

project planning and management series

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ACKNOWLEDGEMENT

The Project Planning and Management Series consists of a set of manuals and associated modules presenting practical approaches, tools and techniques for project planning and management. (See list on back cover). A product of the Government of Jamaica/USAID National Planning Project (1976-1980), the series was developed by the Project Development Resource Team (PDRT) of PAMCO for use in "action-training" workshops and reflects extensive experience in training and project development. All present PDRT members are contributing authors and have worked together in writing, revising and publishing the series. Special credits are due to Dr. Merlyn Kettering for design and development of the series; Dr. Bruce Brooks for writing final versions of many modules; Mrs. Marjorie Humphreys for assuming primary editing and production responsibility and for organizing draft papers into more useful materials; Mr. Lascelles Dixon, head of PDRT since 1979, for designing the cover and improving many of the illustrations; and Mrs. Christine Hinds and Miss Linette Johnson for typing the drafts and final manuscripts. Any comments on the series and its usefulness are welcome.

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MODULE 26

SOCIAL ANALYSIS OF A PROJECT
Bruce Brooks & Merlyn Kettering

A. PREREQUISITES:

References

B. DISCUSSION:

Project selection procedures include an evaluation of the social aspects of a project. The costs of a project may be perceived to be a cost by those who are affected by a project and by others the costs may be perceived as a benefit. It is crucial to the success of a project that the project image, held by these different individuals and groups involved in and influenced by a project, are identified. The subjective images that these groups have, regarding the effect that the project may have on them and their circumstances, should be measured to the best of the project planners' ability. They should use tools such as questionnaires and interviews to gather qualitative data, and others, such as rating scales and surveys, for quantifying and assessing the qualitative factors, arising out of the use of these tools, for decision making purposes. Both rating scales and surveys are discussed in this module.

There is a danger in project design and planning that important social aspects of a project will be omitted from the analysis because these are not always in quantifiable form. They may be based on moral judgment, religious beliefs, patriotism, nationalistic attitudes or other social and cultural mores. For example, the failure to recognise the community leadership structure in the project area and its relative importance in relation to other characteristics can and often does lead to the failure of projects. There are many projects that are solidly based in theory and practice in a certain location; but when transplanted to another locality are not successful because the planner has failed to weigh the social factors in the project's design.

C. PURPOSE:

Social analysis in relation to projects is the process of discovering and analysing the social factors that may affect in the structure of a project. Then these are examined and quantified with the help of specific tools. They are quantified to enable the decision makers to put them into the proper perspective when planning, implementing and managing the project.

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D. USES OF SOCIAL ANALYSIS

During the planning phases of a project every effort should be made to:

1. discover the community and social structure attributes within the project area embodying such things as the leadership patterns, the social and cultural mores, the motivating forces (including what they are and to what degree they exist), the education level, level of resources, skills, etc. Some of these factors will support the project and others will be obstacles to its success. A well constructed and skillfully conducted survey can be used to obtain this information. The survey form on which the social data are collected must be constructed to permit as much quantification of the data as possible.
2. to analyse data that is available or can be obtained by using tools that quantify the data and permits sounder project plans on the part of the planners.

E. DISCUSSION OF SELECTED SOCIAL ANALYSIS TOOLS

1. SAMPLE SURVEYS

Purpose

The sample survey gathers information from a representative portion of the population in order to identify and measure the structure and attributes of the whole population.

Discussion

Surveys are an expedient method of gathering a maximum of information at a minimum cost. The size of the sample can be tailored to fit the time and budget available. There are two common measurement instruments that can be used. They are, questionnaires and interviews schedules.

The analyst should extend the major part of the effort in designing the survey. Survey design requires skill in drawing samples that are representative of the population in constructing questionnaires and in analysing data statistically.

There are several considerations when decisions are made regarding a survey. These decisions are:

- (a) the type of problem,
- (b) the cost of doing the survey,

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- (c) the time frame for getting the data, and
- (d) the size of sample needed.

These should all be dealt with during the planning phases of the project in which a survey is being considered as the method to provide the information needed to plan and implement the project successfully.

