Abstract

Across the country evaluators are being asked to determine the likelihood that energy efficiency marketing efforts not only raise awareness, but also result in customers adopting more energy efficient practices. Funders of energy efficiency marketing campaigns are also asking implementers to consider social marketing approaches when developing their campaigns—as the external environment for promoting energy efficiency has opened the door for alternative marketing approaches.

This paper illustrates the core research methods that allow us to both confidently predict the success of a particular marketing effort before committing the funds to undertake the effort, and to evaluate the effectiveness of a marketing effort after implementation. In the past, many research studies measuring the success of an energy efficiency marketing effort simply asked respondents to indicate whether they were likely to undertake a particular energy efficient practice or purchase a particular piece of energy efficient equipment. The answers to these questions were often used to predict behaviors and to measure the impact of programs. This practice still occurs even though these answers are now known to not necessarily reflect the actual intentions of the respondent. This paper provides a better methodology for understanding and predicting actual behaviors and for measuring program effectiveness. A more effective approach for measuring likely behavior change allows the energy efficiency community to make sounder decisions regarding the funding of programs and marketing efforts.

Social Marketing Campaigns: Why is Evaluation Different?

Evaluating the effectiveness of social marketing efforts differs from evaluating traditional product marketing in several ways. One obvious and fundamental way is that for product marketing, sales data and customer satisfaction data tell the whole story. If sales increase, we can assume the marketing campaign worked. If people stop purchasing a product, we can assume the product needs enhancement—not the marketing effort. Since a social marketing campaign usually does not focus on attempting to get consumers to make a monetary transaction, but rather changing behavior, hard evaluation data are generally lacking. For that reason, survey research is crucial not only to the planning of a social marketing campaign, but also to evaluating a campaign’s effectiveness.

A second difference relates to the importance of influencing behavior and changing how a person acts in the long run. Understanding what motivates behavior is therefore critical in any evaluation of a social marketing campaign. Drawing on the authors’ many cumulative years of experience evaluating social marketing campaigns, as well as on key works from social psychology, this paper will help provide readers with an understanding of the drivers behind individuals’ actions and how to use this understanding to evaluate social marketing campaigns designed to change behavior.
Social Marketing and the Innovation Adoption Process

An important theory from social psychology that frequently informs the development of social marketing campaign and the evaluation of such campaigns is Everett Roger’s innovation adoption process. In his book *Diffusion of Innovations* (1962), Rogers defines the diffusion process as, “the spread of a new idea from its source of invention or creation to its ultimate users or adopters.” Rogers defines, “the adoption process as the mental process through which an individual passes from first hearing about an innovation to final adoption.”

Rogers breaks the adoption process down into the following five stages:

1) Awareness
2) Interest / Information
3) Evaluation
4) Trial, and
5) Adoption

Initially, in the awareness stage, “the individual is exposed to the innovation but lacks complete information about it.” In the interest or information stage, “the individual becomes interested in the new idea and seeks additional information about it.” During Stage 3, the evaluation stage, the “individual mentally applies the innovation to his present and anticipated future situation, and then decides whether or not to try it.” During the trial stage, “the individual makes full use of the innovation.” Finally, in the adoption stage, “the individual decides to continue the full use of the innovation.”

Understanding the innovation adoption process is extremely important to both advertisers and those evaluating campaigns and messaging. Social Marketing programs are designed to move customers through the several steps in a continuum similar to Rogers’. In the first stage, pre-awareness, a person may not be aware of the issue or problem or may not think it is relevant them. Customers at this stage must first be made aware of the problem and possible risk factors in order to move to them to the next stage, awareness. To move from awareness to action, the social marketing message should promote the benefits of performing the desired behavior and minimize the perceived costs.

Simply put, in a social marketing campaign it is not enough merely to make the audience aware of the issue. A good campaign moves people through the stages of adoption, ultimately culminating with the adoption of the desired behavior.

Social Marketing and the Theory of Reasoned Actions

Evaluating the impact that marketing campaigns have on actual behavior can be extremely difficult and, in fact, focusing entirely on behavior may neglect important progress made by a campaign. Ajzen & Fishbein’s Theory of Reasoned Action provides a useful framework for understanding motivations behind behavioral changes. As Figure 1 illustrates, the Theory of Reasoned Action states that behavioral intention is ultimately determined by a combination of an individual’s personal beliefs and attitudes, and the individual’s evaluation of the beliefs and attitudes of those around him. By tracing behavior from its roots in a belief system (personal and normative) and personal and subjective judgments, the Theory of Reasoned Action illustrates the importance of evaluating social marketing campaigns by both attitudinal and behavioral changes. An evaluation that only measures behavior is likely to either understate or overstate the actual impact of a campaign.
Figure 1. Theory of Reasoned Action

- **Beliefs**
  - **Behavioral Beliefs**: The person's belief that the behavior leads to certain outcomes and his evaluation of those outcomes.
  - **Normative Beliefs**: The person's belief that people who are important to him think he should or should perform the behavior and his motivation to comply.

