CHAPTER IV

RESEARCH METHODOLOGY

(Covered in sections 17 to 20)
17. RESEARCH DESIGN

Secondary Research

17.1. In-depth secondary research formed the starting point of the proposed study and laid the groundwork for the primary research, as well as for preparing the various sections of the report. Once the topic of Social Marketing by NGOs was identified, various secondary sources such as related books, journals, theses and dissertations of both Indian and foreign universities, websites of NGOs, NGO federations and organizations and the World Bank, and NGO directories were consulted. Discussions were also held with experts in areas relevant to the study. As a result of the secondary research, in addition to accessing 60 websites, it was possible to gather well over 200 references, out of a search of over 300 references of scholarly articles, papers presented at conferences, reports, books and articles. These references were then listed and numbered.

17.2. In addition to these 300 references, the 60 websites were studied and utilized for “profiling” the NGOs, which is explained in a subsequent part of this section.

17.3. Next, an outline of the Ph.D. thesis was prepared, listing all relevant aspects of the proposed study. From the over 200 references, relevant portions were extracted and key ideas identified. These were arranged in the form of a “Reference Analysis Matrix”, or master plan. The matrix listed each section of the outline and against it the bibliographic reference numbers and the key idea/s in each were cited. This matrix formed the backdrop and framework for the entire study, since it listed the bibliography number, the corresponding author’s name, the type of reference (e.g. scholarly article or research article), the key idea(s) in each reference and the linkage of the key idea to a specific stage or aspect of the study listed in the structure.

17.4. The master plan was then broken down section wise as in the outline, wherein each key idea and its source were linked to a specific aspect in the form of a sub-matrix for each aspect. The various aspects of the study included the following – rationale, scope and definition, NGO background - Karnataka, India and the world, NGOs and the government, NGO types, role of NGOs, social marketing in socio-economic development, accountability
aspects and internal systems in NGOs and how they affect sustainability, need and scope for building image of reliability applying marketing practices, funding and donor perspectives, performance measurement, success and failure factors, sustainability aspects, hypotheses, methodology, findings and recommendations.

17.5. This procedure provided the basis for three important aspects – a) understanding the environment of the voluntary sector b) primary research and design of the questionnaire, the instrument and c) developing the different sections of the thesis.

Sample Selection
17.6. As a first step in sample selection, the universe of NGOs in the selected States of Tamil Nadu and Karnataka had to be compiled. This proved to be a difficult task, since there is no single, reliable, authentic and consistent source of information on NGOs in India. The primary reason for this is the lack of separate legal status and identity for the voluntary sector. NGOs are taken to include all organizations outside the government sector and embrace a wide range of organizations such as clubs, schools, hospitals and even apartment associations. Therefore, isolating the voluntary sector engaged in socio-economic development became difficult. Yet another constraint was that although a list of names of NGOs in each state was available, there was no information on their activities.

17.7. Given this situation, two directories, identified as a beginning point (even these sources had limitations), were used to compile the universe of NGOs – V. K. Puri’s Directory of Top NGOs and NPOs in India, 2009 and Profile 500. The listing of NGOs by CAPART was of limited use, since it included only those NGOs with government aid and consisted mostly of those doing social service, such as care of the aged etc. These categories fall outside the scope of this study, which is limited to activities in which there could be scope for application of marketing practices. The two directories provided the basic information about each NGO, including the name, the contact details such as the telephone number, the email address and the website, the particular Act (e.g. Foreign Contribution Regulation Act) under which the NGO is registered and an outline of the activity in which the NGO is engaged in. The number of NGOs in Tamil Nadu and Karnataka, based on these two directories was 365 and this formed the initial universe of NGOs. Since the proposed study focuses only on organizations doing social marketing, this list had to be further narrowed down, by excluding
those organizations that were engaged in social service. The final sampling frame boiled down to 67.

17.8. A ‘multiple factor’ profile was then prepared for each of the above NGOs, through secondary research covering over 60 websites. This was based on seven main criteria, with sub-criteria under some of the main criteria. The seven criteria were –

i. Availability of funds - size and continuity

ii. Experience of the organization

iii. Objectives - clarity and relevance

iv. Expenditure on programs

v. Geographical coverage of activity

vi. Organizational support and resources

vii. Performance effectiveness, including availability of a system of measurement and use of the system for tracking impact

17.9. These criteria were then assessed by 40 experts – 20 academicians and 20 management professionals. They assigned relative weightages to these criteria. The average weightage for each of the seven criteria was calculated and this formed the basis for profiling the NGOs.

17.10. The next step in the sample selection procedure was to rate the NGOs in the universe on each of these criteria. This was an elaborate and time-consuming exercise, which was carried out by searching websites to gather detailed information. An outcome of this exercise was that it threw up the poor state of many websites. An objective five point rating/classification scale was developed for this purpose (refer Appendix 8). The average weightage for each criterion was then applied to the rating of each NGO on each criterion, in order to arrive at a score for each NGO. Thus, for each NGO, a total score was computed.
17.11. The coefficient of variation was then calculated for each NGO, in order to assess the degree of balance in the overall effectiveness of each NGO on the various criteria. The NGOs were ranked in descending order from the highest score to the least score (with the highest score being the best) and from the lowest coefficient of variation to the highest coefficient of variation (with the lowest coefficient of variation being the best). The two rank values were then combined. Based on the combined rank value, the NGOs were finally re-arranged, from the least combined rank value to the highest combined rank value (with the least combined rank value being the best). In addition, the NGOs were also categorized as “apex” and “frontline” NGOs, in order to draw a sample that included both categories. The apex NGOs were those that either operated at a state level with intermediary NGOs under them, or those that provided training and other services (mother NGOs) to member NGOs, while the frontline NGOs were those that operated at the community level with direct contact with the target groups. The ranking procedure allowed enough flexibility, but without introducing bias, in selecting the samples for study. Such flexibility was needed to deal with possible reluctance of the selected respondent to cooperate in sharing information and to avoid going through the whole selection procedure all over again. Fortunately, in actual practice, all the selected respondents extended cooperation in providing and sharing information within the constraints of their policy on such matters.

17.12. The sampling procedure detailed above could be described as “holistic probability sampling”, since it is comprehensive and takes into consideration various criteria for rating and selecting the NGOs and minimizes room for bias.

17.13. The Table on the next page presents brief profiles of the ten NGOs selected by the sampling procedure detailed above.
Table 7
Profiles of Sample NGOs

<table>
<thead>
<tr>
<th>No</th>
<th>NGO Name</th>
<th>State</th>
<th>Geographical Coverage</th>
<th>Annual Exp. Lacs</th>
<th>Full time Staff</th>
<th>Regd. Under Act</th>
<th>Year Estd.</th>
<th>Main Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Action Aid India</td>
<td>Karnataka</td>
<td>Karnataka &amp; parts of Kerala</td>
<td>250-300</td>
<td>13</td>
<td>Societies Act, FCRA</td>
<td>1973</td>
<td>Poverty reduction</td>
</tr>
<tr>
<td>2</td>
<td>Agricultural Devpt. &amp; Training Society</td>
<td>Karnataka</td>
<td>5 Taluks of Chickballapur</td>
<td>380</td>
<td>64</td>
<td>Societies Act, FCRA</td>
<td>1977</td>
<td>Empowerment of Coolie class</td>
</tr>
<tr>
<td>4</td>
<td>Samuha</td>
<td>Karnataka</td>
<td>6 dts. of Karnataka</td>
<td>1600</td>
<td>&gt;163</td>
<td>Indian Trust Act</td>
<td>1995</td>
<td>Reduction of HIV incidence</td>
</tr>
<tr>
<td>6</td>
<td>Action for Community Orgn, Rehab &amp; Devpt</td>
<td>Tamil Nadu</td>
<td>2 Taluks of Nilgiris</td>
<td>100</td>
<td>65</td>
<td>Karnataka Societies Regn. 1960 Act</td>
<td>1986</td>
<td>Adivasi Devpt. &amp; Advocacy</td>
</tr>
<tr>
<td>7</td>
<td>Deepam Educational Society for Health</td>
<td>Tamil Nadu</td>
<td>3 dts of Tamil Nadu</td>
<td>64</td>
<td>20</td>
<td>Societies Act</td>
<td>1991</td>
<td>Health Promotion</td>
</tr>
<tr>
<td>8</td>
<td>Devpt. Promotion Group</td>
<td>Tamil Nadu</td>
<td>10 dts. of Tamil Nadu</td>
<td>300</td>
<td>47</td>
<td>Societies Act</td>
<td>1986</td>
<td>Watershed Devpt. &amp; SHGs</td>
</tr>
<tr>
<td>9</td>
<td>Social Action Movement</td>
<td>Tamil Nadu</td>
<td>5 dts. of Tamil Nadu</td>
<td>50</td>
<td>20</td>
<td>Societies Act</td>
<td>1985</td>
<td>Eradication of Child labour</td>
</tr>
<tr>
<td>10</td>
<td>Tamil Nadu Voluntary health Assn.</td>
<td>Tamil Nadu</td>
<td>Tamil Nadu &amp; Pondicherry</td>
<td>117</td>
<td>18</td>
<td>Societies Act</td>
<td>1971</td>
<td>Health Promotion</td>
</tr>
</tbody>
</table>

The above details collected prior to sample selection were either validated or updated at interviews

Primary Research

17.14. The primary research included both quantitative research in the form of a survey using a structured questionnaire with closed ended questions, as well as qualitative research using techniques such as observation and depth interviews. Since the study is a three dimensional one that involves assessing the perceptions of NGOs, donors and experts, both the
quantitative and the qualitative research had to be designed in such a way as to gather information from all these three parties.

