>
<td>gradu~ate</td>
<td></td>
<td></td>
<td></td>
<td>0.751**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(2.79)</td>
</tr>
<tr>
<td>totalcost</td>
<td></td>
<td></td>
<td>-0.0000103*</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(-2.05)</td>
<td></td>
</tr>
<tr>
<td>_cons</td>
<td>4.174***</td>
<td>3.850***</td>
<td>4.265***</td>
<td>3.579***</td>
</tr>
<tr>
<td></td>
<td>(25.54)</td>
<td>(17.93)</td>
<td>(26.46)</td>
<td>(26.17)</td>
</tr>
<tr>
<td>N</td>
<td>49</td>
<td>49</td>
<td>49</td>
<td>51</td>
</tr>
</tbody>
</table>

N statistics in parentheses
* p<0.05, ** p<0.01, *** p<0.001

Adjusted R-squared

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>.9312</td>
</tr>
<tr>
<td>(2)</td>
<td>.6069</td>
</tr>
<tr>
<td>(3)</td>
<td>.8109</td>
</tr>
<tr>
<td>(4)</td>
<td>.6987</td>
</tr>
</tbody>
</table>

Based solely on the adjusted R-squared values, model (1) and (3) are the best. Model (1)’s regressors explain 93.12% of the variations in the fundraising level of Relay for Life events at colleges in New England. Model (3)’s regressors explain 81.09% of these variations. The problem with Model (3) is
that the statistical significance of the regressors are not as strong as the statistical significance of the
regressors in Model (1).

Model (2) is a much weaker model than (1) or (3) and although Model (4) is stronger than (2), it is
still weaker than (1) and (3). Rearranging and adding/eliminating variables in various different forms
of this model was useful and as the process progressed, it became clear which variables were the most
significant and therefore, which variables should be included in the final model. As more variables
were added to the model, the adjusted R-squared changed. In some situations, an additional variable
made the R-squared drop. When the undergraduate population variable was added to the model as a
logarithmic term rather than a linear term, the adjusted R-squared increased. When observing a
variable such as population that does not have a significant impact on the outcome of the model when
only one unit of measure is added, it is important to use the logarithm of that variable in order to
explain the changes in the model based on the percentage change in the variable. Just as one extra
point on an SAT score does not significantly influence the rate of college acceptance, one extra
student in a school with a population of thousands does not have a significant impact on the
fundraising level achieved through an event like Relay for Life.

The following chart (Figure 20) displays the regression results for Model (1). Since this is the final
model chosen, observations on the specific variables and statistical measurements will be reported
separately from the results of the other three models shown in the summarizing chart above.

*Figure 20 – Regression Results for Model (1)*

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>Number of obs = 49</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>3.50061464</td>
<td>9</td>
<td>.388957183</td>
<td>F(  9,   39) =   58.61</td>
</tr>
<tr>
<td>Residual</td>
<td>.258825528</td>
<td>39</td>
<td>.006636552</td>
<td>Prob &gt; F = 0.0000</td>
</tr>
<tr>
<td>Total</td>
<td>3.75944017</td>
<td>48</td>
<td>.07832167</td>
<td>R-squared = 0.9312</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Adj R-squared = 0.9153</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Root MSE = .08147</td>
</tr>
</tbody>
</table>

| lnfunds        | Coef.         | Std. Err. | t    | P>|t| | [95% Conf. Interval] |
|----------------|---------------|-----------|-----|-----|---------------------|
| emails         | .0008346      | .0012236  | 0.68| 0.499| -.0016404           |
| online         | -.1542194     | .1059034  | -1.46| 0.153| -.3684293           |
| onlinereg12    | .0000102      | 1.23e-06  | 8.30| 0.000| .0000127            |
| participat~e   | 2.727796      | .3395894  | 8.03| 0.000| 2.040912            |
| participa~12   | -.0006179     | .0001317  | -4.69| 0.000| -.0008844           |
| lnschoolpop    | .6897856      | .0858385  | 8.04| 0.000| .5161608            |
| feb            | .0917442      | .1137115  | 0.81| 0.425| -.1382589           |
| mar            | -.0308697     | .0572805  | -0.54| 0.593| -.1467303           |
| apr            | -.0545127     | .0529919  | -1.03| 0.310| -.1616989           |
| _cons          | 1.843288      | .3316415  | 5.56| 0.000| 1.17248             |
As previously stated, this model possesses a high adjusted R-squared value which means that only 6.88% of the variations in the net fundraising level are not explained by the independent variables used in the model. The final equation obtained through the regression results is as follows:

\[
\ln(\text{netfunds}) = 1.8432 + .00063(\text{emails}) - .1542(\text{online}) + .0000102(\text{onlinereg12}) + 2.7277(\text{percpop}) - .0006179(\text{participants12}) + .6897(\ln\text{schoolpop}) + .0917(\text{feb}) - .0309(\text{mar}) - .0545(\text{apr}) + \epsilon
\]

Below is a breakdown of the coefficient terms and the p-values of each variable resulting from this model and a brief explanation of what kind of an impact they have on the net funds raised by college and university Relay for Life events in New England. A short statement is also included about whether or not the results coincided with the initial hypotheses.