Definitions

- 1) A *sample population* is a set of events or people that possess certain characteristics, i.e., all married women in district.
- 2) A *sample* is a sub-set of a total population in a delineated area and related to a specified activity or group. The attributes of this sub-set are assumed to be the same as the entire specified population.
- 3) *Attributes* of a project are the social, economic and political characteristics of the project.
- 4) A *measuring instrument* is a specific way of eliciting the desired information from a respondent. For example, a questionnaire which may elicit a yes or a no answer; varying shades of agreement, rank ordering of a group of possible responses, etc.
- 5) A *complete census* is a survey of all the events or members in a subject population.
- 6) *Participant observation* is the gathering of the desired information about behaviour patterns, social relationships, cultural practices and beliefs and economic status while directly interacting with a group over an extended length of time.
- 7) A *simple random sample* is a sample drawn from a population so that every member of that population has an equal opportunity of being chosen.
- 8) A *stratified random sample* selects a proportional number from each of the groups in the specified total population, e.g., the sample could be farmers in a parish. *It is determined* that 10% of these farmers have gross incomes of \$45,000 and over per year, 30% have incomes of \$25,000 to \$44,999 per year, and 60% have incomes below \$25,000 per year. The decision is to draw a stratified random sample of 100 farmers based on annual gross income. Therefore, 10% of them will be drawn at random from the \$45,000 per annum and over group, 30% from the \$25,000 to \$44,999 per year group, and 60% from the lower income group.

- 9) *Random Cluster or Block Sampling* is the process of gathering information from all the members in a given cluster or block, after all blocks or clusters have been identified and *each is given* equal opportunity for selection through a random sampling process. For example, three blocks in a village may be randomly selected and all persons in those blocks are interviewed.

F. *LIMITATIONS:*

G. *ASSUMPTIONS:*

These assumptions must be valid when a sample survey is done:

- (1) A random sample can be selected that is representative of the total population.
- (2) The measures to be used are not biased.
- (3) The conclusions drawn from the data are statistically valid in relation to the target population.

SAMPLE SURVEYS

The sample survey can be used to:

- 1) define the characteristics, issues, opinions, and attitudes of a selected target group, e.g., families with children of school age, children, farmers, mothers, industrial workers, civil servants, etc;
- 2) quantify the data by:
 - (a) attaching weights to different answers to a question, and reducing the responses to these questions to percentages; or
 - (b) structuring questions to permit the respondent a range of choices out of which he chooses one. An example of this kind of question is "How acceptable is the IUD method of birth control?"
 - A. Very acceptable
 - B. Acceptable
 - C. Unacceptable

In order to quantify this, the answers can either be reduced to a percentage of total responses or assigned a pre-determined weight such as three

for a, 2 for b, and 1 for c, and then finding the sum of each of the weighted responses;

- 3) form the basis for evaluating the social factors that may impinge on the project and enable the project planners to circumvent these problems. This may entail a decision not to undertake the project at all;
- 4) provide feedback on project progress in relation to the output objectives of the project;
- 5) measure the effectiveness of the completed project by measuring its impact on the target and non-target groups in the project area, e.g., number of new jobs, additional tax base, etc; and
- 6) quantify statistical data used in the financial and economic analysis of projects.

STEPS IN PREPARING AND DOING A SURVEY

There are a number of general procedural steps that are required.

- STEP 1. Decide why the survey is being done and what results are expected from it.
- STEP 2. Decide on the population to be surveyed giving due consideration to what is expected from the survey and the likely cooperativeness and accessibility of the selected survey population.
- STEP 3. Select the sampling method to be used, e.g., random, stratified random, etc.
- STEP 4. Determine the best sample size after giving consideration to the:
 - (a) desired accuracy and reliability desired;
 - (b) cost of gathering the data. The larger the survey the more costly it will be;
 - (c) cost of processing the data; and
 - (d) the variation in the population as shown by the data obtained.
- STEP 5. Decide on what procedure that will be used to collect the data, i.e., questionnaire and personal interview; questionnaire sent through the post; telephone interview using questionnaire; etc.

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- STEP 6. Train the interviewers if the personal interview technique is used.
- STEP 7. Design and pretest the questionnaire.
- STEP 8. Conduct the survey including arrangements for necessary transport.
- STEP 9. Check interviewers' work by contacting several of the interviewees to see if actual contact was made. "Spot checking" and monitoring are necessary.
- STEP 10. Start analysing results as soon as possible and adjust questionnaire and interviewing methods if necessary.
- STEP 11. Tabulate the results and do the analysis.
- STEP 12. Show as much of the material as possible in *illustrative materials, i.e.*, graphic and tabular form, histograms, etc. Compute percentages and do the necessary tabular analysis.
- STEP 13. Do the necessary statistical tests to enable the user to draw conclusions about the reliability of the results.
- STEP 14. Summarise data and develop conclusions and implications of the data for use by the planners and implementers of the project. Include the questionnaire and the sampling procedure in the appendices and a summary of the survey findings.