**Questionnaire Design**

17.15. The questionnaire was minutely tested against what was “promised” in the protocol submitted to the university. This exercise ensured that all aspects visualized and hypothesized at the formulation stage were in fact covered by the questionnaire. The hypotheses, objectives of the study and other outcomes listed in the synopsis were extracted and formed the basis for design and test of the questionnaire. These issues were then grouped under various categories - background information on the respondent, role, objectives, programs, measuring program effectiveness, application of social marketing practices (if any), relationships, image of the organization, leadership and management, capacity building, fund raising, sustainability and accountability.

17.16. The questions were framed taking into consideration, the following aspects –

- Making the questionnaire respondent friendly, by including largely multiple choice, rating scale, ranking and dichotomous questions.

- Including a few simple open-ended questions, so as to gather more in-depth information. The answers to these questions could be given in a few words or a couple of sentences.

- Framing the questions in such a way that they lend themselves to analysis

- Designing the questionnaire in a manner that it can be adapted as a self-review sheet for Managements of the voluntary sector and as a checklist of benchmark practices.

17.17. As a next step, the questionnaire was pre-tested with four NGOs/experts, for both contents and interview methodologies. Based on the feedback, refinements were carried out. It may not be out of place to mention that the test respondents uniformly appreciated the
comprehensive nature of the questionnaire. A copy of the final modified questionnaire and a matrix including the responses of the ten sample NGOs are attached in Appendices 4 and 9.

17.18. A separate, simpler questionnaire was also prepared for donors/funding agencies and for experts, in order to assess their perception of various aspects covered in the main questionnaire. This is in Appendix 5. The sample size for this is twelve– seven donors and five experts. Respondents were given the option of completing the questionnaire online, or through a face-to-face interview. A summary of their responses is in Appendix 10.

**Qualitative Research**

17.19. While the questionnaire and interviews helped to shed light on the various aspects of functioning of the NGOs in the sample, they did not record information on qualitative aspects such as the attitude of the respondents, their personality traits, body language and some indication of the type of leadership style. In this connection it may be mentioned that access to the CEO or equivalent senior level official was possible on behalf of each respondent. Extensive field notes made by the interviewer in the course of the interviews on such aspects were incorporated, by developing a comprehensive, numerical five point rating scale, which would enable the data to be quantified. The different qualitative aspects included in the scale are -

i. Appointment process, or the ease with which the appointment was fixed

ii. Attitude of the respondent towards the interview

iii. Degree of focus and involvement of the respondent during the interview

iv. Transparency, or openness regarding various issues

v. Quality of information provided

vi. Quality of articulation

vii. Technical knowledge, especially of marketing concepts
viii. Clarity of understanding of objectives and mission

ix. Level of sharing information – whether spontaneous or after prompting

x. Level of inhibition in revealing information

xi. Functional awareness of one’s role

xii. Knowledge state

xiii. Skill level

xiv. Knowledge of the markets they are operating in

xv. Type of leadership

17.20. All the NGOs/respondents were rated on the above aspects (see Appendix 7). While most of these aspects could be clearly observed or inferred from the data gathered during the interview, there were a few instances when they could neither be observed nor inferred and these were indicated by assigning a “zero” rating on the scale for that particular aspect/respondent. The qualitative data gathered from this scale will be analyzed separately and integrated with the quantitative data gathered from the structured questionnaire and interview.

Depth Interviews
17.21. In addition to the questionnaires developed for the NGOs, experts and donors that generated a lot of discussion and rich information, a question guide for conducting separate one-to-one depth interviews with six NGO experts/donors was designed. The purpose of these interviews was to incorporate “phenomenological” research into the qualitative research design, whereby the experts were asked to describe their personal experiences of phenomena related to the NGO sector. These interviews included probing questions to gain additional
insights into the sector from the experts. The responses to these questions will be analyzed separately and integrated with the quantitative data. The interview guide is in Appendix 6.

Integration of Qualitative and Quantitative Research

17.22. Since social marketing is primarily concerned with behavioral change, research into its effectiveness would not be complete with gathering data of a quantitative nature from surveys and structured questionnaires. In order to gain deeper insights into complex behaviors and unconscious motives, qualitative methods such as focus groups, depth interviews and observation would be needed to supplement quantitative research and to extract rich information. An integration of the two approaches is advocated, especially for socio-economic situations, by Weinrich, Nedra Klein, (1996)\(^2\) in a scholarly article, for their very divergence of approaches which has the effect of complementing each other.

17.23. Although quantitative and qualitative researches have their relative strengths and weaknesses, combining the two methods in a single research study helps to get the best of both approaches. Quantitative research has the ability to measure opinions, facts, awareness, and other data which can be gathered through pre-determined questionnaires, quantified and analyzed through statistical tests for proving or disproving various hypotheses regarding the relationship between variables. The results of the sample may also be generalized to a larger population. However, the disadvantage of this research method, according to Weinrich, is that it “decontextualizes” human behavior, or studies it in an artificial context, ignoring the influence of variables other than those specified.

17.24. Qualitative research on the other hand helps to understand the target audience’s psyche. Since it is unstructured and is conducted in a more free-wheeling manner, it helps to provide richer information on situation specific behavior and the meanings that people assign to social phenomena. The disadvantage of qualitative research is that the data gathered cannot be quantified and analyzed and that measurement of data is subjective, depending on who conducts the research. It requires highly trained investigators to conduct the research in a skilful manner.
17.25. The current study aims at a holistic approach by integrating both the above types of research for a greater depth of understanding and a higher degree of generalizability to a larger population.

Performance Measurement

17.26. One of the main objectives of the current study is to identify the traits of successful NGOs, with a view to establishing benchmark practices and a social marketing model for others to follow. This was to be achieved by assessing the social marketing effectiveness of select NGOs. An earlier section on Performance Measurement spells out the various criteria upon which an NGO could be evaluated – cost per unit of output from year to year, percentage of fixed administrative expenditure on total expenditure to show organizational efficiency, impact measurement at the target community level and assessment of sustainability of impact carried out in the post-program phase. Ideally, assessment of the relative efficiency levels of select NGOs should be done by comparing these figures year to year within NGOs and comparing similar figures for different NGOs. However, reliable data or even qualitative information on these aspects is hardly available, compounded by the general tendency to treat such information as privileged and secretive. In the absence of such data the study had to develop other means of assessing the performance level of each NGO in the set based on the scores of specific traits and sub-traits. This is based on the reasonable assumption that the quality of a given NGO’s output and impact are likely to depend on the quality of its traits and practices.

Procedure for Developing Benchmark Matrix

17.27. One of the main objectives of the current study is to identify the traits of successful NGOs, with a view to establishing benchmark practices and a social marketing model for others to follow. In this regard, fifteen different marketing related traits or benchmark criteria were identified – Marketing Concept, Market Analysis, Marketing Planning, Social Marketing Strategy – Product (Program), Social Marketing Strategy - Promotion, Social Marketing Strategy – Place (Delivery of Services), Social Marketing Strategy - Policy (Government Relations), Social Marketing Strategy - Publics (Stakeholder Relations), Social Marketing Strategy – Purse (Funding), Social Marketing Strategy – Partnerships (Networking and Alliances), Institutional Image, Marketing Capacity Building, Marketing Evaluation,
17.28. The above traits were based on research findings elsewhere, including other parts of the world, scholarly articles, World Bank recommendations, as well as the insights of a senior marketing expert. In addition, nearly ninety different checkpoints or sub-traits were identified for all the criteria.

17.29. The second step in developing the Benchmark Matrix was to connect each of the checkpoints or sub-traits to the responses from the questionnaires for NGOs, the observation chart and the post interview notes that were developed for each NGO after the interview. This way, the quantitative data and the qualitative data were integrated.

17.30. Next, a scoring method was devised for the answers to the different types of questions – dichotomous or yes/no questions, the questions that involved checking multiple options and the open-ended questions. Dichotomous/yes-no questions carried one mark for positive answers and zero marks for negative answers. Multiple option questions carried as many marks as options chosen and open-ended questions were assigned marks according to the category of the responses as high, moderate or low compliance, carrying three, two and one marks respectively. In this manner, all the responses were converted to numerical values.

