

INCORPORATING THE INTRAHOUSEHOLD
DIMENSION INTO DEVELOPMENT PROJECTS:
A GUIDE

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Foreword

This guideline was prepared under Grant No. OTR-0096-GSS-2268-00 with USAID/PPC/Office of Policy Development and Program Review. I would like to thank my Project Officer, Dr. Judy McGuire, for her continuous assistance, including substantial intellectual interchange and valuable editorial comments. This paper has also benefited from the editorial comments of the following people: Nancy Pielemeier, Nina Schlossman, Judit Katonah-Apte, Ellen Messer, Per Pinstруп-Andersen, Jere Behrman, Patrice Engle, and Lisa Miller.

This same contract funded a four-day workshop at which professionals from the US and from several developing countries discussed why intrahousehold processes are important to economic development, and ways in which an understanding of these processes can realistically be incorporated into project planning. This paper owes much to the discussions which took place and to the background papers prepared for the workshop*. A list of conference participants appears at the end of this report.

*The workshop papers are being edited for publication as a monograph supplement to the Food and Nutrition Bulletin in 1988.

Summary

Development projects have as their ultimate objective the improvement of human welfare. Therefore, project analysis must be concerned with whether target individuals are likely to benefit from the resources and activities generated by projects. Such analysis must be based on an understanding of individual behavior and individual sources of income and material support. The most important argument in this paper is that one cannot make assumptions about sharing of resources within households. While the groups to which a person belongs (family and household) can be an important frame of reference, it is the individual who must be the focus of analysis.

The proposed analysis should be applied to the whole range of development intervention: macroeconomic policy change focused on altering the economic environment; microeconomic development projects which provide inputs and technical assistance to productive enterprises; and welfare programs providing transfers of consumption goods to enhance human capital formation.

The analytic approach focuses on measurement of individual characteristics (health, nutritional status, work burden and leisure, earning capacity and individual control over income and resources). It should ideally be applied at the earliest stages of project identification, as part of the investigation of the causes of poverty and its possible solutions in a given environment. Such analysis should also be an integral part of project design and of project monitoring and evaluation. Intrahousehold analysis is not an arbitrary add-on to the project development process, because the allocation of resources among individuals within households is the last step in the whole process by which project inputs achieve their individual welfare objectives.

Intrahousehold analysis should be organized around the following questions:

1. Who will participate in project activities?
2. Will the project require or cause a change in household structure, composition, or function?
3. Will the project change any person's access to productive resources, or any person's control over what is produced (including control over income from his/her labor)?
4. Will the project affect any person's wage rate (returns to labor) or the rate of return to assets under any person's control?
5. Will the project require changes in the inventory of tasks performed by household members, or in the organization of tasks?
6. Will the project change the allocation of tasks among members or the time use of members?
7. Will the project change any person's access to consumption goods (food, health care, education, etc.) which affect welfare?

Answering these questions requires information on the following topics:

1. household structure and composition
2. individual incomes (cash, in-kind)
3. individual and household asset ownership
4. tasks performed and their allocation among members
5. time use of individuals
6. allocation of consumption goods among household members.

A summary listing of the data needed in each of these categories, together with the uses of the information for project identification, planning and evaluation, and suggested methods for obtaining the data, are presented in Table I. The recommended procedures for obtaining the information are outlined in Table II, along with the written outputs required at each step.

The basic approach is to develop a detailed model for the linkages between the changes brought about by the project and expected individual outcomes. The questions listed in the previous section are used as a guide to identify missing information required to specify the linkages adequately. This information is then collected through review of published and unpublished literature, contact with professionals who have worked in the geographic area of interest, and on-site informal and formal data collection. At each stage, the model of the project is revised based on the new information obtained, and the specification of missing information is updated. The final output is a complete model of the proposed project, including a plan for continued monitoring of project effects at the intrahousehold level.

1. Introduction

The underlying goal of economic development is to improve the welfare of disadvantaged people. Development efforts may be undertaken at the level of the household, the community, or even the nation, but the ultimate target is the individual; the test of a project's (or policy's) long-term success is whether it has improved human welfare.

The allocation of resources among individuals within households is the last of a series of processes which determine who benefits from a development project or a new economic or social policy. The processes of intrahousehold resource allocation are critical factors determining the success of development efforts (Rogers, 1983; Rogers & Schlossman, 1988). A successful program or policy is one whose benefits reach the intended target group and which achieves the desired result without any unforeseen negative side-effects on other groups. Understanding current patterns of resource distribution is necessary in order to design such programs. It is equally imperative to understand the factors which determine these patterns, since new projects or policies may alter the determining factors and thus change the patterns of allocation.

Project effects on intrahousehold dynamics may be subtle and complex, but they are also absolutely central to the successful outcome, and even to the successful implementation of development interventions. This is because all development projects are based on certain assumptions about how households will behave in the face of the change these projects bring about in some aspect of the environment. Change causes readjustment in household function for a variety of reasons. A new agricultural technology may increase productivity and change the relative value of an individual's

time devoted to particular tasks. An immunization program may alter the probabilities of child survival and change the strategies by which households decide to invest in certain children. A paved road may open new opportunities for wage employment, altering the opportunity cost of time devoted to unpaid household tasks.

It is important to understand the ways in which intrahousehold distribution decisions are made, in order to predict who within the household is likely to gain or lose (in both the short and long run) as a result of an intervention. Projects which place unacceptable burdens on some individuals without compensating for them in some way may find they have no participation from the target population. For example, a rice irrigation project in the Gambia so greatly increased the need for weeding, which was exclusively a woman's task, that women withheld their labor from the scheme and rice production fell (Dey, 1981). Free primary health clinics are often underused, at least in part because using them entails an unacceptably high cost in terms of an adult household member's time. These failures have to do with how tasks are allocated among household members. They are examples of programs in which the very process by which the project was to work did not take place.

Even when implementation is successful, project outcomes may be compromised by failure to account for intrahousehold processes. The well-known phenomenon of sharing a supplemental food ration among all the household's children rather than giving it only to the target child, resulting in an unmeasurably small effect of the ration on the child's growth, is an obvious example (Anderson, 1981).

The resources a household has are cash and in-kind income; output of home production; productive resources such as land and machinery and other forms of wealth; and the time and skills of its members. Neither income,

capital, nor time of a given member is necessarily interchangeable with that of other members.