2. RATING SCALES

Quite often the results of the analysis may not lend themselves to strict quantification in the sense that there is an absolute value that can be attached to certain aspects of a project. This does not prohibit the analyst from making a quantitative determination based on either an absolute or relative judgements of the respondents to a pre-structured series of questions. For example, a project may be contemplated about which there is some concern that there may be social and cultural reactions to the project as well as those based on economic considerations, an attempt should be made to measure the absolute and relative reaction to the social aspects of the project. *Rating Scales* can be used for this purpose. (SEE pp. OF THIS MODULE).

Purpose of Rating Scales

Rating scales are used to measure the absolute or relative reaction to a given project or aspect of a project, either in the form of an absolute rejection or acceptance or a relative level of judgement, e.g., a numerical ranking of a reaction in relation to given alternatives.

Use of Rating Scales

Rating scales are used to quantify subjective judgements either in absolute form or on a relative basis. An example of the absolute form of judgement is a question which gives two choices, i.e., "yes or no", acceptable or unacceptable. Once these judgements are made, then they can be quantified, e.g., 70% answered "yes", 30% answered "no". The choices are now quantified and can be used in the analyses.

There are three kinds of rating scales that can be used. These are:

Nominal Scales show the relative position of a group of alternatives based on the response of the members of a population to several choices they can make on a scale showing relative judgement or absolute judgement. This enables the analyser to quantify factors which may be highly subjective or qualitative, and to incorporate them into the analysis which will help the decision maker.

Ordinal Scales are used to rank order a set of similar objects along a criterion scale which considers the comparative features of the objects, but they do not show the degree of difference. They only show that some exceed others when considering all of these criteria, e.g., good, better, best. For example, three project alternatives may be under consideration and the respondents are asked to rank them based on a set of criteria. They must rank them good, better, and best. If there are forty (40) respondents who rank the three project alternatives so that one project alternative has a prepondence of responses that show "best", it ranks Number 1. The alternative that has the most responses of "best" or "better" but more "better" than "best", is ranked second, and so on.

Interval Scales reflect the rank of one factor over another and also the degree that one factor exceeds another. The difference between the factors corresponds to the distance on the scale between them. For example, the capital cost for meeting the needs of three projects fall between 0 and 800,000, but, project A's capital cost is 610,000, B's is 500,000 and C's is 550,000. On an interval scale B would be lowest by 50,000 in relation to C; and next lowest, by 60,000, is C when related to A. The interval scale not only shows the relative position on a scale, representing the capital cost of each project alternative, but also the interval that exists between the projects being measured.

Rating scales allow a quantitative comparison by reducing the responses to a rank order, a percentage figure or a numerically definitive statement, which enhances the decision-making capability.

These different rating scales are depicted in ILLUSTRATION 1 gives an example of the results obtained in a survey which attempted to determine the acceptability of various methods of Birth Control.

ILLUSTRATION 1

EXAMPLE OF RATING SCALES USED TO DISCRIMINATE BETWEEN
AND QUANTIFY FACTORS IN RELATION TO BIRTH CONTROL METHODS*

NOMINAL SCALE	ORDINAL SCALE	INTERVAL SCALE																					
<p>Favourable ----- Methods 2, 3, 7</p> <hr/> <p>Unfavourable ----- 6, 1, 5, 4</p>	<p>First Choice: <u>4</u> Second " : <u>3</u> Third " : <u>1</u> Fourth " : <u>6</u> Fifth " : <u>7</u> Sixth " : <u>2</u> Seventh " : <u>5</u></p>	<table border="1"> <tr><td rowspan="10" style="writing-mode: vertical-rl; transform: rotate(180deg);">Acceptance of Method</td><td><u>10</u></td><td>Sterilize</td></tr> <tr><td><u>9</u></td><td></td></tr> <tr><td><u>8</u></td><td>Pill</td></tr> <tr><td><u>7</u></td><td>Condom</td></tr> <tr><td><u>6</u></td><td></td></tr> <tr><td><u>5</u></td><td>IUD</td></tr> <tr><td><u>4</u></td><td></td></tr> <tr><td><u>3</u></td><td>Morning after Pill</td></tr> <tr><td><u>2</u></td><td>Rhythm</td></tr> <tr><td><u>1</u></td><td>Abstinence</td></tr> </table>	Acceptance of Method	<u>10</u>	Sterilize	<u>9</u>		<u>8</u>	Pill	<u>7</u>	Condom	<u>6</u>		<u>5</u>	IUD	<u>4</u>		<u>3</u>	Morning after Pill	<u>2</u>	Rhythm	<u>1</u>	Abstinence
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	<u>4</u>																						
	<u>3</u>	Morning after Pill																					
	<u>2</u>	Rhythm																					
	<u>1</u>	Abstinence																					

* Numbers identify the different birth control methods.