17.31. The scores for all the ten NGOs in the sample were calculated for the different traits, through a build-up of values for each sub-trait. The scores on the different traits are included in the summary sheet of the same Excel file, which is attached in Appendix 11. The summary sheet sets out the following – total score of each NGO on all traits, overall score percentage, standard deviation or the degree of fluctuation for each NGO between the different traits, coefficients of variation or the percentage of fluctuation for each NGO between the different traits, average score of all NGOs on each trait, standard deviation or the degree of fluctuation between the NGOs on a particular trait and coefficients of variation or the percentage of fluctuation between the NGOs on a particular trait.

17.32. The purpose of the study is not to compare the different NGOs, but to see how strong or weak the NGOs are on the different criteria. The scores thus make it possible to identify
not only the weak aspects, but also the weak areas within each aspect or trait, by identifying low sub-trait values. The data from the summary sheet is not only meaningful by itself, but also lends itself to further statistical analysis to test the different hypotheses of the study.

17.33. The chart on the next page summarizes the procedure.
Figure 5
Flow Chart of Research Methodology & Procedure

(Source: Author)
18. SECONDARY RESEARCH – OBSERVATIONS

18.1. The following observations arise even from the preliminary search for secondary data at the earlier stage of this study, covering about 41 NGOs in Karnataka and Tamil Nadu.

18.2. Information and data on the activities of the voluntary sector are scarce and scrappy. Websites are either non-existent for many NGOs, or, in respect of those that post a website, there seems to be no systematic upkeep with latest information. Websites are treated more as a status symbol than as a means of providing and sharing reasonable information and financial data on activities. Most NGOs are reluctant to publicize details of expenditure on individual programs, break-up of program and non-program expenditures and sources of funds. Where data is provided, it is too scrappy and sometimes inconsistent to be of any real value. Descriptive and self-congratulatory accounts of activities are furnished, which cannot substitute for hard, quantified data or information on the actual impact on the target audience during a specific period. This could be due to the absence of any systematic attempt at measuring results. Self criticism, self-evaluation and greater transparency seem to be the key needs.

18.3. The poor level of transparency could also be due to lack of any statutory obligation to publicize information and data on specific issues, as in the case of stipulations in respect of Companies under the Companies Act. This, in turn, could be due to lack of clear legal definition of NGOs of different types and hues – they could range from hospitals and football clubs to voluntary organizations engaged in social service or social development. The lack of clear delineation of different types of NGOs and the resultant “lumping” may make it difficult for the government or the donor to tell the genuine and efficient ones from the spurious ones and thereby deny a basis for encouraging the good ones.

18.4. Objectives seem too general and vague to be of use internally as a guide-post for programs and priorities. To the outside observer, they are of even less value in providing an insight into the concerned NGO’s purpose and direction. From the secondary data, it seems that many NGOs are engaged in many activities of a diverse nature all at the same time, lacking sharp and clear focus.
18.5. The following diagram is reproduced from Independent Sector, from their website nonprofit.about.com, on the activities of the voluntary sector in the U.S.A.

**Figure 6**
**Activities of Voluntary Sector in USA**

18.6. It is seen from the above pie chart that human services, academics, educational services, health and human rights form only about 30% of the focus of the voluntary sector, the balance being devoted to higher needs of society. In contrast, in India, social services and advocacy constitute the bulk of the activities of the NGO sector. This may be inferred from the fact that out of 1936 NGOs in Karnataka and Tamil Nadu, only around 181 seem to be engaged in the higher needs of socio-economic development and environmental protection. Out of these, only 41 have any kind of basic access to information about their activity. The large majority is engaged in direct service like care of the aged, the sick, the disabled and street children. Many provide medical care and the basic need of food. This prompts us to hypothesize the following -

a) Social service caters to the most basic and primary needs like hunger, sickness, illiteracy and social acceptance;
b) Social marketing has a part to play in activities that concern issues of social, economic, health and environmental development, since they involve behavior transformation;

c) The more developed a society, the greater is the activity of the type mentioned in (b). Therefore, a larger part of the voluntary sector in those countries would be engaged in such activities, requiring the application of social marketing principles;

d) In developing countries, social marketing is not necessarily practised properly, even with regard to development activities. This is because such activities are still in a stage of infancy and there is a strong belief that marketing methods are meant only for selling goods.
19. STATISTICAL TESTS OF HYPOTHESES - ANALYSIS AND INTERPRETATION

19.1. The information in the available data sets including the Benchmark Matrix, the Observation Charts with their qualitative data, the post interview notes and the questionnaire response matrix was subject to statistical tests covering regression, correlation, t test, F test and collinearity, using the SPSS 17.0 statistical software package.

19.2. The objective was to test each of the six hypotheses derived from the Structural Equation Model (SEM) outlined earlier in the section on Hypotheses. These specific hypotheses were linked with the earlier list of General Hypotheses derived from a preliminary literature review. The SEM is broadly based on the Log Frame (Logical Framework) model employed by international multilateral agencies for evaluation of socio-economic projects.

19.3. In this concept, the project is visualized in three parts – (a) the input provided by the funding agencies in money, material and technical assistance (b) the output of the implementing agency, utilizing the input, in the form of activities that promote the objective of the project and (c) the outcome of the project, or impact on the target audience. Input information was available in the form of total annual expenditure. Given the constraint of data availability on output and outcome (impact), marketing effectiveness, with regard to social marketing P’s, on which information was available, was adopted as an indicator of output and determinant of outcome.

Validity and Reliability

19.4. The current data set was subject to validity and reliability tests, which yielded high coefficients as indicated by Cronbach’s alpha of 92.6%. This denotes that the current data set used for the analysis is greatly reliable.

19.5. Detailed analysis and interpretation of the results of the tests are explained in the following paragraphs.
SEM Hypotheses

19.6. In the next few paragraphs a brief explanation of each hypothesis and the data set used for the variables in each are set out, followed by a summary of the results of the statistical tests and interpretation.

19.7. SEM Hypothesis 1.

**Input size significantly influences output.**

This implies that the amount of resources in terms of funds or expenditure would determine both the quality and quantity of output, as measured by the quality and number of training sessions, for example.

Input is equivalent to the funds placed at the disposal of the NGO and as this information is unavailable in precise and reliable terms, the expenditure by each of the NGOs is taken as being indicative of funds made available. This is a reasonable and safe assumption, as most NGOs spend most of what they receive and, in any case, do not have the means to access borrowed funds from lending institutions.

Output is the quantity of various means adopted for achieving the desired impact. Normally, these details are available with NGOs in precise detail – like number of training programs held, number of group meetings conducted, number of brochures distributed, number of SHGs formed and so on. These, however, are not made available in their websites or annual reports. Under the circumstances, social marketing effectiveness in terms of seven select traits as measured in the Benchmark Matrix is taken as an indicator of quality and quantity of output.

19.8. SEM Hypothesis 2.

**Output significantly influences Outcome.**

Output and Outcome are required for H2. It was seen under H1 that social marketing effectiveness, for which data is available, is a reliable indicator of output. In regard to Outcome, again, there is no data. As such, social marketing effectiveness is also taken to represent Outcome, since it undoubtedly influences Outcome. In view of these data
limitations, H1 and H2 need to be combined into a single hypothesis as SEM H1 and restated as follows. Consequently the other SEM Hypotheses have been renumbered.

19.9. Combined SEM Hypothesis 1 – Input significantly influences Outcome (where Input is expenditure and Outcome is social marketing effectiveness).

Null hypothesis: There is no relationship between expenditure and social marketing effectiveness.

Alternate hypothesis: Level of expenditure significantly influences social marketing effectiveness.

Level of expenditure is the independent variable and social marketing effectiveness (as Outcome) is the dependent variable.

The data set for the level of expenditure is drawn from the Post Interview notes and that for social marketing effectiveness from the scores from the Benchmark Matrix for the following aspects – program, promotion, delivery of services, stakeholder relationships, alliances and networking, government relations and funding.

The result of the test of this hypothesis would be of significance to funding agencies and NGOs, as it would enable them to know the extent to which size of expenditure, consequently funding, is critical for marketing effectiveness.

In addition to the variables in the Log Frame Matrix, there are other “latent” variables that could also have a bearing on either output or outcome, as specified in the earlier flow diagram (Figure 1). These latent variables include marketing related traits, some of which are specific to social marketing. The following hypotheses are based on these latent variables.

Given the data constraint on Output and Outcome, in the remaining hypotheses, social marketing effectiveness would be taken to represent either Output or Outcome.
19.10. SEM Hypothesis 2

Total clarity of objectives leads to more effective output.