- **Attitude Toward the Behavior**: The judgment that performing the behavior is good or bad.
- **Subjective Norms**: The judgment that people who are important to him feel he should or should not perform the behavior.

- **Behavioral Intention**: A person's intention to perform or not to perform the behavior.

Behavior

The theory of reasoned action frequently underlies the evaluation of social marketing campaigns. For example, it was used in Westat and Annenberg’s 2001 evaluation of the National Youth Anti-Drug Media Campaign.

**Key Elements of Social Marketing Campaign Evaluation**

**The Importance of Benchmarking**

Conducting survey research is a core methodological element for evaluating any energy efficiency marketing campaign. There are two key aspects of using survey research to determine the success of any energy efficiency campaign, whether based on social marketing or not. The first is establishing a benchmark. If we do not know what people think about an issue, or how they behaved prior to a social marketing campaign, it is nearly impossible to gauge the impact of the campaign. For example, a survey conducted after an energy efficiency social marketing campaign may indicate that 50 percent of customers will make a behavioral change in their energy use. However, this tells us nothing useful if we do not know the percentage of customers who intended to make a behavioral change prior to the campaign.

A properly designed benchmark survey is also much more than just the preliminary step for planning a post-campaign evaluation. A benchmark survey should be a fundamental component of planning campaign strategy, providing key insights into how to change beliefs, judgments, and ultimately behavior. Surveys that focus on testing arguments are useful in judging what will compel someone to act differently. Such surveys, for example, tend to be extremely accurate in predicting how someone might vote in an election. The same methodology works for predicting the success of a social marketing effort, whereby if the arguments that test the highest are used in the marketing effort, the results are likely to be better.

**Attitudinal Measurements: A Research Priority**

A second key element of evaluating a social marketing campaign involves measuring a range of attitudinal measures in addition to reported behavior. One of the primary challenges of conducting opinion research on social marketing topics is sorting out actual behavioral changes from reported behavioral changes. For example, environmentally concerned individuals may tell an interviewer that they turned their thermostat down the previous winter to conserve energy, but in fact did not. This is not to say that people intentionally lie, but rather have selective memory that conveniently fits with their
ideology. To avoid being misled by falsely reported behavior data, we implement a range of research measures related to the behavior change a social marketing campaign is designed to influence. Key techniques identifying the impact of a social marketing campaign include awareness measures, trade-off analysis (often referred to as conjoint analysis), and intensity measures, among others. These techniques are discussed later in this paper.

Taken together, a benchmark survey utilizing a range of attitudinal measures, followed by a post-campaign survey provide both an informed platform for program planning and solid evaluation tools for measuring a program’s impact.

Designing and Implementing a Survey-based Evaluation

When boiled down to its bare essentials, there are two things that need to be accomplished to successfully use survey research to plan a campaign and evaluate its impact: 1) ask the right questions; 2) ask the right people. While this paper is devoted largely the first point of determining what are the right questions, it is important to note the vital importance of developing the right sample for a survey. This means identifying and defining the target market for a campaign and translating that into an appropriate sample selection for your survey. Ask the right questions of the wrong people and you risk developing a flawed campaign strategy, or not measuring the true impact of a campaign.

Of course, stating that all we need to do is “ask the right questions” is a bit of an oversimplification, since the questions need to be designed to facilitate advanced statistical analysis. In developing any survey, we suggest that our clients first identify the broad topics or issues they are interested in addressing before focusing on the specific survey questions. This paper is organized in the same way—we first discuss the types of information that need to be understood in a benchmark and post-campaign evaluation, and then we discuss the specific questions and analytical techniques that turn the data into actionable campaign plans and quantifiable impact evaluations.

We believe that for functional evaluation purposes of social marketing campaigns, Roger’s five stage adoption process discussed earlier can be condensed into three stages: 1) awareness of the problem; 2) awareness of a behavior solution; 3) belief that the benefits of the solution outweigh effort and/or cost of undertaking the action. By using survey research to classify individuals into one of these three stages, campaign planners can understand what needs to be done to effect behavior change, and then later evaluate the effectiveness of those efforts.

An Environmental Example

ODC’s work on a campaign to reduce emissions from automobile travel provides a good example of how the three stages discussed above are important to planning and evaluating a social marketing campaign with the goal of changing behavior at the individual level.