- Number of emails sent to participants before the event
  - Coefficient = .00063
  - For every extra email sent to participants before the event, net fundraising levels increase by .063%
    - This makes logical sense because additional emails motivating people to fundraise and spread awareness about the disease and the event will likely increase the amount of money collected through additional donations or participants that would not have known about the event otherwise. This variable does not have a hugely significant effect on net funds raised so it can be assumed that it is not crucial that Relay for Life committees put a high level of effort into sending countless emails to their participants. If an increase in the number of emails sent to participants before the event does not have a significant effect on the net funds raised, then it would be beneficial to focus the attention of the planning committee elsewhere on areas that have a more positive effect on fundraising totals.
    - Based on the p-value of .499 for this variable, the conclusion can be made that this variable is insignificant
      - Hypothesis – not confirmed

- % of donations made online
  - Coefficient = -.1542
For every increase in the % of donations made online, net fundraising levels decreases by .1542%

- Based on the research done that showed how important online marketing is for non-profit organizations, it is surprising that the number of emails sent to participants has a negative correlation with funds raised.

- Some possible explanations for this surprising result include the fact that donors making online donations are not making as personal of a connection to the participant as they would giving a cash or check donation in a face-to-face setting. This might make it easier for online donors to give a lower donation amount. A second possible explanation is that the American Cancer Society’s website gives pre-set donation amount options for donors to choose from in addition to an option for donors to enter their own alternative donation amount. When a donor is online, they might be more likely to choose a lower donation amount (i.e. $20) rather than choosing the next highest donation button (i.e. $50). In person, and without any persuasion from pre-set donation amount recommendations, donors are more likely to select their donation amount without any outside input. If donors were originally planning on donating $50, they will not be tempted to decrease their donation to $20 after seeing the selection option like they would on the website.

- Hypothesis – not confirmed

$ value of donations made online
- Coefficient = .000102
- For every dollar increase in online donations made, the net funds raised increases by .0001%
  - This does make logical sense that the net funds raised is increasing with each additional dollar donated online. However, it makes more sense to measure this statistic using the percentage of donations made online (as discussed previously) since $1 increments are not particularly significant. Net funds and the dollar amount of online donations received are too closely correlated because they are both measuring the same thing (an increase in the funds raised). For this reason, this variable is not considered to play a significant role in determining what factors are most significant in increasing net funds.
  - Hypothesis – slightly confirmed
• % of undergraduate population participating in the event
  o Coefficient = 2.7277
  o For every 1% increase in the percentage of the undergraduate population participating in the event, fundraising levels go up by 2.7277%
    ▪ This makes logical sense because with each additional percentage of the student body participating, there will be an increase in the funds raised because of the extra fundraising efforts done by that extra group of people.
    ▪ Hypothesis - confirmed

• Number of participants
  o Coefficient = -.0006179
  o For every extra person that participates in the event, the net fundraising level goes down .0006%.
    ▪ This makes logical sense because this study is examining the net fundraising level and the American Cancer Society incurs costs to run this event that have been taken out of the raw fundraising total. For each additional participant, there is an added cost (though very small) to put on the event for things such as t-shirts, food, drinks, etc.
    ▪ This small decrease in net funds raised based on additional participants can be offset by increasing the motivational materials to encourage people to raise more money in order to offset the additional variable costs incurred by the organization.
    ▪ Hypothesis – not confirmed

• School population (logarithmic)
  o Coefficient = .6897
  o For each additional percentage increase in the total population of a college or university, the fundraising level will increase by .6897%.
    ▪ This makes logical sense because schools with a larger pool of students to draw from and attract to the event will likely have more participants that are able to raise money and encourage their friends to participate and raise money too. If a college or university has a larger number of students in general, there is likely to be a larger number of students interested in this cause and this particular event.
    ▪ Hypothesis - confirmed
Month of event – dummy variables with May being the base month

- The dummy variables are not significant because based on the joint test shown below in Figure 21, and the p-value of .3223.
- Though the model displays coefficients related to the regression results for these dummy variables, the p-value indicates that these results are insignificant. This suggests that the month that Relay for Life events are held does not impact the fundraising levels achieved.
- Hypothesis – non confirmed

![Figure 21 – Insignificance of month of event](image)

Based on the coefficients contained in the prior analysis, there are implications to what factors result in a more successful Relay for Life event and if colleges and universities can take these factors into consideration and adjust their planning strategies, they might be able to increase the level of funds raised and therefore, increase the inflow of money to the American Cancer Society each year.

When looking at the p-values of each variable to determine the statistical significance, only a few variables are not statistically significant. This is a positive attribute of this model because it shows that the variables used are actually relevant to coming up with the net fundraising level dependent variable. The email variable is not significant because it has a p-value of .499. Also, the dummy variables are not significant because based on the joint test shown in Figure 21, and the p-value of .3223.

Overall, the results of this model are very useful because of the high adjusted R-squared value along with the fact that the majority of the variables are statistically significant.