Within the bounds of traditional rights and obligations, there is evidence that decisions about the uses of resources are influenced by who brought the resource to the household. Thus income control is an important determinant of the uses of income. Projects which shift control over income within the household may change its uses and reduce some kinds of consumption, even if the amount of income to the household is maintained or increased. A project which shifts income control away from an individual may cause resistance to participation by that individual. It may also cause hardship among those who lose their direct access to income. The same reasoning can be applied to projects which alter access to or control over productive resources. Projects which teach a new production technology or use of a new tool only to men, for example, or which register land only in the husband's name, may reduce women's degree of influence over the uses of those resources or of their product. Therefore, predicting a project's outcome requires an answer to the question of whether this intervention will change access to income or productive resources and what the consequences of such a change are likely to be. To answer this question, information is needed on the current situation regarding individual income streams and individual access to resources.

The second major issue of importance to development planners is that of participants' time use and task allocation. Certain tasks are generally performed by specific household members; and each member has a limited amount of time in the day. A project which changes the demands on an individual's time will certainly result in a reallocation of tasks among household members. The reallocation may result in a task being performed by someone else (for example, child care tasks may shift from an older

sister to a grandmother if schooling for girls is introduced), or being allotted reduced time (for example, less time is devoted to meal preparation during periods of peak agricultural labor demand [Schofield, 1972/3]). An important determinant of project consequences, therefore, is how tasks shift once the project is introduced. Predicting these changes requires information about which tasks are currently performed and by whom, and on what basis (age, sex, skill level, position in the household) they are allocated.

This paper suggests how the people responsible for choosing which development strategies to fund, and for elaborating their design and implementation, can obtain and use information on intrahousehold allocation processes to improve their performance of these tasks. The two most important areas in which intrahousehold dynamics are likely to be critical for project planning are 1) income and resource control by individuals within households, and 2) individual time use and task allocation. The paper lists a set of specific data needs, and suggests a set of specific steps for obtaining these data, to be followed in selecting and designing projects taking into account the processes of intrahousehold resource allocation which determine the ultimate beneficiaries of project inputs. These procedures are not an arbitrary add-on to the already complicated process of project design. Rather, they should be central to the earliest stages of project development, which are, first, understanding the causes of poverty in a particular area of the less developed world, and, then, identifying possible solutions.

2. Identifying The Links Between Development Projects and Individual Outcomes

Development efforts assume a series of linkages between the inputs of a project, or the changes brought about by a new policy, and the outcome in terms of individual welfare. The approach suggested here is to make the objectives of the intervention explicit and to specify in detail the expected links between the intervention and the individual. Once these assumptions are explicit they can be tested for their validity.

2.1 Types of Interventions

Development interventions may take a variety of forms. Some are welfare projects which directly provide free or subsidized consumption goods (such as food, health care, education, and others) to households or to specific individuals within households. From a development perspective, these programs are intended to make a long-term contribution to the productivity of individuals by increasing their stock of human capital (energy, health, skills and knowledge), and to improve their subjective well-being in the short run.

Another type of intervention focuses on microeconomic development. Such programs include the free or subsidized provision of capital goods such as irrigation services, agro-chemicals, equipment, and training, and the provision of credit and technical assistance in developing agricultural and other enterprises. These programs are intended to improve welfare by increasing the income-earning capacity of individuals through improved productivity of capital assets and improved employment opportunities.

Increasingly, AID and other bilateral and multilateral donors are focusing on a third type of intervention, aimed at encouraging macroeconomic policy change at the national level. These changes in the currency exchange rate, interest rates, and in government spending and debt policy are intended to improve the economic climate in the country to promote investment in the national economy, resulting in more and better employment opportunities at higher wages and rates of return. The ultimate goal is that this will translate into higher and more secure incomes for poor households.

2.2 Measuring Intervention Effects on Individual Welfare

All three types of intervention assume that individual well-being will be affected by an increased flow of resources (goods, cash income, education and training) information to the household. Resources entering the household, however, may not reach the most vulnerable or needy individuals within it. Under severe resource constraints, a household may allocate consumption goods to the members whose probability of survival or whose potential material contribution to the household is highest (cf. Rosenzweig & Schultz, 1983; Engle, 1988; Behrman, 1988). Even when goods or services are delivered to one member of a household, the reallocation of the household's other goods may result in no net increase

in that member's consumption. Interventions which change an individual's present or future productivity (through employment opportunities, wage rate increases, or education and training) are likely to alter the flow of resources to the individual and thus also to other household members. Furthermore, changes in one individual's productivity are likely to affect the uses of that person's time, with consequences for the allocation of all the household's tasks among all its members. This task reallocation will undoubtedly affect the welfare of the other members in a variety of ways.

2.2.1 Health and Nutrition

The most appropriate way to determine a project's effect on individual well-being is by directly measuring individual outcomes. Two obvious measures of individual well-being are health and nutritional status. Health can be measured by morbidity (frequency of occurrence of particular illnesses among members) and by infant and child mortality rates. Nutritional status can most easily be measured by achieved growth of children, compared with a reference standard for age and sex.

Food consumption is often used as a measure of nutritional status. While the quantity and quality of the diet is the primary determinant of individual nutrition, individual dietary intake is difficult and time-consuming to measure, and food consumption at the household level is a very poor indicator of an individual's diet (Pinstrup-Andersen and Garcia,

1988). The frequency of an individual's consumption of key foods and food categories may be a suitable and less time-consuming measure of dietary quality. Thus, delivery of food to the household, or even to an individual within it, is not a valid measure of the outcome of a program. Similarly, delivery of health services is not a measure of the outcome of a health program; the improved health of individuals is.

2.2.2 Education

The achieved educational level of individuals may be taken as an indirect measure of welfare if one assumes that education increases the individual's ability to cope with his/her environment, including the ability to find remunerative work. In this sense, education can contribute to personal security, and thus to personal welfare.

2.2.3 Time Availability

The amount of leisure time an individual has is another indicator of welfare, although this is only the case if the leisure is voluntary, and not the result of an inability to find work. A project such as piped water which reduces the time burden of certain tasks can be considered to increase the welfare of those people who now have more time available for leisure or for other productive activities.

2.2.4. Income and Wealth

An implicit assumption of many if not most development interventions is that household income and wealth are good proxies for the welfare of household members. It is certainly true that the level of household income determines the resources available to individuals within the household. Indicators of health, nutritional status, and other components of welfare are known to be strongly associated with household wealth and income.

However, the relationship between marginal changes in household income and individual well-being is neither direct nor simple. The target population for development programs is ^{the} poor, and in poor households, members are likely to compete for inadequate resources. Under very constrained circumstances, there is no guarantee that an increase in income or wealth will benefit a particular person in the household, since the benefits may be captured by others, or diluted to the point of ineffectiveness.