The assumption is that social marketing organizations that are clear about what they want to achieve are more likely to design their programs more effectively, ensuring a higher degree of success.

While most organizations in the voluntary sector seem to have a statement of objectives and also of their mission, these often turn out to be lofty statements with little practicality. It is done more as a formality for public viewing than for directing their action towards a clear goal. The result of testing this hypothesis would throw light on whether clarity of objectives is really a guiding factor for success.

**Null hypothesis:** There is no relationship between clarity of objectives and social marketing effectiveness.

**Alternate hypothesis:** Clarity of objectives significantly influences social marketing effectiveness.

Clarity of objectives is the independent variable and social marketing effectiveness (Output) is the dependent variable.

The data set for clarity of objectives is drawn from the Observation Chart and that for social marketing effectiveness from the scores from the Benchmark Matrix for the following aspects – program, promotion, delivery of services, stakeholder relationships, alliances and networking, government relations and funding.

19.11. SEM Hypothesis 3

A democratic leadership style leads to more effective output.

Ideally, a democratic style of leadership where staff is involved and empowered to take decisions is more likely to create higher quality and quantity of output than an autocratic style where the leader takes decisions in isolation.
Although information on leadership styles was not available, this could be partly inferred from the observation of respondents’ attitudes towards the interview. It remains to be seen from the tests whether the type of leadership has any influence on the effectiveness of social marketing.

**Null hypothesis:** There is no relationship between leadership style and social marketing effectiveness.

**Alternate hypothesis:** Leadership style significantly influences social marketing effectiveness.

Leadership style is the independent variable and social marketing effectiveness (Output) is the dependent variable.

The data set for leadership style is drawn from the Observation Chart and that for social marketing effectiveness from the scores from the Benchmark Matrix for the following aspects – program, promotion, delivery of services, stakeholder relationships, alliances and networking, government relations and funding.

**19.12. SEM Hypothesis 4**

A higher quality of management leads to more effective output.

Quality of management is determined by organizational aspects such as management structure, cost effectiveness aspects, accountability aspects and the degree of transparency shown by the management. The assumption is that a flat management structure, higher cost effectiveness and greater accountability and transparency will lead to quicker and more efficient creation of output. The tests will throw light on whether social marketing effectiveness is dependent on such qualitative factors or whether it is solely determined by quantitative factors such as amount of funds available.

**Null hypothesis:** There is no relationship between quality of management and social marketing effectiveness.
Alternate hypothesis: Quality of management significantly influences social marketing effectiveness.

Quality of management is the independent variable and social marketing effectiveness (Output) is the dependent variable.

The data set for quality of management is drawn from the scores from the Benchmark Matrix on this trait and that for social marketing effectiveness from the scores from the Benchmark Matrix for the following aspects – program, promotion, delivery of services, stakeholder relationships, alliances and networking, government relations and funding.

19.13. SEM Hypothesis 5
Greater connectivity across organizations creates better impact/outcome.

Connectivity refers to partnership, networking or alliances with the private sector, the government or other NGOs and is an important aspect of social marketing. Since the task of bringing about behavioral change is too difficult to be achieved by a single organization functioning in isolation, it is expected that such networking will create greater impact through the combined strengths of the partners. However, this remains to be tested through the analyses.

Null hypothesis: There is no relationship between connectivity across organizations and social marketing effectiveness.

Alternate hypothesis: Connectivity across organizations significantly influences social marketing effectiveness.

Connectivity across organizations is the independent variable and social marketing effectiveness (Outcome) is the dependent variable.

The data set for connectivity across organizations is drawn from the Observation Chart and that for social marketing effectiveness from the scores from the Benchmark Matrix for the following aspects – program, promotion, delivery of services, stakeholder relationships, alliances and networking, government relations and funding.
19.14. SEM Hypothesis 6

A relationship of high involvement with stakeholders creates better impact/outcome.

High involvement with important stakeholders, particularly the local community, the funding agencies and the government would mean frequent interaction and consultation with them, regarding choice of program theme, design and implementation. It is to be expected that NGOs that adopt long-term, relationship based social marketing are more successful than those that adopt a short-term, transaction based approach. Such a relationship would go a long way in creating better impact through unity of message and an environment conducive for success.

Null hypothesis: There is no relationship between stakeholder involvement and social marketing effectiveness.

Alternate hypothesis: Stakeholder involvement significantly influences social marketing effectiveness.

Stakeholder involvement is the independent variable and social marketing effectiveness (Outcome) is the dependent variable.

The data set for stakeholder involvement is drawn from the scores from the Benchmark Matrix for stakeholder relationships and that for social marketing effectiveness from the scores from the Benchmark Matrix for the following aspects – program, promotion, delivery of services, stakeholder relationships, alliances and networking, government relations and funding.

Statistical Results and Analysis

19.15. Multiple regression is a flexible method of data analysis that may be appropriate whenever a quantitative variable (the dependent variable) is to be examined in relationship to any other factors (expressed as independent or predictor variables). Relationships may be non-linear, independent variables may be quantitative or qualitative, and one can examine the effects of a single variable or multiple variables with or without the effects of other variables taken into account (Cohen, Cohen, West, & Aiken, 2003).
19.16. As a first step, an analysis of the combined effect of all the six independent variables (regressors or predictors) on each of the seven different components of the dependent outcome variable (regressand) was carried out and these are summarized in the Table that follows later in this section. A few introductory words on each of the relevant statistical indicators in the Table are given below before interpreting the contents of the Table.

19.17. Multiple correlation is a linear relationship among more than two variables. It is measured by the coefficient of multiple determination, denoted as $R^2$, which is a measure of the fit of a linear regression. A regression's $R^2$ falls somewhere between zero and one (assuming a constant term has been included in the regression); a higher value indicates a stronger relationship among the variables, with a value of one indicating that all data points fall exactly on a line in multidimensional space and a value of zero indicating no relationship at all between the independent variables collectively and the dependent variable. Value of “R” indicates the multiple correlation / causation between the set of independent variables and the dependent variable. Values in excess of 0.5 are generally presumed to indicate that correlation / causation is high and a high degree of linear relationship.

19.18. Adjusted $R^2$ is calculated to remove the “spurious” effects of independent variables on the dependent variable. Variables that are available for analysis are not necessarily the ones that would be chosen as the ideal set of variables given the purposes of the analysis. A side effect is that in many cases critical variables may be missing. This can lead to "spurious correlations," a common and serious interpretation fallacy. For example, if we collect data on all fires in a town for the last ten years and correlate the number of fire engines at each fire and the damages in Rupees at each fire, we may note a significant relationship between number of fire engines and the amount of damage, which could lead to the conclusion that fire engines cause the damage! It can be easily recognized that both variables result from and are correlated with the overall size of the fire; however, both are not necessarily causal factors. These correlations are spurious because their primary cause is the missing critical variable. Nonetheless these spurious correlations are at times used as indicators of discrimination. The purpose of this paper is to illustrate the widespread occurrence of spurious correlations.
19.19. Large differences between $R^2$ and adjusted $R^2$ indicate some independent variables have a spurious effect on the dependent variable. If $R^2$ is negative, it implies that there is no spurious effect. By referring to the Significance values in the Coefficient Table (see also below) for each of the dependent variables, it is possible to identify those independent variables which may have a spurious effect. If the Significance value is <0.2 there is no spurious effect and vice versa.

19.20. Standard Error of Estimate shows the degree of variability of effect of the many independent variables.

19.21. $R^2$ of Change is an indicator of the amount of change that is likely to happen between the set of independent variables and the dependent variable.

19.22. F Values are used test the null hypothesis of no relationship between the six independent variables combined and each component of the dependent variable. If the F value is >1, the null hypothesis is to be rejected and vice versa (since $F>1$ is an indication of compatibility of the assumption of the model the ANOVA is based upon).

19.23. The Durbin Watson shows the presence of auto correlation or natural association between the variables as a result of time. The threshold of around 2 indicates that there is no auto correlation. Auto correlation is the similarity between observations as a function of the time separation between them. It is a mathematical tool for finding repeating patterns which have been buried under noise.