The final model chosen for the College Board data is as follows:

\[
\ln(\text{netfunds}) = \beta_0 + \beta_1(\text{ug}) + \beta_2(\text{gradrate}) + \beta_3(\text{totalcost}) + \beta_4(\text{participationrate}) + U_t
\]

The regression results for this model are shown in Figure 22:
Figure 22 – College Board Data Regression

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>Number of obs = 51</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>3.50349452</td>
<td>4</td>
<td>.87587363</td>
<td>F( 4, 46) = 46.20</td>
</tr>
<tr>
<td>Residual</td>
<td>.872005743</td>
<td>46</td>
<td>.018956647</td>
<td>Prob &gt; F = 0.0000</td>
</tr>
<tr>
<td>Total</td>
<td>4.37550026</td>
<td>50</td>
<td>.08751005</td>
<td>R-squared = 0.8007</td>
</tr>
</tbody>
</table>

| lnfunds | Coef. | Std. Err. | t | P>|t| | [95% Conf. Interval] |
|---------|-------|-----------|---|-----|----------------------|
| lnschoolpop | .8219876 | .075848 | 10.84 | 0.000 | .6693134, .9746618 |
| gradrate | .3370429 | .2192753 | 1.54 | 0.131 | -.1043354, .7784213 |
| lntotalcost | -.0636062 | .293873 | -0.22 | 0.830 | -.6551419, .5279295 |
| participat~e | 3.054616 | .3415391 | 8.94 | 0.000 | 2.367134, 3.742098 |
| _cons     | 1.273984 | 1.336084 | 0.95 | 0.345 | -1.415414, 3.963382 |

This model contains a relatively high adjusted R-squared that suggests 78.34% of the variations in the net funds are explained by the independent variables in the model. The final equation obtained through the regression results is as follows:

\[
\text{Ln(\text{netfunds})} = 1.013 + .8219 (\text{lnschoolpop}) + .3370(\text{gradrate}) + -.0636(\text{totalcost}) + 3.054(\text{participationrate}) + U_t
\]

Below is a breakdown of the coefficient terms and the p-values that are relevant to the final results of each variable resulting from this model and a brief explanation of what kind of an impact they have on the net funds raised by college and university Relay for Life events in New England. A short statement is also included about whether or not the results coincided with the initial hypotheses.

- **School population (logarithmic)**
  - Coefficient = .8219
  - For each additional percentage increase in the total population of a college or university, the fundraising level will increase by .8228%
    - This makes logical sense because schools with a larger pool of students to draw from and attract to the event will likely have more participants that are able to raise money and encourage their friends to participate and raise money too. If a college or university has a larger number of students in general, there is likely to be a larger number of students interested in this cause and this particular event.
    - **Hypothesis – confirmed**
  - Graduation rate
    - Coefficient = .3370
For each additional percentage increase in the graduation rate at a college or university, the fundraising level will increase by .3313%.
  - This makes logical sense because often times students that are engaged in their school work and dedicated to the institution they are attending, they are more likely to also be involved in events on campus. When students are more involved on campus, they are able to raise more funds at Relay for Life.
  - Hypothesis = confirmed

- Total cost of tuition (logarithmic)
  - Coefficient = -.0636
  - For each additional percentage increase in the total cost of tuition at a college or university, the net fundraising level decreases by .0636%.
    - The p-value of .830 suggests that this variable is not significant meaning that there is no relevant relationship between the cost of tuition and total funds raised.
    - Hypothesis – not confirmed

- Participation rate
  - Coefficient = 3.054
  - For each additional percentage increase in the participation rate at a college or university, the net fundraising level increases by 3.054%.
    - This makes logical sense because when there is an increase in the percentage of students participating in the event, there will be an increase in the amount of funds raised.

When looking at the p-values of each independent variable, the only variable that was insignificant was the cost of tuition. The fact that the adjusted R-squared value was high and all of the other independent variables were significant shows that this model is a good representation of which factors relating to college specific information obtained through research done with the College Board are most significant when determining fundraising success levels of Relay for Life events.

The final model for surveyed schools is measured based on the dependent variable of average funds per participant. This differs from the data analysis of the American Cancer Society data and College Board data because there was a smaller amount of observations for surveyed schools. With a smaller amount of schools to compare, it makes more sense to measure success on a smaller level to get more
accurate results since the measure of net funds could be skewed by either significantly low or high
values. The final model for surveyed schools is as follows:

\[
\ln(\text{avgfundspart}) = \beta_0 + \beta_1(\text{cancerimpact}) + \beta_2(\text{early_reg}) + \beta_3(\text{comm1120}) + \\
\beta_4(\text{comm2130}) + \beta_5(\text{comm3140}) + \beta_6(\text{commover40}) + \beta_7(\text{teamcapt}) + \epsilon
\]