Changes in income and assets used as measures of individual welfare must be measured at the individual level. Individual earnings not only contribute to household income, but they also increase individual security. It is reasonable to believe (as many have reported) that individual earnings are also associated with a greater sense of control over household resource allocation decisions. There is evidence that, in some cases, people will choose to earn income which they control in preference to working for a higher amount of income controlled by someone else in the household (Jones, 1983; Caughman, 1981). This suggests that changes in personal income or wealth (where relevant) may be better measures of change in personal welfare than are changes in the household's income.

2.3 The Household as the Link Between Project and Individual

The importance of understanding the household in order to predict the effects of a project or policy change lies in the fact that the household can be viewed as a mini-economy in which exchanges take place and in which resources are differentially allocated among members according to a variety of rules. The household as a unit displays a set of preferences for the use of its joint resources and those of its members, as revealed in its investment, spending, and consumption decisions. These decisions are undoubtedly the result of bargaining and negotiation in addition to mutual agreement on common priorities.

Projects cannot directly alter household allocation behavior. Any resource provided by a development project (whether directly, or indirectly through a changed economic environment) must pass through the filter of the household to reach and benefit a target individual. An intervention must therefore either use the household's own priorities; accommodate to them in some way; or alter them indirectly, by changing the environment in which they are established.

2.3.1 Defining the Household

The pervasiveness of the household as the basic social unit across cultures is striking (Johnson, 1984; Netting, Wilk, and Arnould, 1985). Nonetheless, defining the household operationally in a consistent way has been one of the long-standing, intractable problems faced by anthropologists (Messer, 1983; Guyer, 1981). One reason for this difficulty is that the western concept of the household combines several separate functions. These are: coresidence (living together under one

roof or in one residential compound); commensality (eating together from a common food supply); and income pooling (the joint use of individual incomes for the common good). The function of labor sharing is also a part of the household concept: members pool work time as well as income for the maintenance of the household (although the household unit is not necessarily the primary unit of production). The household is often identified with the family, since it is generally families who share these functions.

In western culture, these four functions do not necessarily define the same group of people, and this is even more true in other cultures. Even a single function, such as coresidence or commensality, does not absolutely define a fixed group since some individuals will share the function at one time but not at another. Therefore, a simple algorithm for defining "the household" with certainty is an impossibility. In fact, once it is recognized that the household is a starting point for studying the individuals within it, such a firm and fixed definition is not necessary.

The choice of which social function to use as the basis for defining the household should be determined by the nature of the program being planned or evaluated. Coresidence is a convenient basis because it is linked to a physical location and thus can be used for identifying and sampling households. Common food supply, however, may be more relevant in a study of food acquisition, consumption or nutritional status. What is crucial is to accept the imperfect overlap of the various groups. In data collection the participation of the individual in several resource-sharing groups can be accommodated by identifying several groups to which he/she belongs (Heywood, 1988), and by tracking resource flows to and from the individual, whether from within or from outside the household.

3. Uses of Intrahousehold Analysis in Project Planning and Implementation

3.1 Project Identification

The identification of approaches to solving the poverty problem in a particular country or region should be based on a thorough understanding of local intrahousehold allocation processes. Intrahousehold analysis should not be performed after a project plan or policy agenda has been chosen, but should contribute to the project selection process. This means that the data collection and analysis steps suggested in this report, including site visits and the collection of data in the field, should precede the elaboration of a detailed project plan, and should be done by those responsible for initiating project ideas.

3.2 Project Planning

Development assistance projects may be selected for a variety of reasons. If a project is identified before intrahousehold-level analysis is performed, the approach should certainly be applied during the planning process. As we have argued above, the analysis of intrahousehold effects of projects is an integral part of the evaluation of how project inputs are expected to bring about specific outcomes. Specifying the linkages between project inputs and outputs at the level of the individual is essential to predicting project success. The analysis may also suggest modifications which might increase the probability that the project will have beneficial effects.

3.3 Project Monitoring

Equally important, the approach provides a framework and guide to project evaluation and monitoring. Prediction is never perfectly accurate: projects and policies are implemented in a constantly changing environment, usually over a period of years, so that the appropriateness of particular programs and policies may change over time. In fact, many projects have unanticipated consequences precisely because they do induce changes within the household. Intrahousehold analysis is, therefore, absolutely essential to project monitoring. Finally, project monitoring, with provision for modifications if necessary, is essential to successful implementation. The welfare of vulnerable individuals should be the consistent criterion of project success.

4. Data Needs for Intrahousehold Analysis

4.1 Questions to Answer

The collection of data for the analysis of intrahousehold processes can be organized around the answers to seven key questions relating to the project's effects on individuals and households:

1. Who will participate in project activities?
2. Will the project require or cause a change in household structure, composition, or function?
3. Will the project change any person's access to productive resources or any person's control over what is produced (including control over income from his/her labor)?
4. Will the project affect any person's wage rate (returns to labor) or the rate of return to assets under any person's control?

5. Will the project require changes in the inventory of tasks performed by household members, or in the organization of tasks?
6. Will the project change the allocation of tasks among members or the time use of members?
7. Will the project change any person's access to consumption goods (food, health care, education, etc.) which affect individual welfare?

Answering these questions is an essential part of planning not only projects which supply concrete inputs, but also policy changes affecting the macroeconomic environment. For the latter to have an effect on welfare, they must cause individuals to alter their behavior.

The need to answer the first question should be self-evident: participants must first be identified, before their behavior can be predicted. The question of household structure is important because of the potential for resistance to or rejection of the project (Safilios-Rothschild, 1988). Fundamental changes in the household may also cause emotional stress, as when an agricultural extension project shifted the power balance between the older and younger generations in Turkey (Hinderink and Kiray, 1970), or when wage employment for women threatened male economic dominance and caused family violence in Argentina (Jelin, 1988). Moreover, a change in household composition such as male outmigration or the physical separation of nuclear from extended family units may increase the work burden on remaining members by reducing the possibilities for sharing tasks, the income on which they can draw, the

resources available to them, and the possibilities for support during an emergency. The question of individual access to income and capital is key because of the potential harm that projects may do to certain categories of individuals if this issue is not resolved equitably. Since different individuals have different priorities for the uses of income, and since the person who earns the income generally has a greater degree of control over its uses, changing access to income may also have significant consequences for the ways in which income is used.

The task allocation and time-use questions are related. They are important because time burdens may reduce or prevent participation in the project, or may interfere with the performance of other tasks equally important to the welfare of household members. For example, a project which imposes increased demands on a mother's time may reduce the amount of time she can spend in child care, including food preparation and feeding (Schofield, 1974). This reasoning applies to all household members. An employment or scholarship project, for instance, takes children's labor time away from the household, increasing the work burden of remaining members, and possibly reducing the total time devoted to particular tasks.