### Table 8

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Regressand</th>
<th>R</th>
<th>$R^2$</th>
<th>Adjusted $R^2$</th>
<th>Std. Error of the Estimate</th>
<th>$R^2$ Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Signif Value (Alpha)</th>
<th>Durbin-Watson Stat</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Policy</td>
<td>0.914</td>
<td>0.835</td>
<td>0.504</td>
<td>5.552</td>
<td>0.835</td>
<td>2.522</td>
<td>6</td>
<td>3</td>
<td>0.239</td>
<td>1.1</td>
</tr>
<tr>
<td>2</td>
<td>Publics</td>
<td>0.985</td>
<td>0.97</td>
<td>0.91</td>
<td>1.848</td>
<td>0.97</td>
<td>16.108</td>
<td>6</td>
<td>3</td>
<td>0.022</td>
<td>2.086</td>
</tr>
<tr>
<td>3</td>
<td>Program</td>
<td>0.949</td>
<td>0.901</td>
<td>0.704</td>
<td>9.111</td>
<td>0.901</td>
<td>4.563</td>
<td>6</td>
<td>3</td>
<td>0.12</td>
<td>2.387</td>
</tr>
<tr>
<td>4</td>
<td>Promotion</td>
<td>0.803</td>
<td>0.644</td>
<td>-0.067</td>
<td>15.242</td>
<td>0.644</td>
<td>0.906</td>
<td>6</td>
<td>3</td>
<td>0.582</td>
<td>2.128</td>
</tr>
<tr>
<td>5</td>
<td>Service Delivery</td>
<td>0.617</td>
<td>0.381</td>
<td>-0.857</td>
<td>13.172</td>
<td>0.381</td>
<td>0.308</td>
<td>6</td>
<td>3</td>
<td>0.898</td>
<td>2.26</td>
</tr>
<tr>
<td>6</td>
<td>Purse</td>
<td>0.916</td>
<td>0.839</td>
<td>0.518</td>
<td>6.299</td>
<td>0.839</td>
<td>2.615</td>
<td>6</td>
<td>3</td>
<td>0.023</td>
<td>2.622</td>
</tr>
<tr>
<td>7</td>
<td>Partnership</td>
<td>0.931</td>
<td>0.866</td>
<td>0.598</td>
<td>6.126</td>
<td>0.866</td>
<td>3.231</td>
<td>6</td>
<td>3</td>
<td>0.182</td>
<td>2.195</td>
</tr>
</tbody>
</table>

Note: Each Regressand is assumed to be a function of Relationship, Quality of Management, Funds, Connectivity, Type of Leadership and Objectives.
Interpretation of Combined Effect of Independent Variables on Each Dependent Variable Component

19.24. Policy:
R value of 0.914 which is greater than 0.5, indicates that the correlation and causation are high, as well as a high degree of linear relationship.

The large difference between $R^2$ value (0.835) and Adjusted $R^2$ (0.504) shows that some independent variable/s have a spurious effect on Policy. The Significance value in the Coefficient Table below is <0.2 only for Relationship (0.161). It indicates that apart from Relationship, all the other variables have a spurious correlation with Policy. In other words, only Relationship, in the sense of stakeholder involvement, has a non-spurious correlation with Policy.

<table>
<thead>
<tr>
<th>Model</th>
<th>Un-standardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (constant)</td>
<td>67.093</td>
<td>26.730</td>
<td>2.510</td>
<td>0.087</td>
</tr>
<tr>
<td>Funds</td>
<td>0.004</td>
<td>0.004</td>
<td>0.266</td>
<td>1.012</td>
</tr>
<tr>
<td>Objectives</td>
<td>0.547</td>
<td>4.148</td>
<td>0.049</td>
<td>0.132</td>
</tr>
<tr>
<td>Type of Leadership</td>
<td>2.160</td>
<td>1.522</td>
<td>0.480</td>
<td>1.419</td>
</tr>
<tr>
<td>Quality of Management</td>
<td>3.910</td>
<td>2.592</td>
<td>0.482</td>
<td>1.508</td>
</tr>
<tr>
<td>Connectivity</td>
<td>-2.619</td>
<td>4.274</td>
<td>-0.161</td>
<td>-0.613</td>
</tr>
<tr>
<td>Relationship</td>
<td>4.074</td>
<td>2.201</td>
<td>0.556</td>
<td>1.851</td>
</tr>
</tbody>
</table>

Standard Error (05.552) is high, indicating that there is a large variability in the effect of the independent variables.

The value of $R^2$ Change (0.835) indicates the amount of change likely to happen between the independent variables and the dependent variable.
F Value (2.522) being >1, the null hypothesis that there is no relationship between the independent variables and Policy (dependent variable) is to be rejected at the 0.239 level of significance.

Durbin Watson value (1.1) being <2 indicates the presence of auto correlation between the six independent variables and Policy, the pattern of relationship having the tendency to repeat itself over time.

19.25. Publics:
R value of 0.985 which is greater than 0.5 indicates that the correlation and causation are high, as well as a high degree of linear relationship.

The narrow difference between $R^2$ value (0.970) and Adjusted $R^2$ (0.910) shows that the spurious effect is low. The Significance value in the Coefficient Table below is <0.2 only for Relationship (0.004) and it indicates that apart from Relationship all the other variables have a spurious correlation with Publics.

<table>
<thead>
<tr>
<th>Model</th>
<th>Un-standardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (constant)</td>
<td>57.119</td>
<td>8.899</td>
<td></td>
<td>6.419</td>
</tr>
<tr>
<td>Funds</td>
<td>0.000</td>
<td>0.001</td>
<td>0.033</td>
<td>0.293</td>
</tr>
<tr>
<td>Objectives</td>
<td>-0.683</td>
<td>1.381</td>
<td>-0.078</td>
<td>-0.494</td>
</tr>
<tr>
<td>Type of Leadership</td>
<td>-0.069</td>
<td>0.507</td>
<td>-0.020</td>
<td>-0.135</td>
</tr>
<tr>
<td>Quality of Management</td>
<td>-0.621</td>
<td>0.863</td>
<td>-0.098</td>
<td>-0.719</td>
</tr>
<tr>
<td>Connectivity</td>
<td>-0.094</td>
<td>1.423</td>
<td>-0.007</td>
<td>-0.066</td>
</tr>
<tr>
<td>Relationship</td>
<td>5.793</td>
<td>0.733</td>
<td>1.013</td>
<td>7.906</td>
</tr>
</tbody>
</table>

Standard Error (1.848) is relatively low, indicating that there is low variability in effect of the independent variables.

The value of $R^2$ Change (0.970) indicates the amount of change likely to happen between the independent variables and the dependent variable.
F Value (16.108) being >1, the null hypothesis that there is no relationship between the independent variables and Publics (dependent variable) is to be rejected at the 0.022 level of significance.

Durbin Watson value (2.086) being around 2 indicates the absence of auto correlation between the six independent variables and Publics.

19.26. Program:
R value of 0.949 which is greater than 0.5 indicates that the correlation and causation are high, as well as a high degree of linear relationship.

The large difference between $R^2$ value (0.901) and Adjusted $R^2$ (0.704) shows that the spurious effect is considerable. The Significance value in the Coefficient Table below is <0.2 only for Funds (0.087) and Relationship (0.045) and it indicates that apart from Funds and Relationship all the other variables have a spurious correlation with Program.

<table>
<thead>
<tr>
<th>Model</th>
<th>Un-standardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (constant)</td>
<td>23.578</td>
<td>43.866</td>
<td>0.537</td>
<td>0.628</td>
</tr>
<tr>
<td>Funds</td>
<td>-0.016</td>
<td>0.006</td>
<td>-0.508</td>
<td>-2.506</td>
</tr>
<tr>
<td>Objectives</td>
<td>4.265</td>
<td>6.807</td>
<td>0.178</td>
<td>0.627</td>
</tr>
<tr>
<td>Type of Leadership</td>
<td>-3.307</td>
<td>2.498</td>
<td>-0.346</td>
<td>-1.324</td>
</tr>
<tr>
<td>Quality of Management</td>
<td>4.472</td>
<td>4.254</td>
<td>0.260</td>
<td>1.051</td>
</tr>
<tr>
<td>Connectivity</td>
<td>-3.758</td>
<td>7.014</td>
<td>-0.108</td>
<td>-0.536</td>
</tr>
<tr>
<td>Relationship</td>
<td>11.957</td>
<td>3.612</td>
<td>0.768</td>
<td>3.311</td>
</tr>
</tbody>
</table>

Standard Error (9.111) is high, indicating that there is large variability in effect of the six independent variables.

The value of $R^2$ Change (0.901) indicates the amount of change likely to happen between the independent variables and the dependent variable.
F Value (4.563) being >1, the null hypothesis that there is no relationship between the independent variables and Program (dependent variable) is to be rejected at the 0.12 level of significance.

Durbin Watson value (2.387) being around 2 indicates the absence of auto correlation between the six independent variables and Program.

1927. Promotion:

R value of 0.803 which is greater than 0.5 indicates that the correlation and causation are high, as well as a high degree of linear relationship.

The large difference between R² value (0.644) and Adjusted R² (-0.067) shows that the spurious effect is considerable. The Significance value in the Coefficient Table below is <0.2 only for Objectives (0.181) and it indicates that apart from Objectives all the other variables have a spurious correlation with Promotion.