The regression results for this model are shown in Figure 23:

\begin{table}[h]
\centering
\begin{tabular}{lrrrr}
Source & SS & df & MS & Number of obs = 12 \\
\hline
Model & .151646434 & 7 & .021663776 & F(7, 4) = 5.43 \\
Residual & .015947639 & 4 & .00398691 & Prob > F = 0.0606 \\
Total & .167594073 & 11 & .015235825 & R-squared = 0.7383 \\
\hline
\end{tabular}
\caption{Surveyed Schools Data Regression}
\end{table}

\begin{table}[h]
\centering
\begin{tabular}{lrrrrrr}
lnavgfunds & Coef. & Std. Err. & t & P>|t| & [95\% Conf. Interval] \\
\hline
cancerimpact & .1981957 & .081035 & 2.45 & 0.071 & -.0267936 & .423185 \\
early_reg & -1.012027 & .2765047 & -3.66 & 0.022 & -1.779728 & -.2443272 \\
comm1120 & .1346297 & .0850362 & 1.58 & 0.189 & -.1014687 & .3707282 \\
comm2130 & -.1484863 & .0676256 & -2.20 & 0.093 & -.336245 & .0392724 \\
comm3140 & -1.107736 & .2604912 & -4.25 & 0.013 & -1.830976 & -.3844969 \\
commover40 & .2377281 & .0739741 & 3.21 & 0.032 & .0323419 & .4431143 \\
teamcapt & -.0374874 & .0176833 & -2.12 & 0.101 & -.0865841 & .0116093 \\
_cons & 2.763004 & .2726612 & 10.13 & 0.001 & 2.005975 & 3.520033 \\
\hline
\end{tabular}
\caption{Regression Results}
\end{table}

This model contains a relatively high adjusted R-squared that suggests 73.83% of the variations in the
net funds are explained by the independent variables in the model. The final equation obtained
through the regression results is as follows:

\[
\ln(\text{avgfundspart}) = 2.763 + .1981(\text{cancerimpact}) - .1012(\text{early_reg}) + .1346(\text{comm1120}) - \\
.1484(\text{comm2130}) – 1.1077(\text{comm3140}) + .2377(\text{commover40}) - .0374(\text{teamcapt}) + \epsilon
\]

Below is a breakdown of the coefficient terms and the p-values that are relevant to the final results of
each variable resulting from this model and a brief explanation of what kind of an impact they have on
the net funds raised by college and university Relay for Life events in New England. A short
statement is also included about whether or not the results coincided with the initial hypotheses.

- Cancer impact on campus
• Schools with a student/faculty/staff member with recent diagnosis or death from cancer experienced 19% higher average fundraising totals per participant than schools without any recent cancer impact
  ▪ This statistic is the most important from this model because it shows how much of an impact this disease has on the success levels of Relay for Life events. When members of a school have experienced cancer first-hand, their motivation to fundraise increases significantly.
  ▪ Hypothesis – confirmed

• Early registration incentives
  o Schools that offered an early registration incentive to participants that signed up on or before a certain date experienced a decrease of average funds raised per participant by 1.01%.
    ▪ This result is surprising because it is typically assumed that when people are getting a discount to sign up for the event that more people will register and therefore, more funds will be raised.
    ▪ Some possible explanations for this result are that more people register simply because it is cheaper and they feel that they are getting a good deal when, in reality, they do not have intentions to make an effort to fundraise for the event. Another possible explanation is that since the registration fee that participants pay is included in their total fundraising amount, when a lot of people are signing up at a discounted rate, the average funds raised per participant decreases by the value of the discount they are receiving for registering early.
    ▪ A way to combat this is to focus heavily on encouraging participants that sign up early and receive the early registration discount to fundraise. This will compensate for any money lost on early registration discounts.
  ▪ Hypothesis – not confirmed

• Committee size
  o These joint test results in Figure 24 show that the dummy variables associated with the committee size are significant because of their p-value of 0.0502.
The Numbers Behind Celebrating More Birthdays: An Analysis of the American Cancer Society’s Relay for Life
Senior Capstone Project for Eva Mahan

Figure 24 - Significance of variable for committee size:
(1) comm1120 = 0
(2) comm2130 = 0
(3) comm3140 = 0
(4) commover40 = 0

\[ F(4, 4) = 6.37 \]
\[ \text{Prob} > F = 0.0502 \]

- The results of the regression show that the most effective committee sizes are small (11-20 members) and large (40+ members)
- This result can be explained because smaller committees are typically seen at the smaller schools so even though Relay for Life is a large event and a lot of effort goes into planning it, smaller committees that know more people on their campus are effective at promoting the event and splitting up duties to prepare for the event in a way that encourages participation and fundraising. On the other hand, large committees are some of the biggest schools in New England are able to spread their impact out over a wide variety of students and divide their responsibilities very specifically to host the most successful event possible.
- Hypothesis – not confirmed

When looking at the p-values of each independent variable, every independent variable in this model was significant. The fact that the adjusted R-squared value was high and all of the independent variables were significant shows that this model is a good representation of which factors found via survey results play a role in making Relay for Life events successful. In this case, success was measured by the average funds raised per participant.