4.2 Categories of Data to Collect

Answering these key questions requires information in the following areas:

1. household structure and composition
2. individual incomes (cash, in-kind)
3. individual and household asset ownership
4. tasks performed and their allocation among members
5. uses of individuals' time
6. allocation of consumption goods among household members.

A summary listing of the data needed in each of these categories, together with the uses of the information for project identification, planning, and evaluation and suggested methods for obtaining the data are presented in Table I.

4.3 Individual Characteristics of Interest In Intrahousehold Analysis

It should be understood that data on individual household members will be analyzed according to their sex, age, and other relevant characteristics. These may include such factors as: relation to household head, marital and childbearing status, and others. Age categories of interest are: completely dependent children (up to about age 3); children who require supervision but can contribute some household work (from about 3 to about 6 years old); children who require little supervision and can contribute household or market work (about 6 to the age at which young adulthood is defined, somewhere between 12 and 18 years old); working-aged adults; and the elderly (no longer engaged in market activities). Specific ages defining these categories will depend on the given culture. The categories measure the relative labor burden versus labor and resource contribution represented by different household members. Kinship with the household head may affect task allocation and access to consumption goods. In some societies, women who have borne children have greater access to food and greater command over the labor of others than do married women before they have had children (Chaudhury, 1981). Single, married, and widowed women often have quite different access to resources, responsibility for tasks, and command over consumption goods (Little, 1987).

4.4. Time Frame of Project Effects

Intrahousehold analysis needs to distinguish between expected project effects in the long and short term. Households may adapt slowly to changes in resource flows, so that the immediate effects of a project may be different from those felt later on. Many studies have suggested that individual income streams are associated with particular uses of income: such as women's income with food purchases and men's income with agricultural investment (Kumar, 1979; Haugerud, 1981). The effect of changing the balance between sources of income may be quite marked at the beginning, until the members adjust to the new earning pattern. The immediate effect of introducing educational programs for children may be to reduce the resources of the household (because of the loss of children's household labor), while the long-run effect may be to increase resources (because of the children's increased earning power).

5. Procedures for Data Collection and Analysis

Incorporating intrahousehold analysis into project and policy planning requires a series of iterative steps for collecting information on intrahousehold processes and integrating it into the model of the project's inputs and outcomes. These steps are outlined in Table II, along with the written outputs required at the end of each step. The basic approach is to develop a detailed model for the linkages between the changes brought about by the project and expected individual outcomes. Using the questions presented in Section 4 as a guide, missing information required to specify the linkages adequately is identified. This information is then collected

through a combination of: review of published and unpublished literature, contact with professionals who have worked in the geographic area of interest, and on-site informal and formal data collection. At each stage, the model of the project is revised based on the new information obtained, and the specification of missing information is updated. The final output is a complete written model of the proposed project taking into account (linkages with) IHA processes and their potential effects on project outcomes. The project plan should include provisions for continued monitoring of project effects on individuals within the household.

5.1 Review of the Literature

The literature review should include published books and journals in the fields of economics, anthropology, sociology, and the specific subject area (e.g. health, food and nutrition, water supply, etc.) covered by the proposed project. It should also include the fugitive literature: unpublished reports and program evaluations prepared by bilateral and multilateral donor agencies in the United States and elsewhere, by the government of the country where the project is to take place, and unpublished scholarly reports including graduate-level theses and dissertations. The literature review should focus on the specific subject areas of missing information identified in the development of the project model.

There are annual indexes of economic and social science abstracts which provide comprehensive coverage of the published literature. Numerous computerized data bases, including Agricola, and others, cover unpublished government reports as well. Dissertation Abstracts publishes abstracts of

most doctoral dissertations completed each year. Any good public or university library has a reference librarian who can assist in literature searches. Personal contact by mail and phone with people who have worked in the geographic area or topic of interest are excellent routes to the most recent material.

Literature should be reviewed not only for the conclusions presented, but also for the validity of the research methods used, the timeliness of the information, and the relevance of the information to the target group of the project under consideration.

5.2 Contact with Social Scientists and Development Professionals

Reviewing the literature will help to identify people, both in the United States and in other countries, including the host country, who have relevant experience. The help of these professionals should be enlisted in several ways. First, they can be asked to review the project plan, which should include the detailed specification of the behavioral expectations discussed above. They can validate or criticize the steps by which project goals are to be achieved. Second, they should be involved in the process of collecting data on households in the proposed project area. These people will be more aware than most outsiders can be of approaches which will and will not work, and of the best ways to obtain cooperation and accurate information. They can suggest topics for questioning which might not otherwise have been identified as relevant. If they have been involved closely enough in the data collection process, a third area in which the help of local social scientists can be requested is in reviewing and commenting on the project plan in its final form, or at least on aspects of the project which concern intrahousehold allocation of goods and tasks.

5.3 On-Site Data Collection

Direct observation and informal and formal interviews with local informants at the site (or sites) of the proposed project are essential to effective planning. Experienced social scientists and development professionals, including local professionals if feasible, should be involved in the data collection effort. Direct observation should be used where possible to complement and to validate the information obtained in earlier studies and that obtained from key informant interviews.

5.3.1. Avoiding Bias in Data Collection

Data Collection for project planning and evaluation may be smaller-scale than a survey, and the techniques used may be less formal, but the principles of sampling are essential to ensure that a representative range of respondents is studied. In survey research, bias in the selection of respondents is avoided by applying proper techniques of sampling. These techniques are intended to ensure that every member of the population being studied has a known, non-zero chance of being observed. The population being studied may be households, persons, health clinics or other institutions, or a variety of other units.

Observations should be conducted at randomly selected locations and times of day and week; households, and individuals within households, should be selected from the full range of geographic locations, and individual characteristics, which exist in the project area. It will be too costly and time consuming to draw up an exhaustive sampling frame for households in a region. Still, the target region may be divided into zones by distance from the town, school, or clinic, for example, to ensure

sampling some households from each zone. If the relevant characteristics are not geographic but relate to landlessness or male and female headship, for instance, care must be taken to include some representative households from each sub-group ("quota sampling"). Sampling of observations based on convenience of time and place should be avoided at all costs, since it is bound to be non-representative and may provide misleading results.

5.3.2. Approaches to Data Collection

There are several well-accepted methods of data collection for project planning and evaluation which are designed to be relatively low-cost and to provide results relatively quickly (cf. Kumar, 1987b; Scrimshaw & Hurtado, 1986). Different methods are suitable for different types of information and are described briefly in the following paragraphs. Table I presents the types of data which may be obtained with each of these methods. Generally, such data collection requires trained and experienced people to work in the field.