ODC was recently involved in designing and evaluating a social marketing campaign around the issue of reducing auto emissions. Specifically, there was a change made in several states in which new enhanced auto emissions testing programs were implemented; efforts were made to encourage people to support the program and comply with the law. We conducted a survey before the campaign that indicates people were already aware of the problems caused by pollution in general and automobile emissions in particular and also believed that the requested behavioral change would help address the problem. In other words, most people were already in stage two of the adoption process.

However, we found in the benchmark survey that people lacked awareness of some of the details of the program, and perceived that there would be high tradeoffs, both in terms of monetary costs of compliance, as well as inconvenience. Based on these results, we suggested that the campaign focus
less on the overall issue of pollution and automobile emissions and more on the details of the program, such as the low cost and ease of participation.

The program was implemented and people did comply— but does that mean that the campaign was a success? In our tracking survey after the program, we found that people’s awareness of the details of the campaign, as well as perceptions of the costs and tradeoffs of the program, did change, largely as a result of the campaign. It was only by conducting both the benchmark and tracking survey, however, that we could confidently identify this change and show that the program was a success.

Analytical Techniques for Planning and Evaluating

In a typical social marketing research project, we use a range of measures and techniques to identify what behavioral changes are most and least likely to be adopted, and to identify messages and circumstances that are best for encouraging a desired behavioral change. As mentioned earlier three commonly implemented techniques in most studies include: 1) trade-off analysis; 2) intensity measures; 3) past behavior indices. We focus next on explaining these three techniques, and providing examples of how they can be used in assessing how consumers are being moved along the diffusion of innovation continuum.

Method #1: Trade – Off Analysis

A trade-off analysis isolates specific choice criterion to predict what circumstances or sets of choices are most likely to lead to behavioral changes.

An Example: We use trade off analysis to predict the choices that potential program participants might make. In a trade-off study conducted for a residential pilot load control program at a major Southern utility, ODC provided potential residential load control customers with the following scenarios of program attributes:

- appliance sign-up choices (i.e. air conditioners, electric water heaters and pool pumps),
- cycling strategy options (15 minute, 30 minute and on/off), and
- monthly rebates (ranging from $2 to $50 a month)

These customers were then asked to put together various participation options and then rate their likelihood of participating in the package created. The choices these customers made helped the utility understand the customer decision making process, and develop packages that were most attractive to customers.

Another example involved research related to customer willingness to pay for electricity from a renewable resource, versus a non-renewable resource. ODC fielded a tradeoff analysis survey that included customers making choices between “Protecting the environment” and “Paying 10% more for electricity”, along with other attributes including the tricky point that the electrons being purchased do not necessarily end up at your home, rather they go into the grid. Our research showed that customers were more interested in helping the environment than saving money. Based on these results, our client ran an advertising campaign that focused less on price, and more on the environment. After the ad campaign, we conducted the tradeoff analysis again, and we found more customers who were sympathetic to the environmental issue.

A trade-off analysis is extremely useful in designing programs with a number of customer choices and possible incentive levels. The choices made by these customers helped to quickly design a program with the optimum mix of appliance participation, incentives and cycling strategies. Statistically significant results can be obtained if the process is repeated a sufficient number of times.
Another advantage of this approach is that we can measure attitude changes which may later manifest themselves in behavior change. We can measure where customers are on the buyer behavior continuum, and show intermediate steps towards progress.

While a trade-off analysis is extremely useful in designing programs and in predicting behavior, the findings still may not mirror what participants might do in the real world when confronted with program attributes that were not modeled. For instance, in the example of the load control analysis conducted above, a significant percent of customers indicated that they would be very receptive to participating in an air conditioning program which shut off their air conditioner during peak periods if it meant they would receive the maximum incentive amounts. When faced with hot humid summer days and no air conditioning, however, many of these participants changed their minds and participated in a cycling strategy which was less intrusive and offered a lower monthly incentive. This goes back to our point above about consumers not only buying into the need for altering their behavior, but they also have to agree that the behavior change does not affect their level of comfort or require them to sacrifice more than they think it is worth.

Method #2: Intensity Measures

Intensity measures look at understanding the intensity, or lack of intensity, that surrounds a particular issue and using this understanding to predict the likelihood that individuals are to change their behavior or to act in response to particular messages.

We use this approach in most of our political and referenda research, along with the energy and non-energy social marketing research we conduct. It allows for the issue to be framed in the context of all other major issues in the American consciousness. For political campaign work, determining intensity helps a candidate understand what issues they should address in advertising. For social marketing campaigns, it helps define how much time, money and effort needs to be utilized to affect public attitudes and change behaviors. For example, several years ago, recycling issues were not important to many consumers. Supporters of “bottle bills” (laws that would require recycling of bottles) considered various angles in their messaging, often focusing more on cleaning up our streets rather than other environmental benefits of recycling glass bottles. Today, however, the public awareness of issues related to resource scarcity and global warming is higher, and messages related to protecting the environment are usually more effective for promoting recycling than controlling litter.