Qualitative Case Study Analysis

There was a limited amount of qualitative data that was not possible to turn into dummy variables and run with the electronic data models. This qualitative data is only applicable to the schools that were surveyed or interviewed and mostly contains information regarding the culture of each school’s campus, the marketing materials used, and the promotional events that were hosted leading up to Relay for Life. It is difficult to quantify the level of enthusiasm possessed by the students on each campus so this analysis was performed through a case study analysis process. The dependent variables remained consistent with the dependent variables in the data that was analyzed with the Stata software.
Analysis first focused on the effects that the independent variables of marketing materials and promotional events had on average fundraising per participant and average fundraising per undergraduate student. Information obtained from surveys and interviews conveyed how effective each event was and how visible marketing materials were around campus and online. The majority of the trends found from this analysis proved that effective and well organized promotional materials and events resulted in higher fundraising levels.

The analysis of marketing materials and events also examined the variable as an independent variable with the dependent variable being the participation rate of students on campus. The majority of this data showed that schools with larger marketing campaigns and a more prominent online presence were able to get a high level of participation among students on campus. For the majority of schools with participation rates exceeding 10% of the total undergraduate population, the fundraising per participant was significantly higher than that of schools with lower participation rates. This suggests that schools able to encourage and obtain high levels of event participants are also able to motivate these participants to complete high levels of fundraising.

**Data Analysis**

Using the dependent variable of average funds per event participant, the results were broken up into two categories: schools that reached the $100 per participant fundraising goal, and schools that did not reach this goal. The American Cancer Society encourages all Relay for Life participants to raise a minimum of $100 for the event and although there is no consequence for not reaching this fundraising level, it is highly recommended. The incentive implemented by the American Cancer Society is that participants receive a free t-shirt when they reach the $100 fundraising level that they would otherwise not receive. Since $100 is the threshold used by the American Cancer Society, it is also the threshold that was implemented in the case study research portion of this data analysis.

There were five schools out of the twelve schools surveyed and interviewed that reached the $100 per participant fundraising level. Stonehill College, Boston College, Tufts University, Roger Williams University, and Clark University each exceeded the $100 recommended participant fundraising level. With the exception of Clark University, the other four schools displayed extremely high levels of promotional materials around campus and events held prior to Relay for Life. Stonehill College, Boston College, Tufts University, and Roger Williams University all utilized the three different varieties of marketing materials (posters, flyers, and online marketing). Each of these four schools had
posters hanging in their academic buildings, student union buildings, athletic centers, and residence halls prior to Relay for Life encouraging students to register for the event and begin fundraising. These four schools also distributed flyers to students, faculty, and staff with information about their event and how to register and fundraise. In addition, each of these four schools had an online marketing presence including Facebook pages and Twitter accounts that were updated frequently with information about Relay for Life. Each of these four schools hosted at least five promotional events prior to their main event and all reported high levels of participation at each event. Example of some of the events hosted include kick-off events, dances, auctions, pub nights off campus, holiday themed fundraisers throughout the year, movie nights, etc.

While these four schools were very similar in the way they advertised their event on campus, Roger Williams University reported an additional level of hype around campus prior to Relay for Life because 2012 was the inaugural year hosting the event separate from the community Relay for Life. For this reason, Roger Williams University obtained the second highest level of fundraising per participant out of the surveyed schools with an average of $127.98 per person.

Clark University proved to be an outlier in this study. The average fundraising level per participant was $158.74 putting them ahead of each of the eleven other schools surveyed for this project. As seen with the four other schools that obtained the $100 fundraising per participant level, Clark University did not host any promotional events prior to their event and did not have any posters hanging on campus advertising Relay for Life. The four other schools all reported that they believed the posters around campus, especially in the residence halls and academic buildings were marketing materials that brought in a significant amount of participants and drew the most attention, especially when eye-catching posters and slogans were utilized. Clark University did not use any posters around campus which would typically suggest that their fundraising levels should be lower than that of other schools. However, this was not the case which suggests that their other forms of marketing materials are just as effective as the posters used at other schools. Clark University did implement the use of flyers to hand out to faculty, staff, and students as well as online marketing through Facebook and Twitter.

The seven schools that did not reach the recommended $100 per participant fundraising level also showed major similarities in the marketing materials and promotional events used on campus leading up to the event. UMass Dartmouth, WPI, Harvard University, Keene State College, Bridgewater State College, and Bryant University were all below the $100 participant fundraising level.
Bryant University, Harvard University, WPI, and Bridgewater each hosted promotional events prior to Relay for Life but it was reported that these events were not very well attended. Bryant University, Harvard University, and Bridgewater’s events were held on campus and all included a kick-off event held early in the spring semester along with one additional promotional event each throughout the spring before Relay for Life. Aside from kick-off, example of additional events held include a flash mob, bake sales, scavenger hunts, and dances. The marketing materials used by each of these schools included posters at all relevant locations on campus, flyers to faculty, staff, and students, and online marketing through Facebook and Twitter.

Keene State University and UMass Dartmouth did not host any promotional events prior to Relay for Life and the events hosted by Boston University included an on-campus kick-off event and one off-campus restaurant fundraiser. Boston University also did not do any online marketing with Facebook or Twitter leading up to their event.