5.3.2.1. Direct Observation

Direct observation of public behavior permits the observer to validate information reported in the literature or by local informants. A format for collecting the data should be developed specifying the number of observations required and the procedure for obtaining them in an unbiased way. Observation should always be in quantitative terms when possible. Structured data collection instruments for direct observation should specify the precise information required. Examples are: numbers of girls and boys attending school at each grade level in a sample of schools; relative frequency of men and women and of different age groups performing

a given (publicly observable) task; time required to perform a given task; what tasks are performed together or in sequence; length of waiting time at a clinic, public distribution outlet, or other service.

5.3.2.2. Focus Groups

In a focus group, a small, about six to fifteen people, for example, group of people with a similar interest in the project, mothers of small children, farmers, or members of the marketing cooperative, meet with a discussion leader who guides a 45-minute to two-hour discussion on a particular topic (see Kumar, 1987a, for a fuller discussion). The idea of focus groups is to get discussion going among the participants rather than to conduct a question-and-answer session. The leader's job is to keep the discussion on relevant topics and to move the discussion along when a topic seems to be exhausted. He should be prepared with a list of general questions which participants can answer and in which they are interested. The questions should be designed to elicit information without suggesting responses. "What is involved in getting water for your household?" is a more appropriate opener than "Would you like to have piped water in your village?" Of course, native fluency in the local language is essential.

If several groups have an interest in the project, then several focus groups are needed, since some people may be unwilling to discuss their opinions in front of people whose interests in the project diverge from their own. Focus groups, by encouraging discussion, often reveal unanticipated aspects of a particular issue. Feelings, preferences, attitudes may come out which could not have been anticipated, but which might affect execution of a project. Since discussions are public, people

may correct each other's reports and improve the reliability of the information provided.

The process of note-taking in focus groups should be thorough but unobtrusive. If it seems inappropriate to take notes during the session, notes should be completed immediately after leaving the meeting. In a focus group, it can be helpful to have two people working, one guiding the conversation and the other taking notes*.

Focus groups will not provide information about attitudes or behavior which people are unwilling to reveal to their neighbors. No form of data collection suitable to the project planning process will reliably obtain information on embarrassing or illegal activity, although a sensitive leader can often address relatively private subjects. Another drawback of a focus group is that responses may reflect social norms rather than actual behavior, since people are responding in public. Furthermore, people may describe what they believe to be general practice, even if they know their own behavior in specific instances does not conform to it.

5.3.2.3. Key Informant Interviews

Individual interviews using a relatively unstructured set of questions or "topic guides" (Scrimshaw and Hurtado, 1987) can substitute for or augment focus groups if privacy is considered essential, or if it is difficult to reach some people in a group setting. The questions are used to introduce a general subject area, and the respondent can answer focusing

* Use of tape recorders is probably not an improvement over taking notes. Aside from the obvious problems of power source and scarcity of tapes, sound quality is often poor, especially in a field setting where ambient noise may be hard to control. The time cost of transcribing the tapes is substantial, and much of the recording may turn out to be unintelligible. Also, using a recorder may tend to make the leader inattentive, relying too heavily on the possibility of going over the tape later.

on the aspects of the question most relevant to him/herself. The advantage of such semi-structured interviews is that, as in a focus group, the interviewer can pursue a line of questioning that leads in unanticipated directions.

5.3.2.4. Small-Scale Surveys

Surveys are distinguished from key informant interviews by the relatively larger number of respondents, greater use of closed-ended, precoded questions, and more rigorous application of sampling techniques. A survey must be the last stage in the data collection process, because the key informant interview and focus group methods, as well as direct observation, are essential to ensure that the close-ended survey questions are meaningful, cover all the relevant aspects of the problem, and are phrased in a culturally appropriate manner. The advantage of the survey approach is that there is greater assurance of statistical representativeness. If the sampling method is indeed representative, then surveys permit one to assess the frequency of particular situations or attitudes, not just to note their occurrence. Also, the more structured approach to interviewing ensures that all questions are covered in all interviews in the same way. The possibility of bias due to permitting the respondent to define the focus of the interview is thereby avoided.

6. Measurement Techniques

6.1. Household Composition and Structure

The most straightforward way to measure household composition is to list in table format all the members of the household according to the

definition selected (see Section 2.3.1.). It is useful to specify each person's relationship to the household head, so that the structure of the household can be determined. Age (in months for children under 5, in years for older persons) and sex are also necessary for intrahousehold-level analysis. Additional questions may be asked about educational level, work status and type of work, and whether the person is always present in the household.

If intersecting membership of individuals in different household or work groups is important to the project, this information should be included in the table. In this way, the members of a single coresidential group can be linked to different commensal, labor-sharing, or kinship groups by information recorded in the appropriate column (c.f. Heywood, 1988).

The household list is a convenient format for any information which is collected individually for all members of the household. However, not all the questions will be simple to answer. For example, interviewers may need to probe for work status, particularly among women who may not define themselves as workers even if they spend considerable time in market work.

One question is whether to include as members in the household people who are unrelated to the household head such as those who live in the household but work as servants. A possible criterion for household membership is income pooling: a person who is paid by the reference household constitutes a separate unit. For some purposes, meal sharing may

be the appropriate criterion. It should be noted that if paid servants are not considered members of the households in which they live, then any study must include them as separate household units. If sampling is performed based on dwelling place, then the servant household must be included in the study along with the primary household, or one of the two should be randomly selected.

6.2 Income

Measuring income is difficult, because income is a sensitive topic in most cultures. People may be unwilling to discuss the amount of their income, either because they do not trust the confidentiality of the interview or because they are embarrassed. Furthermore, in many developing countries, people themselves may not be able to quantify their incomes either because payment is irregular and unreliable or because it is received in kind as well as cash.

Information about household income is vital because it indicates the severity of the resource constraint within which households are operating. Absolute precision of measurement, even if it were possible, is not necessary for this purpose. Information about individual income streams is important because it indicates the frequency, timing, and reliability of income (all of which are known to affect how income is used), and because it indicates the value of the contribution of individual members in relative terms, which may be one indicator of their command over the household's resources. Individually reported incomes may indicate the relative proportions of income earned, even if the absolute amounts contain error.

There are several practical approaches to these problems of measurement. A first approximation to household income level can be obtained by measuring possession of key assets. These will vary from one location to another, but typically include the type of house (mud versus cement floor; thatch, mud, or brick or cement walls; thatch, corrugated metal or cement roof), number of rooms in relation to the number of people; source of water; ownership of radios, televisions, bicycles, motorcycles, automobiles, and other durable goods; type of cooking facilities. Land ownership may be one proxy for wealth in some places, but agricultural assets (land, animals, equipment) only indicate wealth for households involved in agriculture, not for merchants, professionals, or administrators. Also, the definition of land ownership is not always straightforward, as use-rights and rights to sell or give away land may belong to different individuals.