An Example: Looking at the issue of protecting the environment, the first thing that we would want to understand is how important the issue is in relation to other social issues, such as terrorism, education, raising gas prices, etc. Our next step would be to determine if we need to make strong arguments to persuade people that the issue is one of importance, or is the intensity level high enough among consumers that we can make the assumption that the issue is already important? If we find a lack of intensity to our issue, are their other issues that are related to our core issue that we can link into our core messaging?

Advantages of intensity measures include helping to frame the energy efficiency issue on a local or state level and to determine appropriate messaging that will help alter behaviors. From an evaluation point of view, understanding the intensity measure up front, and measuring it over time, can help an evaluator place a marketing effort in context, aid with process evaluation issues, and provide another measure of marketing success if we see the issue rising in intensity over time.

While intensity measures should be an important part of any campaign evaluation, understanding intensity of public perceptions about an issue is not sufficient. It is not enough that people perceive an issue to be an important problem. They must also understand what they can personally do about the
problem, perceive that the requested behaviors will be effective, and believe that the tradeoffs in terms of money, inconvenience, or time are not substantial.

**Method #3: Past Behavior Indices**

Past behavior models look at the past actions of individuals and use this historic behavior to predict future behaviors and likelihood of taking action. By creating an index of related past behaviors, researchers can develop demographic profiles of customer segments most likely to have participated in activities relevant to an issue. These profiles can then also be used to predict who is most likely to participate in the future.

Without understanding past behaviors, we cannot measure behavior changes over time. That is why a baseline study is so important. It is also why some key questions developed in the baseline survey should be asked time and again to measure trends. By understanding what customers have done in the past, we can paint a clearer picture as to what we can expect them to do in the future.

The advantage of assessing past behaviors is that it is more tangible for customers to answer and is more accurate than expected behavior (that is, as long as the questions are crafted to eliminate bias, particularly the bias associated with a respondent wanting to provide the answer that they think the interviewer wants to hear). Of course, in traditional evaluations of energy efficiency programs, we are often only asking about past behaviors, and the behaviors are tangible (installing CFLs, purchasing an energy efficient refrigerator, etc.) For social marketing programs, we often are talking about changes in practices such as turning down a thermostat, turning off lights when not in the room, etc.

Indices of past behaviors can be an effective tool in predicting the general success of the campaign while providing a better understanding of the true target audience. However, since most campaigns target a particular subgroup, the information obtained by assessing past behaviors may be limited in use for the design of future campaigns. Furthermore, if people who have undertaken a particular behavior are not concentrated in any demographic group, targeting may be impossible regardless of other circumstances.

**An Example:** In order to understand which residents are most likely to take energy efficiency actions in the future, it would be helpful to understand current environmental practices. This could be accomplished through a survey as asking about:

- How often they recycle
- Carpooling or public transportation use practices
- Purchase of CFL’s

Responses to these questions, along with a module of demographic questions, are analyzed and a score assigned to each respondent. Scores are then used to develop a past behavior index.

**Summary and Conclusions**

As mentioned at the beginning of this paper, evaluating an energy social marketing campaign is difficult and very different from the typical energy evaluation campaign. Changing an individual’s behavior is difficult. Evaluating a campaign’s effectiveness and success in changing these behaviors is even more difficult. Evaluators cannot simply survey customers and ask if they will change their behavior in response to various marketing messages, since historic results show that while many indicate that they will change their behavior based on what they have heard in a social marketing campaign, in reality they often do not act on these good intentions. Rogers’ theory of diffusion of innovations and
Ajzen and Fishbein’s theory of reasoned actions can both be used to help guide the evaluation of many social marketing campaigns.

Consequently, the research necessary to design, market and evaluate social marketing campaigns, while often difficult to obtain, is necessary in order to make informative decisions. An evaluation plan for a social marketing effort must be crafted in order to obtain a wide range of information that can be used to target the messages to the appropriate targeted segments and then evaluate the results of these campaigns.

Conducting a baseline is a crucial component of the evaluation plan in order to have benchmarks upon which to compare the research results. The three research methods listed in this paper can then be used to help determine the effectiveness of the social marketing campaign. The effectiveness of a social marketing campaign can then be measured based on its success at moving people through the three stages of social marketing: 1) belief in the problem; 2) belief in the solution; and 3) belief that the solution is worth the cost/effort.

References