<table>
<thead>
<tr>
<th>Model</th>
<th>Un-standardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (constant)</td>
<td>-48.811</td>
<td>73.386</td>
<td>-0.665</td>
<td>0.554</td>
</tr>
<tr>
<td>Funds</td>
<td>-0.017</td>
<td>0.011</td>
<td>-0.611</td>
<td>-1.587</td>
</tr>
<tr>
<td>Objectives</td>
<td>19.775</td>
<td>11.388</td>
<td>0.937</td>
<td>1.736</td>
</tr>
<tr>
<td>Type of Leadership</td>
<td>4.577</td>
<td>4.178</td>
<td>0.543</td>
<td>1.096</td>
</tr>
<tr>
<td>Quality of Management</td>
<td>9.626</td>
<td>7.116</td>
<td>0.634</td>
<td>1.353</td>
</tr>
<tr>
<td>Connectivity</td>
<td>2.673</td>
<td>11.735</td>
<td>0.088</td>
<td>0.228</td>
</tr>
<tr>
<td>Relationship</td>
<td>-7.073</td>
<td>6.042</td>
<td>-0.515</td>
<td>-1.171</td>
</tr>
</tbody>
</table>

Standard Error (15.242) is high, indicating that there is large variability in effect of the six independent variables.

The R² Change (0.644) indicates the amount of change likely to happen between the independent variables and the dependent variable.
F Value (0.906) being <1, the null hypothesis is to be accepted that there is no relationship between the independent variables and Promotion (dependent variable) at the 0.582 level of significance.

Durbin Watson value (2.128) being around 2 indicates the absence of auto correlation between the six independent variables and Promotion.

19.28. Service Delivery:
R value of 0.617 which is more than 0.5 indicates that there is high correlation or causation and linear relationship.

The very large difference between R² value (0.381) and Adjusted R² (-0.857) shows a high spurious effect. The Significance values in the Coefficient Table below show that all the independent variables have only a spurious correlation with Service Delivery.

<table>
<thead>
<tr>
<th>Model</th>
<th>Un-standardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (constant)</td>
<td>71.730</td>
<td>63.420</td>
<td>1.131</td>
<td>0.340</td>
</tr>
<tr>
<td>Funds</td>
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<td>0.009</td>
<td>-0.225</td>
<td>-0.443</td>
</tr>
<tr>
<td>Objectives</td>
<td>-7.179</td>
<td>9.842</td>
<td>-0.519</td>
<td>-0.729</td>
</tr>
<tr>
<td>Type of Leadership</td>
<td>-1.306</td>
<td>3.611</td>
<td>-0.237</td>
<td>-0.362</td>
</tr>
<tr>
<td>Quality of Management</td>
<td>-1.645</td>
<td>6.150</td>
<td>-0.165</td>
<td>-0.267</td>
</tr>
<tr>
<td>Connectivity</td>
<td>1.950</td>
<td>10.141</td>
<td>0.097</td>
<td>0.192</td>
</tr>
<tr>
<td>Relationship</td>
<td>-2.807</td>
<td>5.222</td>
<td>-0.312</td>
<td>-0.532</td>
</tr>
</tbody>
</table>

Standard Error (13.172) is high, indicating that there is high variability in effect of the independent variables.

The values of R² Change (0.381) indicate the amount of change likely to happen between the independent variables and the dependent variable.
F Value (0.308) being <1, the null hypothesis that there is no relationship between the independent variables and Service Delivery (dependent variable) is to be accepted at the 0.898 level of significance.

19.29. Purse:
R value of 0.916 which is greater than 0.5 indicates that the correlation and causation are high, as well as a high degree of linear relationship.

The large difference between R² value (0.839) and Adjusted R² (0.518) shows that the spurious effect is considerable. The Significance value in the Coefficient Table below is <0.2 only for Type of Leadership (0.165) and Quality of Management (0.086) and it indicates that apart from Type of Leadership and Quality of Management, all the other variables have a spurious correlation with Purse or Funding aspects.

<table>
<thead>
<tr>
<th>Model</th>
<th>Un-standardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (constant)</td>
<td>57.184</td>
<td>30.329</td>
<td>1.885</td>
<td>0.156</td>
</tr>
<tr>
<td>Funds</td>
<td>0.005</td>
<td>0.004</td>
<td>0.268</td>
<td>1.037</td>
</tr>
<tr>
<td>Objectives</td>
<td>2.481</td>
<td>4.707</td>
<td>0.191</td>
<td>0.527</td>
</tr>
<tr>
<td>Type of Leadership</td>
<td>3.153</td>
<td>1.727</td>
<td>0.608</td>
<td>1.826</td>
</tr>
<tr>
<td>Quality of Management</td>
<td>7.409</td>
<td>2.941</td>
<td>0.793</td>
<td>2.519</td>
</tr>
<tr>
<td>Connectivity</td>
<td>-5.325</td>
<td>4.850</td>
<td>-0.283</td>
<td>-1.098</td>
</tr>
<tr>
<td>Relationship</td>
<td>1.839</td>
<td>2.497</td>
<td>0.218</td>
<td>0.736</td>
</tr>
</tbody>
</table>

Standard Error (6.299) is high, indicating that there is large variability in effect of the six independent variables.

The value of R² Change (0.839) indicates the amount of change likely to happen between the independent variables and the dependent variable.
F Value (2.615) being >1, the null hypothesis that there is no relationship between the independent variables and Purse or Funding aspects (dependent variable) is to be rejected at the 0.023 level of significance.

Durbin Watson value (2.622) being around 2 indicates the absence of auto correlation between the six independent variables and Purse or Funding aspects.

19.30. Partnership:
R value of 0.931 which is greater than 0.5 indicates that the correlation and causation are high, as well as a high degree of linear relationship.

The large difference between $R^2$ value (0.866) and Adjusted $R^2$ (0.598) shows that the spurious effect is considerable. The Significance value in the Coefficient Table below is $<$0.2 only for Type of Leadership (0.096), Quality of Management (0.101) and Relationship (0.063) and it indicates that apart from Type of Leadership, Quality of Management and Relationship, all the other variables have a spurious correlation with Partnership or Networking aspects.

### Table 15

<table>
<thead>
<tr>
<th>Model</th>
<th>Un-standardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (constant)</td>
<td>121.322</td>
<td>29.494</td>
<td>4.113</td>
<td>0.026</td>
</tr>
<tr>
<td>Funds</td>
<td>0.000</td>
<td>0.004</td>
<td>-0.035</td>
<td>-0.147</td>
</tr>
<tr>
<td>Objectives</td>
<td>-5.534</td>
<td>4.577</td>
<td>-0.401</td>
<td>-1.209</td>
</tr>
<tr>
<td>Type of Leadership</td>
<td>-4.036</td>
<td>1.679</td>
<td>-0.732</td>
<td>-2.404</td>
</tr>
<tr>
<td>Quality of Management</td>
<td>-6.691</td>
<td>2.860</td>
<td>-0.673</td>
<td>-2.339</td>
</tr>
<tr>
<td>Connectivity</td>
<td>-6.078</td>
<td>4.716</td>
<td>-0.304</td>
<td>-1.289</td>
</tr>
<tr>
<td>Relationship</td>
<td>7.019</td>
<td>2.428</td>
<td>0.781</td>
<td>2.890</td>
</tr>
</tbody>
</table>
Standard Error (6.126) is high, indicating that there is large variability in effect of the six independent variables.

The value of $R^2$ Change (0.866) indicates the amount of change likely to happen between the independent variables and the dependent variable.

$F$ Value (3.231) being >1, the null hypothesis that there is no relationship between the independent variables and Partnership or Networking aspects (dependent variable) is to be rejected at the 0.182 level of significance.

Durbin Watson value (2.195) being around 2 indicates the absence of auto correlation between the six independent variables and Partnership or Networking aspects.

Summary of Spurious and Non-Spurious Correlations and Discussion

19.31. As a second step to the above analysis, a summary of the type of correlation is given below.

19.32. The results of the Correlation Analysis show that many independent variables have a spurious correlation with the components of the dependent variable. Although this is not unexpected - because many of these variables are not directly connected with components of the dependent variable, except in select situations – these had to be tested to confirm or reject the assumptions. It also serves the purpose of isolating the specific independent variables that have correlation with specific components of the dependent variable.

19.33. An example of the select situation referred to above is with regard to Policy. With Policy, the only independent variable that has a non-spurious association is Relationship. The responses from the NGOs interviewed during the survey clearly supports this finding, since most of them indicated that cooperative relationship with the government at various levels is necessary for ensuring a favorable policy and functioning environment.

19.34. The same is true of Relationship having a non–spurious correlation with Publics (Stakeholders). Good relationship should lead to stakeholder involvement (Publics).
Relationship-based social marketing has been heavily emphasized in expert and scholarly articles as elaborated in the Literature review, in contrast to transaction-based functioning.

19.35. The correlation analysis indicates not only Relationship, but also Funds (Expenditure) as having a meaningful correlation with Program. Study of the sample NGOs indeed goes to show that these two factors have played a part in influencing the effectiveness of Programs.