A second approach to measuring household-level income is to use expenditure as a proxy. Expenditure is a less sensitive topic than income, and is also generally believed to show less short-term fluctuation. In this sense, it is a more accurate indicator of a household's standard of living than respondents' estimates of income itself. Cash expenditure, however, reflects living standards only in areas where most consumption goods are purchased. Where consumption items, especially food, are home-produced or received as gifts or for pay (as in a food-for-work program), the value of this consumption must be included in total expenditure (and, of course, in total income).

Measuring the flow of income to the household directly requires talking separately to each person who brings income into the household. It is not uncommon for people in a household to keep the amount of their earnings

secret from each other, so each interview must be conducted in private, and confidentiality must be made explicit and assured.

If income is to be measured directly, it is important to ask separately about each income source: wage-earners may have more than one job; sources such as pensions, gifts and transfers, and other payments need to be mentioned explicitly. It is also important to allow the respondents to report income in the reference period (day, week, season) which is most comfortable for them, and to obtain enough information on how many days or weeks per year the income is received in order to estimate an annual or monthly rate.

Another use of income information is to compute wage rates by obtaining an estimate of hours worked as well as income earned. Wage rates are an important variable because they are one indicator of the value of individuals' time, and thus of the implicit trade-offs involved in task allocation decisions.

6.3 Assets

Asking about individual and joint ownership of productive assets requires a thorough knowledge of the meaning of ownership in the culture and area being studied. For example, a husband may own all the household's land, but may be obligated by law or tradition to give a certain amount to his wife for her own use. She would not say she owned the land, though she could sell its product and keep the assets derived from it. Urban dwellers may own livestock which are tended, and their milk sold or consumed either by relatives or others who live in rural areas. Questions about assets must therefore be designed to distinguish among ownership, control over their allocation, and rights to their use.

General patterns of ownership and use can be uncovered in focus groups or individual informal interviews, by asking questions about who owns land, animals, and agricultural equipment; what rights does ownership imply; what obligations are involved; whether anyone has legal rights to the use of assets belonging to others; whether there are restrictions on who may own or use particular assets. This information can later be used to design an appropriate questionnaire if more detailed information on a representative sample of households is required. These questions would focus on ownership of assets and use rights of individuals within households over specified assets.

6.4 Tasks and Task Allocation

Developing an inventory of tasks and determining their organization requires both informal interviews (group or individual) and direct observation. Informants can be asked direct questions about how certain tasks are performed, what steps are involved, how long they take, and which things are usually done together or in a fixed sequence. Similarly, informal interviews can find out who (women, men, girls, boys, elderly people, etc.) usually perform these tasks.

It is very important to validate this information with systematic direct observation of tasks being performed. One approach is to select several individuals and watch them during the course of the day, noting every observable activity of interest. The advantage of this approach is that the sequencing and organization of activities can be directly observed. An obvious disadvantage is the severe limitation on the number of observations which can be performed in a fixed time period. If several

different categories of people (men, women with children, women without children, etc.) need to be observed, the time-cost of this method is prohibitive in a short-term study. Another disadvantage is that such close observation is very likely to cause people to alter their behavior (the Hawthorne effect).

An alternative is the random visit method (Gross, 1984; Johnson, 1988; Messer and Block, 1985) by which randomly selected individuals (drawn from randomly selected households) are visited at set times of the day over several days, the times having also been selected at random. At the visit, the interviewer records all the activities the person is doing (or inquires about it, if the person is not at the expected location) and may also ask what the person was doing just before the interviewer arrived. Several hundred observations can be collected in a few days by this method. What proportion of time (observations) is spent in which activities can then be determined, and what proportion of the observations of a particular activity were performed by different categories of people. The disadvantage of this approach is that whole activities are not observed from start to finish, so that the organization and duration of tasks are difficult to discern. Since only a sample of movements is observed, activities which occupy very short amounts of time may be missed. The random visit method is most useful after some knowledge of its organization has been gained, possibly after a few whole-day observations have been made.

A third approach is to focus not on individuals, but on specific activities, and to observe a specified number of times the activity is performed, noting who does it, how long it takes, and if anything else is done at the same time. These observations can be analyzed to determine the average length of time the task takes and what proportion of the times it is performed by different categories of people, and its relation to other

tasks. To use this method, it is necessary to know where and at what times a given task is performed, and to schedule observations randomly across these times and places to ensure unbiased observation.

6.5 Time Use

The measurement of time use focuses on the allocation of an individual's time among tasks during the course of a day, to determine the degree of flexibility different individuals have in their work (market and household) and the extent of their leisure time. Several alternative approaches to measuring time use can be used in conjunction with measuring task allocation. The method using direct observation has been described above.

Another approach is to depend on recall of time use by respondents themselves. An unbiased sample of individuals is interviewed about the time spent in different activities throughout the day. A major problem with depending on recall is that serious underreporting is known to take place (McSweeney, 1979), particularly of tasks such as household maintenance and home-based production, which may be of particular interest to development project planners. Extensive prompting about particular tasks or categories of tasks may significantly improve recall (Schlossman, 1986), but this also lengthens the interview. Recall instruments have been designed which record frequently-interrupted tasks and those of very short duration (1-2 minutes) which are often left out of time use studies (Schlossman, 1986). These instruments also preserve simultaneity and temporal relationships of tasks. People in developing countries may not know how much time they spend at given tasks, and so time use questions must be phrased in so as to take into account culturally specific time frames and references. One possible way of solving the time estimate

problem is to link the estimates to tasks of known duration, eg., "were you there for as long as it would take to walk to the well and back?" (Zeitlin, 1988). In many Muslim countries, for instance, time use can be linked to the several calls to prayer which can be heard at fixed times throughout the day.

An alternative to recall is for the respondents themselves to keep diaries or records of their own time use. This requires high respondent cooperation, and raises the possibility that tasks considered minor by the respondent may be forgotten or omitted. Tasks may also be omitted as too complicated to record. Studies using time use records which could be kept by illiterate respondents, have been done using simple pictures to indicate time of day and activity (Mencher, et al., 1979), but these require excellent training and supervision, and they are limited in the level of detail they can achieve.

An alternative method which would be less time consuming is to build up a picture of individual activities by asking people what tasks they perform, in sequence (with suitable prompting), and to estimate the time costs of the tasks from information already obtained through direct observation. This would relieve some of the burden on the respondent, and probably would not result in much loss of accuracy, given the purposes of the data collection.

In most cases, it may not be necessary to develop an exhaustive account of all people's activities throughout the day. One may estimate the work burden and time constraints on individuals by asking them about key tasks they perform, and whether others in the household also help with these tasks, and how they are organized. ("How often do you prepare meals for the household? How many others also perform this task?") For women, a

central question is whether anyone takes care of the children while women are engaged in other tasks; this can be a rough measure of work burden (Marlett, 1988).