Figure 25 and Figure 26 outline the promotional materials and events utilized by each school and the average amount of fundraising completed per participant.
### Figure 25 - Schools reaching the $100 per participant fundraising level:

<table>
<thead>
<tr>
<th>Marketing Materials</th>
<th>Stonehill</th>
<th>Boston College</th>
<th>Tufts</th>
<th>Roger Williams</th>
<th>Clark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posters in academic buildings, student union, athletic center, residence halls</td>
<td>Posters in academic buildings, student union, athletic center, residence halls</td>
<td>Posters in academic buildings, student union, athletic center, residence halls</td>
<td>Posters in academic buildings, student union, athletic center, residence halls</td>
<td>Flyers to faculty, staff, students</td>
<td>Flyers to faculty, staff, students</td>
</tr>
<tr>
<td>Flyers to faculty, staff, students</td>
<td>Flyers to faculty, staff, students</td>
<td>Flyers to faculty, staff, students</td>
<td>Flyers to faculty, staff, students</td>
<td>Facebook</td>
<td>Twitter</td>
</tr>
<tr>
<td>Facebook</td>
<td>Twitter</td>
<td>Facebook</td>
<td>Facebook</td>
<td>Facebook</td>
<td></td>
</tr>
<tr>
<td>Twitter</td>
<td>Twitter</td>
<td>Facebook</td>
<td>Facebook</td>
<td>Twitter</td>
<td></td>
</tr>
<tr>
<td>Promotional Events</td>
<td>Dodgeball</td>
<td>Kick-off in cafeteria</td>
<td>Kick-off in fall and spring</td>
<td>“Why do you Relay” sticky notes around campus</td>
<td>None</td>
</tr>
<tr>
<td>Ice skating</td>
<td>Mini surprise luminaria bags around campus</td>
<td>Party for life hosted by fraternities on campus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kiss away cancer kissing booth</td>
<td>Mock Relay on mini track in center of campus</td>
<td>Queer Straight Alliance drag show</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Movie night</td>
<td>Holiday candy canes</td>
<td>Pantene Beautiful Lengths hair donation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paint campus purple week</td>
<td>Residence Life Bulletin board kits</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average fundraising per participant</td>
<td>$106.75</td>
<td>$106.99</td>
<td>$117.77</td>
<td>$127.98</td>
<td>$158.74</td>
</tr>
</tbody>
</table>
The main conclusions that can be reached from the data charts and analysis above stress the importance of utilizing all available means of marketing and promotional materials and events and encouraging students to attend not only promotional events prior to Relay for Life, but also Relay for Life itself. Schools that used posters, flyers, and online marketing were much more successful in their fundraising for the most part with the exception of Clark University which seemed to be an outlier school in most categories. Schools like Bryant University, Harvard University, and Bridgewater State that did not see high attendance at promotional events did not perform as well in fundraising, whereas schools like Roger Williams and Boston College that saw high levels of participation and interest on campus prior to Relay for Life were able to achieve higher fundraising levels.
The second phase of case study analysis focused on the way marketing and promotional materials and events affected the participation rates at each school and how the participation rate, in turn, affected the average level of fundraising per participant was affected. Marketing and promotional materials and events were ranked for each school as either strong, average, or weak. Strong marketing schools utilized posters, flyers, and online marketing as well as hosting promotional events. An average marketing school either utilized all materials and hosted low attendance promotional events or was missing one of these factors. Weak promotional schools were missing pieces of marketing materials and did not host promotional events prior to Relay for Life. Figure 27 and Figure 28 display the marketing levels achieved by each surveyed school, the participation rate, and the average fundraising level per participant separated based on the participation level reached either above or below the threshold of 10%.

**Figure 27 - Schools above 10% participation rate:**

<table>
<thead>
<tr>
<th>School</th>
<th>Bryant University</th>
<th>Stonehill College</th>
<th>Boston College</th>
<th>Tufts</th>
<th>WPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing strength</td>
<td>Average</td>
<td>Strong</td>
<td>Strong</td>
<td>Strong</td>
<td>Strong</td>
</tr>
<tr>
<td>Participation rate</td>
<td>15.9%</td>
<td>16.3%</td>
<td>15.4%</td>
<td>16%</td>
<td>27.7%</td>
</tr>
<tr>
<td>Average fundraising per participant</td>
<td>$79.16</td>
<td>$106.75</td>
<td>$106.99</td>
<td>$117.77</td>
<td>$79.95</td>
</tr>
</tbody>
</table>

**Figure 28 - Schools below 10% participation rate:**

<table>
<thead>
<tr>
<th>School</th>
<th>Clark</th>
<th>Harvard</th>
<th>Bridgewater</th>
<th>Keene State</th>
<th>Boston University</th>
<th>UMass Dartmouth</th>
<th>Roger Williams</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing strength</td>
<td>Weak</td>
<td>Average</td>
<td>Strong</td>
<td>Weak</td>
<td>Average</td>
<td>Weak</td>
<td>Average</td>
</tr>
<tr>
<td>Participation rate</td>
<td>7.4%</td>
<td>5.7%</td>
<td>6.9%</td>
<td>7.9%</td>
<td>6.8%</td>
<td>7%</td>
<td>6.4%</td>
</tr>
<tr>
<td>Average fundraising per participant</td>
<td>$158.74</td>
<td>$81.98</td>
<td>$73.73</td>
<td>$84.15</td>
<td>$60.33</td>
<td>$68.66</td>
<td>$127.98</td>
</tr>
</tbody>
</table>