19.36. The non-spurious correlation of Objectives with Promotion seems to indicate a strong link between clarity of objectives and promotion campaigns.

19.37. Type of Leadership and Quality of Management have emerged as having a non-spurious correlation with Purse (Funding aspects). These aspects have been stressed by donor representatives and experts in various forms such as good money management, track record, transparency and credibility.

19.38. The same two aspects referred to in the previous paragraph plus Relationship have a non-spurious correlation with Partnership (Networking). Striking strategic alliances and fostering and maintaining them are important tasks for successful social marketing, which can be accomplished only with leadership, quality management and sound relationships. The Observation ratings of NGOs in the sample show that in most cases where leadership has been highly rated, the networking has also received high ratings. Stakeholder Relationship is the other side of the networking coin and is naturally non-spuriously correlated.

19.39. Thus, Relationship, Funds, Type of Leadership and Quality of Management have emerged as independent variables that have non-spurious correlations with one or more of the seven components of the dependent variable – Relationship being the most prevalent factor.

**Results of Hypotheses Tests**

19.40. The summary table below provides the basis for testing the Hypotheses.
Table 16

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Hypo / Type of Correlation</th>
<th>Dependent Variables (components of Outcome)</th>
<th>Policy</th>
<th>Publics</th>
<th>Program</th>
<th>Promotion</th>
<th>Service Del</th>
<th>Purse</th>
<th>Partnership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funds SEM H1</td>
<td>Null / Alt</td>
<td>Dependent Variables</td>
<td>Alt</td>
<td>Alt</td>
<td>Alt</td>
<td>Null</td>
<td>Null</td>
<td>Alt</td>
<td>Null</td>
</tr>
<tr>
<td></td>
<td>Spurious / Non-Spurious</td>
<td></td>
<td>Spurious</td>
<td>Spurious</td>
<td>Non-Spurious</td>
<td>Spurious</td>
<td>Spurious</td>
<td>Spurious</td>
<td>Spurious</td>
</tr>
<tr>
<td>Objectives SEM H2</td>
<td>Null / Alt</td>
<td></td>
<td>Alt</td>
<td>Alt</td>
<td>Alt</td>
<td>Null</td>
<td>Null</td>
<td>Alt</td>
<td>Null</td>
</tr>
<tr>
<td></td>
<td>Spurious / Non-Spurious</td>
<td></td>
<td>Spurious</td>
<td>Spurious</td>
<td>Spurious</td>
<td>Non-Spurious</td>
<td>Spurious</td>
<td>Spurious</td>
<td>Spurious</td>
</tr>
<tr>
<td>Leadership SEM H3</td>
<td>Null / Alt</td>
<td></td>
<td>Alt</td>
<td>Alt</td>
<td>Alt</td>
<td>Null</td>
<td>Null</td>
<td>Alt</td>
<td>Null</td>
</tr>
<tr>
<td></td>
<td>Spurious / Non-Spurious</td>
<td></td>
<td>Spurious</td>
<td>Spurious</td>
<td>Spurious</td>
<td>Spurious</td>
<td>Non-Spurious</td>
<td>Non-Spurious</td>
<td>Non-Spurious</td>
</tr>
<tr>
<td>Management SEM H4</td>
<td>Null / Alt</td>
<td></td>
<td>Alt</td>
<td>Alt</td>
<td>Alt</td>
<td>Null</td>
<td>Null</td>
<td>Alt</td>
<td>Null</td>
</tr>
<tr>
<td></td>
<td>Spurious / Non-Spurious</td>
<td></td>
<td>Spurious</td>
<td>Spurious</td>
<td>Spurious</td>
<td>Spurious</td>
<td>Non-Spurious</td>
<td>Non-Spurious</td>
<td></td>
</tr>
<tr>
<td>Connectivity SEM H5</td>
<td>Null / Alt</td>
<td></td>
<td>Alt</td>
<td>Alt</td>
<td>Alt</td>
<td>Null</td>
<td>Null</td>
<td>Alt</td>
<td>Null</td>
</tr>
<tr>
<td></td>
<td>Spurious / Non-Spurious</td>
<td></td>
<td>Spurious</td>
<td>Spurious</td>
<td>Spurious</td>
<td>Spurious</td>
<td>Spurious</td>
<td>Spurious</td>
<td>Spurious</td>
</tr>
<tr>
<td>Relationship SEM H6</td>
<td>Null / Alt</td>
<td></td>
<td>Alt</td>
<td>Alt</td>
<td>Alt</td>
<td>Null</td>
<td>Null</td>
<td>Alt</td>
<td>Null</td>
</tr>
<tr>
<td></td>
<td>Spurious / Non-Spurious</td>
<td></td>
<td>Non-Spurious</td>
<td>Non-Spurious</td>
<td>Non-Spurious</td>
<td>Spurious</td>
<td>Spurious</td>
<td>Spurious</td>
<td>Non-Spurious</td>
</tr>
</tbody>
</table>

19.41. The following few observations are necessary as a guide before we interpret the results to test the SEM Hypotheses.

19.42. First, the above information indicates that the basic assumption of the SEM hypotheses that Outcome could be considered as one consolidated dependent variable needs to be refined. As the primary concern is effectiveness of social marketing when we refer to Outcome, there is also need to define what we mean by effectiveness in terms of the individual components of Outcome. The components of Outcome in the Table represent the definition of effectiveness. Different independent variables could and indeed would have a different relationship and effect on individual components of Outcome and not on Outcome as a consolidated entity. If this is so, there are bound to be situations that require us to accept the null in respect of some elements of Outcome and the alternate in the case of some others, depending on the relationship of the independent variable and the dependent variable.
component. It follows from the above, therefore, that each SEM hypothesis will have to be qualified and interpreted with reference to the components of Outcome and not to Outcome as a whole.

19.43. Secondly, the presence of spurious correlation of any independent variable would mean that we have to accept the null even if the F value indicates its rejection.

19.44. Applying the foregoing criteria, we have to reject Alternate hypotheses even if so indicated by the F value, if there is spurious correlation and consider it as null. Similarly, the Alternate hypothesis would be acceptable only if it is accompanied by non-spurious correlation.

19.45. On the above basis, the test results of the SEM Hypotheses are as follows.

**19.46. SEM Hypothesis 1**
Input significantly influences Outcome (where Input is expenditure and Outcome is social marketing effectiveness).

Null: There is no relationship between expenditure and social marketing effectiveness.

Alternate: Level of expenditure significantly influences social marketing effectiveness.

Interpreting the results in the Table above and applying the guidelines, we can accept the Alternate hypothesis and state it as follows.

<table>
<thead>
<tr>
<th><strong>Hypothesis 1</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of expenditure significantly influences program aspects of social marketing effectiveness</td>
</tr>
</tbody>
</table>

**19.47. SEM Hypothesis 2**
Total clarity of objectives leads to more effective output.
Null: There is no relationship between clarity of objectives and social marketing effectiveness.

Alternate: Clarity of objectives significantly influences social marketing effectiveness.

Interpreting the results in the Table above and applying the guidelines, we accept the null hypothesis.

<table>
<thead>
<tr>
<th>Hypothesis 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is no relationship between clarity of objectives and social marketing effectiveness.</td>
</tr>
</tbody>
</table>

19.48. SEM Hypothesis 3
A democratic leadership style leads to more effective output.

Null: There is no relationship between leadership style and social marketing effectiveness.

Alternate: Leadership style significantly influences social marketing effectiveness.

Interpreting the results in the Table above and applying the guidelines, we can accept the Alternate hypothesis and state it as follows.

<table>
<thead>
<tr>
<th>Hypothesis 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership style significantly influences Purse (Funding) and Partnership (Networking) aspects of social marketing effectiveness.</td>
</tr>
</tbody>
</table>

19.49. SEM Hypothesis 4
A higher quality of management leads to more effective output.

Null: There is no relationship between quality of management and social marketing effectiveness.

Alternate: Quality of management significantly influences social marketing effectiveness.
Interpreting the results in the Table above and applying the guidelines, we can accept the Alternate hypothesis and state it as follows.

**Hypothesis 4**

Quality of Management significantly influences Purse (Funding) and Partnership (Networking) aspects of social marketing effectiveness.

19.50. **SEM Hypothesis 5**

Greater connectivity across organizations creates better impact/outcome.

Null: There is no relationship between connectivity across organizations and social marketing effectiveness.

Alternate: Connectivity across organizations significantly influences social marketing effectiveness.

Interpreting the results in the Table above and applying the guidelines, we accept the null hypothesis.

**Hypothesis 5**

There is no relationship between connectivity across organizations and social marketing effectiveness.

19.51. **SEM Hypothesis 6**

A relationship of high involvement with stakeholders creates better impact/outcome.

Null: There is no relationship between stakeholder involvement and social marketing effectiveness.