Measuring time use is a difficult task, but in these ways it may be possible to obtain most of the information on individuals' time constraints needed for project planning with somewhat less detail and at a somewhat lower cost in time and resources than would be required in a rigorous research study.

6.6 Consumption

6.6.1. Food Consumption

The most direct and simplest way to measure food consumption is by looking at the outcome: the growth of children. While food intake interacts with morbidity and activity level as well as genetic make-up in determining growth, the anthropometric measures: height-for-age, weight-for-age, and weight-for-height, are widely accepted as indicators of dietary adequacy. Height-for-age indicates long-term dietary adequacy, and weight-for-height indicates the same in the short-term (McLaren & Read, 1972; Waterlow, 1973). The advantages of anthropometric measures as indicators of dietary adequacy are that they are concrete, directly measurable, quick to perform, and do not depend on respondent recall (except for age, which can be a problem in some areas). The disadvantage is that they are indirect indicators of diet, since other factors can also affect achieved growth. Growth status, however, is a useful indicator, as a reflection of both diet and health care, of who appears to be favored in a household's allocation of resources.

The two major approaches to measuring household food consumption are:

- 1) food weighing (of the food as it is prepared and then of leftovers) and
- 2) dietary recall, using food models to assist the food preparer in estimating the quantities consumed. Weighing is extremely intrusive and time consuming, and is likely to jeopardize respondent cooperation. Furthermore, though it is, strictly speaking, accurate, this method probably causes households to modify their usual behavior so much that the results are not valid or representative. Recall will probably be more valid, to the extent that home-prepared food reflects total food intake. Snacks and meals consumed away from home are likely to be missed by this method. Recall is generally inaccurate for a retrospective period greater than 24 hours, and certainly for one greater than 48 hours. Yet, to get an accurate picture of a single household's or individual's consumption of protein and calories, two or three days worth of data necessary; a single 24-hour recall is not sufficient because of normal day-to-day fluctuations in consumption (Burk and Pao, 1972; Block, 1982). For estimates of micronutrient consumption, even more days of recall are required, the number depending on the nutrient in question (Karkeck, 1987).

Household food consumption is a useful indicator of the overall resource constraint under which the household is operating, but it is a very poor indicator of the diet of any individual member (Pinstrup-Andersen & Garcia, 1988). To measure individual diet, separate 24-hour recall interviews must be conducted for each individual. As with households, at least two or three 24-hour periods are needed to get an accurate estimate of the individual's dietary intake.

A short-cut to measuring dietary quality is to administer a food frequency questionnaire. This is a format in which respondents are asked, for a specified list of foods, how many times a day (week, month) they

consume one serving. Quantities are not accurately measured, but these may be compared among individuals by observation to see whether noticeable inequalities exist among members. One problem with the food frequency method, as with any measure of "usual" behavior, is that people may tend to report idealized rather than actual behavior. Furthermore, there is a recency effect in such reports: respondents report as "usual" generalization applying to the last few weeks. Seasonal variations are often overlooked. An alternative is to pose the questions in relation to actual behavior: "How long ago did you eat..." rather than "How often...". By referring to actual behavior, one avoids the problems of idealizing and of the recency effect to some extent.

Another approach to identifying vulnerable or disadvantaged groups is to ask direct questions about foods which are specifically reserved for certain individuals, and foods which are withheld, both under normal circumstances and during illness or pregnancy. These questions may yield some information about practices which are recognized and accepted in the culture, but they may not reveal sex or age biases of which the respondent is unaware or ashamed. At least one study has found that reports of mothers indicating the lack of sex differences in child feeding conflict with evidence from anthropometric measures (Johnson, 1987).

6.6.2. Health Status

The best measures of health status are morbidity and mortality. Morbidity can be measured by a retrospective questionnaire asking about illness episodes and duration in the past two weeks. It may be possible to distinguish broad categories of illnesses (e.g. diarrhea, respiratory infection, fever, other) if they have a clear meaning in the area being studied. For adults, a measure of illness severity may be whether normal

activities were suspended. Diarrheal severity can be measured by frequency of stools. Infant and child mortality can be measured by interviewing mothers retrospectively. An indirect indicator of infant and child mortality is the ratio of male to female children surviving at age five or six years. An unbalanced ratio is an indicator of sex differences in earlier mortality, and consequently in sex differences in health care practices and morbidity.

Morbidity and mortality represent the interaction of nutritional status, preventive health care, and curative care. The delivery of health care services is only one factor determining health status, but it may be an indicator of household investment in individual members. As with food consumption, more accurate and less idealized information will be obtained from questions referring to actual behavior, eg. "The last time person x was sick with diarrhea, where did she/he go for treatment", or "how was it treated". Questions may cover more than one source of care, if this level of detail is considered necessary, by asking, "where did you go for treatment first?"..."where did you go after that?" "Whom did you see?" The number of different attempts to treat an illness may be as much an indicator of household investment in a person as the kind of treatment sought.

6.6.3. Education

Education of individuals can most easily be measured in the context of the original table listing household members, by asking, for each person, whether she/he is currently enrolled in school, and what was the last grade attended (or completed). There is no advantage to grouping this information by levels (elementary, secondary, etc.), as such grouping loses information. Actual years of schooling will be more useful for the same time cost of collection.

. Summary and Conclusion

This guideline suggests an approach to the selection, design, monitoring, and implementation of development interventions which incorporates an analysis of the internal processes by which households allocate resources and responsibilities among their members. It is argued that intrahousehold allocation and its determinants represent the last link in the chain of causes and effects by which development projects achieve their anticipated outcomes, which ultimately must be measured in terms of the improvement of individual well-being in the disadvantaged populations.

The data requirements for intrahousehold analysis have been assessed, and a set of procedures has been suggested, which should be followed in obtaining the data and in incorporating it into the project planning process. These procedures represent an attempt to accommodate the time and resource constraints of most development projects, while recognizing that responsible project planning and evaluation simply require adequate information to predict their intrahousehold effects.

This paper is not simply a methodological guideline for project planners. Rather, it attempts to suggest a way of thinking about development planning. The methods and procedures for obtaining information are not novel, but their application to the analysis of project impacts at the level of the individual, within the framework of the household unit, is relatively untried. Nonetheless, the case has been made that this information on intrahousehold dynamics, and on the probable changes caused by development interventions, is central to successful project design and implementation. It is a critical element in ensuring that a project or a policy change achieves its goals. The additional resources expended on

performing careful intrahousehold analysis in planning should be amply repaid by the cost effective use of project and program resources in well-conceived projects which have anticipated and accomodated any possible effects on internal household processes.