A stronger correlation was seen between marketing strength and participation rates for the schools with a participation rate exceeding 10%. With the exception of Bryant University, the other four schools with high participation rates each had strong marketing materials and promotional events held prior to Relay for Life. The conclusion can be made that a strong marketing presence increases the
level of participation in Relay for Life. Schools with participation rates below 10% experience the same relationship between marketing strength and participation rates. Bridgewater is the only school with a low participation rate that has strong marketing presence; the other six schools have either average or weak marketing.

The correlation between participation rates and average fundraising per participant is fairly consistent across all of the surveyed schools in this study. Three of the five schools with high participation rates achieved the $100 per participant fundraising level and five of the seven schools with low participation rates did not reach the $100 per participant fundraising level. This suggests that schools with higher participation rates that are achieved by strong marketing materials and promotional events are also more likely to exceed the $100 fundraising threshold.

**Conclusion**

After performing an extensive literature review and applying this research into an original data analysis, some impactful conclusions were made regarding the effectiveness of certain factors incorporated in a Relay for Life event.

Based on the data analysis of the three different models, there are independent variables that proved to have a more significant effect on the fundraising levels attained. Based on the quantitative data analysis, the most significant variables that confirmed my initial hypotheses were participation rate, the number of participants, undergraduate population, graduation rate, total tuition cost, and recent cancer impact on campus. The factors that were found to be insignificant based on the final models were the month that Relay for Life events were held, the number of emails sent to participants leading up to the event and the number of team captain meetings held prior to the event. The most surprising results that went against my initial hypotheses were the percentage of donations collected online, early registration incentives, and committee size.

Based on the qualitative data analysis of surveyed schools, my hypotheses were confirmed that strong marketing schools and high attendance at various promotional events held before Relay for Life have a positive impact on total fundraising.

Taking these results into consideration, some recommendations that can be given to Relay for Life committees when planning their event are as follows. Effective marketing and promotional events are
crucial in maximizing the participation rate at Relay for Life. Once the participation rate is high, it is important for committees to encourage participants to fundraise. Just because there is a high percentage of undergraduate students signed up for the event doesn’t mean that they are dedicated to fundraising. When fundraising tactics are taught to participants and both online and offline fundraising is encouraged, schools will see a lot of success. It is important to note that just because online donations had a negative impact on the final empirical model that if students are collecting a variety of different forms of donations that this slight negative impact is likely to be offset. Committees need to be careful when offering early registration incentives because though these incentives encourage participants to sign up, it does not mean that they are going to be dedicated to fundraising. These early registration incentives should be used in moderation. Finally, since the number of emails sent to participants was insignificant, there is no need for committees to waste their time formulating complex emails to participants. It would be better for committees to spend their time on marketing and promotional events rather than emailing participants details since these emails did not seem to make a significant difference in the fundraising levels achieved.

Some ways that this study could be taken further in the future would be to survey a wider population of schools or to expand the observation area beyond New England. Schools in the Western United States might have totally different Relay for Life events, so it might be beneficial to consider these schools when determining what makes fundraising the most successful rather than staying within the borders of New England with all of the data. Another factor that would be important to consider is the level of energy and passion for the American Cancer Society’s mission that is displayed at each individual event. This could be done by attending various events and making note of the reactions and involvement displayed by the participants.

Overall, this study provides valuable information regarding non-profit organizations, their role in society, fundraising strategies, and trends affecting fundraising. This study delved deeper into the research and analysis that has been performed in previous studies about special event fundraisers that are hosted by non-profits. By collecting my own data about Relay for Life and discovering what factors contribute to a high level of fundraising, I reached conclusions that can be implemented in order to increase fundraising for the American Cancer Society through these events. Relay for Life is already the American Cancer Society’s largest event and hopefully this study proves to be useful in increasing fundraising beyond the high levels it is already at. With more research and dedication to this cause, we will continue getting closer to curing cancer and creating a world with more birthdays.
Appendices
Appendix A – Bryant University Institutional Review Board Project Approval

October, 2012

Eva Mahan
Bryant University
1150 Douglas Pike
Smithfield, Rhode Island 02917

RE: IRB Proposal #2012-1030:
TITLE: The Numbers Behind Celebrating More Birthdays: An Analysis of Fundraising and the American Cancer Society’s Relay for Life

Dear Eva:

Your proposal, entitled “The Numbers Behind Celebrating More Birthdays: An Analysis of Fundraising and the American Cancer Society’s Relay for Life” was considered under IRB Guidelines for expedited review. The IRB Committee of Bryant University approved the proposal October 30, 2012.

Bryant University is strongly committed to adhering to the basic ethical principles related to the conduct of research involving human subjects as set forth in The Belmont Report: Ethical Principles and Guidelines for the Protection of Human Subjects of Research. The submission of your proposal to the IRB Committee supports the goals of Bryant University and the IRB Committee and ensures that research involving any members of the Bryant community is in strict accordance with these ethical principles and guidelines.