Alternate: Stakeholder involvement significantly influences social marketing effectiveness.
Interpreting the results in the Table above and applying the guidelines, we can accept the Alternate hypothesis and state it as follows.

**Hypothesis 6**
Stakeholder involvement significantly influences Policy, Publics, Program and Partnership (Networking) aspects of social marketing effectiveness

**Reconciling General Hypotheses with SEM**
19.52. Having dealt with the SEM Hypotheses, it is now necessary to explain how the General Hypotheses formulated at the beginning of the study have been covered.

19.53. **General Hypothesis 1**: If “market-like” circumstances are prevalent, marketing principles will be relevant and applicable to social marketing by NGOs.

**Sub-hypothesis 1**
“Market-like circumstances, namely the 4 Ps, are prevalent in certain NGO activities involving behavior change and promotion of technology, ideas and concepts.”

**Sub-hypothesis 2**
“If market-like circumstances are prevalent, marketing principles will be relevant and applicable to such NGO activities.”

This hypothesis is not so much of an assumption to be tested, because it is explained in the section titled “Hypotheses” that extensive survey of scholarly articles, experiences of the voluntary sector and research studies are forthright in stating that market-like circumstances are prevalent in the case of NGOs involved in bringing about behavior change for better health, etc. and in promoting technology (e.g. bio gas), ideas and concepts (e.g. rain water harvesting, self help groups, building rural institutions, environment conservation). In the case of such NGOs, their activities do have the elements of Product, Price, Place (Distribution) and Promotion. These are more fully explained in the earlier section on “Hypotheses” (Sub-Hypothesis 1). Almost all the experts / donors and many NGOs interviewed also stated that marketing practices are relevant for the voluntary sector for
greater effectiveness (Sub-Hypothesis 2). The responses to the Questionnaire also show that all the NGOs interviewed do apply several marketing strategies, although many practise them informally and sometimes without being conscious of the fact that they are marketing related. The above being a well documented and recognized fact, this hypothesis has not been tested further.

19.54. **General Hypothesis 2:** What determines success in social marketing is not *transfer* but *adaptation* of strategies to suit the circumstances involved in the “marketing” of concepts, ideas and behavioural change.

19.55. **General Hypothesis 3:** Cultural barriers come in the way of behavioral change. Assimilating cultural forces increases the effectiveness of social marketing.

While data is available for the dependent variable in respect of General Hypotheses 2 and 3, gathering specific and detailed information on aspects of adaptation of commercial marketing practices and adjustment for local cultural needs for each of the ten NGOs was beyond the scope and capability of this study. Such detailed information is necessary to assess the extent of adaptation in each of ten cases, in order to be able to subject the data for the two variables to a statistical test. As such, these hypotheses could not be tested and these may well form an extensive and suitable subject by itself for a separate study.

19.56. **General Hypothesis 4:** The fund raising ability of NGOs is a function of identity with societal forces and the status of legal recognition.

NGOs that are registered under the Society and Trust Act are clubbed along with other voluntary organizations such as clubs, schools and hospitals. They do not enjoy a separate legal identity that demands compliance with reporting and disclosure standards. As such, there is neither legal distinction nor a special status for NGOs engaged in socio-economic development. The assumption was that without this, funding agencies may be hesitant to provide substantial funds. It was also assumed that the fund raising ability of NGOs may depend on certain forces in the macro environment, notably political forces and the government. No reliable data is available on societal aspects for quantification. In these
circumstances, an assessment of the effect of legal identity and impact of societal forces on fund raising capacity was not feasible.

Since none of the NGOs have a separate legal identity under the country’s statutory environment and as still many of them do receive funds, it may be inferred that factors other than legal may be influencing fund raising capacity in India.

19.57. General Hypotheses 5: High fixed costs of NGOs adversely affect the effectiveness and continuation of social programs.

While the survey was able to collect an indicative range of administrative expenses (fixed costs, as an indicator of efficiency in operation) from the NGOs interviewed, due to the reluctance of the respondents to divulge information on donors and donations (for assessing continuation of social programs), it was not possible to put General Hypothesis 5 to a statistical test.

However, a similar Hypothesis tested conducted in the USA among 2359 NGOs over a few years utilizing information from IRS sources available in the public domain, came to some interesting conclusions. (Strategic Positioning and the Financing of Non-profit Organizations: Is Efficiency Rewarded in the Contributions Marketplace? By Peter Frumkin and Mark T. Kim, The Hauser Center for Non-profit Organizations and The Kennedy School of Government, Harvard University, October 2000, Working Paper No. 2)

The Hypothesis was on very similar lines as that of this study. It read: Non-profit organizations that have low administrative to total expense ratios and that appear efficiently managed will have more success raising contributed income than organizations that have higher administrative expense ratios.

The results of the regression model in that study indicated that “reporting low administrative to total expense ratios and positioning an organization as efficient does not lead to greater success in garnering contributions. In none of the six fields of activity did we observe a statistically significant effect of efficiency on contributions..... They indicate that non-profit
organizations that spend more marketing themselves to the donating public do better at raising contributed income”

19.58. General Hypothesis 6: Performance of successful NGOs is influenced by the quality of relationship they have with their stakeholders.

19.59. General Hypothesis 7: The success of an NGO is due to its leadership style.

SEM Hypotheses 6 and 3, respectively, cover the above two General Hypotheses.

19.60. General Hypothesis 8: Strategies of successful NGOs are drawn from the organizational and societal framework.

SEM Hypotheses 3 to 6 cover different organizational and societal aspects- leadership style, quality of management, connectivity across organizations and relationship with stakeholders - and their respective impact on NGO success.

19.61. Summary of Conclusions from Hypotheses Tests

a) Level of expenditure significantly influences social marketing effectiveness. As expenditure is dependent on fund availability, it underlines the importance of funds for successful marketing operations.

b) There is no relationship between clarity of objectives and outcome or marketing effectiveness. A possible interpretation is that irrespective of the clarity in the formal statements, a certain sense of purpose and clarity at the actual operational level could influence social marketing effectiveness.

c) Leadership style significantly influences social marketing effectiveness in respect of government relations, ensuring fund availability and striking strategic alliances – the three aspects that are peculiar to social marketing and perhaps indispensable for its success.
d) Quality of Management, like leadership, significantly influences social marketing effectiveness in respect of policy, purse and partnership. Since this indicates that Management has only a selective influence, we may have to infer that perhaps there are factors other than management that affect the performance and success of other aspects such as program, promotion and service delivery.

e) There is no relationship between connectivity across organizations and social marketing effectiveness. Connectivity being one of many factors, it may not be an important and exclusive influence on social marketing success. Even with good connectivity, weaknesses in other factors could adversely affect success.

f) Relationship, as an independent variable, significantly influences social marketing effectiveness in respect of policy, program, and partnership. Stakeholder involvement is important for program concept, design and implementation.
20. LIMITATIONS

20.1. Based on the search with universities in South India, not much research seems to have been previously done on the subject of social marketing and its application in the voluntary sector, since it is still an evolving discipline. This study is therefore of an exploratory nature and is subject to some unavoidable limitations. These limitations are discussed briefly below-

20.2. Out of 1936 NGOs in Karnataka and Tamil Nadu, only about 181 seem to be engaged in socio-economic development and out of these only 41 provide any access to information about their activity. The large majority is engaged in social service like care of the aged, the sick, the disabled and street children. All this has restricted the size of the universe of NGOs, which are the focus of this study and thereby the sample. To moderate this limitation, the study resorted to a comprehensive and in-depth investigation of the different aspects of NGO functioning.

20.3. Comprehensive statistical data and information on the activities of the voluntary sector from reliable government sources are not available in the public domain. Websites are either non-existent for many NGOs, or, in the case of those that post a website, there is lack of systematic upkeep.

20.4. Most NGOs are reluctant to share details of expenditure on individual programs, break-up of program and non-program expenditures and sources of funds. The information had to be gathered in the face of certain constraints such as general reluctance to share information and tendency to avoid specifics.

20.5. Dearth of information on measurement of output and outcome in the public domain restricts the ability to correlate the effectiveness of marketing practices with success.

20.6 Summary of Chapter IV
This chapter explains the research methodology, including the type of research, sampling procedure, questionnaire design and qualitative research techniques. The sample selection
procedure adopted was “holistic probability sampling” as explained in the text and the sample size was 10 NGOs. The primary research included both quantitative research in the form of a survey and structured questionnaire for NGOs and donors/experts and qualitative research in the form of observation and depth interviews. The data gathered from quantitative and qualitative research was finally integrated. A benchmark matrix was designed for fifteen marketing related traits and over ninety sub-traits identified through secondary research and scores for the NGOs in the sample on all these traits and sub-traits were then calculated. The hypotheses stated in an earlier section were statistically tested. The final chapter that follows focuses on the analysis and discussion of the results and offers suggestions in terms of strategies to be developed, policy implications and areas for future research.

References