In this example of the three kinds of rating scales shown in ILLUSTRATION 1, the *nominal scale* was being used when the respondents were asked;

What is your reaction to these seven methods of birth control?
(Check either favourable or unfavourable)

1. Abstinence	Favourable	_____
	Unfavourable	_____
2. Rhythm method	Favourable	_____
	Unfavourable	_____
3. Morning after Pills	Favourable	_____
	Unfavourable	_____
4. Inter-Urinary Device	Favourable	_____
	Unfavourable	_____
5. Condom	Favourable	_____
	Unfavourable	_____
6. Pill	Favourable	_____
	Unfavourable	_____

The *ordinal scale* was being used when they were given the same list of possible birth control methods and asked to rank them (1) through (7) with (1) being the highest or most preferred and (7) the lowest or least preferred. For example:

Please rank the following methods of birth control according to your preference for use. Rank them (1) through (7), (1) is highest and (7) lowest.

- () Abstinence
- () Rhythm method
- () Morning after Pill
- () Inter-Urinary Device
- () Condom
- () Pill
- () Sterilize

The third kind of rating scale that can be used is the *interval scale*. When this is used the respondent is given the choices he has to choose from (in this case the seven means of birth control) and asked to place them on a relative value scale as shown in ILLUSTRATION 1. In this case,

a scale of ten (10) to (1) is used with 10 the highest and 1 the lowest. The scale shows the rank as well as the amount that one method is preferred over another.

Procedure for Using Rating Scales

1. Determine the factors to be rated.
2. Design the data collection system so that the respondents will provide the data in a form that is usable.
3. Determine the best scale for rating the different factors. This will depend on the analyst's view of the degree of subjective judgement that the respondents are capable of, based primarily on their knowledge of factors.
4. Tabulate the available data and aggregate it.
5. Construct a rating scale that can be used to graphically summarize the data in quantified form.
6. Enter the aggregated data into the rating scales.

Project Planning and Management Series.

MANUAL - I Planning for Project Implementation
MANUAL - P Project Planning
MANUAL - M Project Management
MANUAL - PF Pioneer Farm Implementation Planning

MODULES

1. Defining Project Objectives (Objective Trees)
2. The Logical Framework
3. Work Breakdown Structure
4. Activity Description Sheets
5. Project Organization
6. Linear Responsibility Charts
7. Project Scheduling - Bar Charts
8. Bar Charting for Project Control/Scheduling
9. Project Scheduling - Network Analysis
10. Milestones Description Charts
11. Resource Planning & Budgeting
12. The Role of PAMCO
13. Project Technology Analysis
14. Demand Analysis
15. Market Strategy Analysis
16. Project Area Analysis
17. Project Costs & Benefits
18. Project Profile
19. Financial Analysis
20. Cash Flow Analysis
21. Discounting
22. Net Present Worth Analysis
23. Cost-Benefit Analysis
24. Benefit-Cost Ratio Analysis
25. Internal Rate of Return
26. Social Analysis of a Project
27. Economic Analysis of Projects (including Border Pricing)
28. Financial Statements & Ratios
29. Project Selection & Ratios Analysis
30. Brainstorming
31. Decision-making System for Projects
32. Project Institutional Environmental Analysis
33. Ecological Analysis for Projects
34. Introduction to Contracts, Jamaican Contract Documents & Tendering Procedures
35. Selection & Use of Consultants
36. Project Documents for Planning & Implementation
37. Report Writing for Projects
38. Project Files
39. Formats for Pre-Feasibility & Feasibility Studies
40. Motivation of Employees and Personnel Evaluation
41. Design of a Project Management Control System
42. Evaluating & Forecasting Project Progress & Performance
43. Project Termination
44. Introduction to Lending Agencies
45. Organizing and Conducting Conference Meetings
46. Withdrawal of and Accounting for Loan Funds in the Financing of Projects

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