Thank you for your submission, and good luck with your research.

Very truly yours,

Sukki Yoon
Chair, IRB Committee
Appendix B – Survey Consent Form

All survey participants signed a consent form prior to answering my online survey questions. Below is the statement that was included with the survey and signed electronically prior to the students answering any questions. The same consent statement was also signed by interviewees.

You are invited to participate in a study of Relay for Life events at colleges and universities in New England. I hope to learn about the factors that determine how successful individual events are. Success is measured by the average fundraising level reached per participant. Some examples of factors that influence the overall success of the event include the marketing techniques used, the venue, the date and time of the actual event, etc. You were selected as a possible participant in this study because of your relationship with the American Cancer Society and participation history in Relay for Life events. If you decide to participate, we will conduct an experiment involving online surveys and phone/email/in person interviews (depending on your geographic location). The questions asked will strictly be regarding the 2012 New England area college or university Relay for Life event that you were a part of. Any information obtained in connection with this study will remain confidential and will not be disclosed to the general public in a way that can be traced to you. I will only be reporting the results of my research in terms of the college or university that the Relay for Life data pertains to: not the individuals that are involved with events run by these institutions. In any written reports or publications, no participant other than the researchers will be identified, and only anonymous data will be presented. This consent form, with your digital signature, will be stored with the data that is collected from this survey so that if further information is needed via an interview, you will be able to be identified and contacted. Your participation is totally voluntary, and your decision whether or not to participate will not affect your future relations with Bryant University or its employees in any way. If you decide to participate, you are also free to discontinue participation at any time without affecting such relationships. However, it is requested that you notify the investigator of this. If you have any questions, please contact Eva Mahan (emahan@bryant.edu). If you have any additional questions later, we will be happy to answer them. Please indicate your consent below if you have decided to participate. Your confirmation indicates only that you are at least 18 years of age and have read the information provided above. Your confirmation does not obligate you to participate, and you may withdraw from the study at any time without consequences. Your digital signature in the box below indicates your willingness to participate in this survey and any follow-up interviews that might follow. Please type your full name in the box below if you have read the above information and agree to participate in this study with the understanding that you may withdraw at any time.

Digital Signature *Please type your full name to indicate your consent to participate in this survey and future interviews with the understanding that you may withdraw at any time.
Appendix C – Survey Questions

Below is the list of questions that all survey and interview participants answered regarding the specific Relay for Life event held at their respective college or university in 2012.

Logistical Event Information
1. What was the theme of your 2012 Relay for Life? If your event did not have a specific theme please indicate “no theme”.
2. Are meetings with all the team captains held leading up to the event?
3. If YES, how many team captain meetings are held throughout the year?
4. How many people were on the 2012 Relay for Life planning committee?
5. How early in the 2011-2012 school year did the Relay for Life committee begin preparations for the 2012 event?
6. How often are Relay for Life committee meetings held?

Promotional Information
1. What kinds of promotional materials were used around campus prior to the 2012 Relay for Life event? (please check all that apply)
   a. Posters in academic buildings
   b. Posters in student union buildings
   c. Posters in athletic buildings
   d. Flyers distributed to students
   e. Flyers distributed to faculty and staff
   f. Campus emails
   g. Facebook
   h. Twitter
   i. Other:________________
2. Were promotional events held on or off campus prior to the 2012 Relay for Life to increase awareness, participation, and fundraising for the event?
3. If YES, please indicate the types of events that were held to promote your 2012 event.
4. Were there any incentives offered to participants who signed up for the 2012 Relay for Life before a certain date or within a certain date range at any time throughout the year?
5. If YES, what was the incentive and what were the guidelines to receive this incentive?

Event Information
1. Do you allow teams to host fundraisers during Relay for Life?
2. If YES, what types of fundraisers do people run?
3. Who was your keynote speaker and/or what was their relation to your school?
4. How did you find your keynote speaker?

General Information
1. What day was your 2012 Relay for Life event held?
2. Where is your event held?
   a. Indoors on campus
   b. Outdoors on campus
   c. Indoors off campus
   d. Outdoors off campus
3. How many years has your school hosted Relay for Life?
4. Did you reach your event fundraising goal?
5. What was your event fundraising goal?
6. What was your final overall event fundraising amount for 2012?
7. How does Relay for Life compare in success to other campus fundraising events?
   a. Relay is smaller than other campus events
   b. Relay is similar to other campus events
   c. Relay is bigger than other campus events
8. Have any students/faculty/staff been diagnosed with cancer or passed away from cancer recently? (Check all that apply)
   a. Student(s) have been diagnosed recently
   b. Student(s) have passed away recently
   c. Faculty/staff member(s) have been diagnosed recently
   d. Faculty/staff member(s) have passed away recently
   e. No students/faculty/staff have been directly affected recently
9. If any students/faculty/staff have been diagnosed or have passed away from cancer recently please elaborate in as much detail as possible. (Age, relation to school, type of cancer, etc.)
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