TABLE I

DATA TO BE COLLECTED: Variables, Uses, Methods

<u>Type of Data</u>	<u>Variables</u>	<u>Uses of the Information</u>	<u>Methods</u>
1. Household Composition, Structure and Function			
1.1 Members living under one roof or in one compound (coresidential unit)	<p>a. Number of members, age and sex</p> <p>b. Common household structures (nuclear extended multi-generational other)</p> <p>c. Number of unrelated individuals</p> <p>d. Number of members tied by blood, by marriage to household head</p> <p>e. Ratio of children to adults (age depends on local definition)</p> <p>f. Ratio of non-working to working members (depending ratio)</p> <p>g. Sex of household head</p> <p>h. Seasonal changes in coresidential household size and composition due to in- and out-migration</p>	<p>- Measure level of need in relation to resources (vars. a,e,f)</p> <p>- Assess possibilities for task-sharing within household (vars. a,b,e,f)</p> <p>- Indicate vulnerable groups at risk of low (relative) levels of consumption (vars. c,g)</p> <p>- Identify possible sources of resistance to change (var. b)</p>	<p>- Secondary data is often available on common household structures</p> <p>- Key informant interviews can cover common household structures</p> <p>- Small scale surveys of households should start with a listing of all members (in table form) including age, sex, relation to household head, educational level, occupation(s) for each</p> <p>- Seasonal variation may be addressed by questions on the household list ("is this person usually present all year? During what season is she absent?") or by covering several seasons</p> <p>- Servants or other unrelated individuals may be defined as members for some purposes and not others, eg. if they eat with the household they may be members; if they are paid by the household rather than contributing to it, they may be considered separate</p> <p>- If servants are considered a separate unit, any study of households should include them in the sample</p>

TABLE I cont.

<u>Type of Data</u>	<u>Variables</u>	<u>Uses of the Information</u>	<u>Methods</u>
1.2 Group eating from a common food supply (commensal unit)	<ul style="list-style-type: none"> a. Degree of overlap of this group with the coresidential unit b. Frequency of food gifts sent and received c. Rules governing exchanges of food d. Frequency of members eating away from home 	<ul style="list-style-type: none"> - Identify possibility for leakage of benefits - Identify possible paths for dispersion of benefits - Define level of need. Coresidential unit may not accurately define need if much sharing occurs 	<ul style="list-style-type: none"> - Secondary data on social organization may include information on sharing and gift-giving - Direct observation of households at mealtimes to determine whether members are usually absent or guests are present - In small scale surveys, a question in the household list may be added for some or all members: ("how many meals are taken at home/away from home")
1.3 Group pooling its income and resources for common support (income-pooling unit)	<ul style="list-style-type: none"> a. Degree of overlap of this group with coresidential and commensal units b. Degree of pooling by different members: male head, female head, young adult children, elderly relatives, unrelated members c. Degree of pooling with persons not living in the household: relatives living elsewhere, foster children d. Frequency and source of gifts in cash and kind 	<ul style="list-style-type: none"> - Identify possibility for leakage of benefits - Identify possible paths for dispersion of benefits - Define level of need 	<ul style="list-style-type: none"> - Information on income/resource pooling is very difficult to obtain in a short-cut manner. Food sharing may be a proxy in some cases - Secondary data on pooling is not commonly available - Direct observation of pooling is not possible - Informal questioning of key informants may give idealized rather than actual picture but should indicate how to pose survey questions - In small-scale surveys, may ask individual members: "What categories of expenditure do you spend <u>your</u> income on?" "How frequently do you receive (give) gifts of cash, of goods?" "Does anyone outside the household depend on your income?" "How much of your income is reserved for your personal (as opposed to household) use?"

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TABLE I cont.

<u>Type of data</u>	<u>Variables</u>	<u>Uses of the Information</u>	<u>Methods</u>
1.4 Labor-sharing unit	<ul style="list-style-type: none"> a. Degree of overlap with co-residential, commensal, or income-pooling group b. Nature of labor obligation (type of work, whether mutual or one-way) c. Whether labor obligations are determined by blood, affinal, or other ties d. Seasonality of obligations e. Whether there are several different labor-sharing units with different obligations and tasks f. Degree of overlap among the different labor-sharing units 	<ul style="list-style-type: none"> - Identify possible conflicts with time and labor requirements resulting from development projects or policies, and possible means of accommodating to them - Identify possible sources of resistance to change, or barriers to individuals taking advantage of new programs or policies - Identify possible paths for dispersion of benefits, especially of productive assets and training - Identify possible detrimental effects from disruption of the labor-sharing units or possible shifts in membership (due to introduction of new technology for example) 	<ul style="list-style-type: none"> - Studies on labor obligations may exist in the anthropological or sociological literature - Informal direct questioning of local informants can reveal rules for labor sharing and the nature of the shared tasks
2. Income	<ul style="list-style-type: none"> a. Agriculture <ul style="list-style-type: none"> a.1 Degree of dependence on agricultural wage labor, subsistence farming, and farming for sale (proportion of households which earn income from each source; proportion of each household's income from each source) 	<ul style="list-style-type: none"> - Estimate level of income adequacy and security of households - Estimate returns to different kinds of human capital (wage rates) based on education, age, sex, to predict incentives for investment in particular individuals; to estimate relative value of individuals' time in home and market activities 	<ul style="list-style-type: none"> - Information on the nature of the economy (types of employment, types of production) will certainly be available either from published studies or internal government or donor agency reports - Direct observation of workplaces (fields, markets, factories) can indicate by whom certain jobs are done and the types of work performed

TABLE 1 cont.

<u>Type of data</u>	<u>Variables</u>	<u>Uses of the Information</u>	<u>Methods</u>
2. Income (continued)	a.2 Are certain types of agricultural labor performed by women, men, children (whether for pay or for own production)?	- Identify likely degree of control (by individuals) of income as a whole; of income from different sources	- Key informant interviews can provide information on: a) association of crops, tasks with certain individuals b) seasonality of employment c) labor shortage/surplus d) types of work available
	a.3 Who in the household - owns land - controls the uses of its products - markets the products?	- Predict changes in returns to different kinds of human capital; possibly predict changes in household's investment in different individuals	- Focus group methods may be used to obtain information on: a) general pattern of income earning (number of earners, their sex, age, type of jobs) b) perceived association of individuals' income with specific expenditures c) perceived association of individual income with control over income uses
	a.4 Are certain crops or types of crops the responsibility of certain members (women, men)?	- Predict changes in returns to physical assets and possible consequences for access	
	a.5 Seasonality of income from different crops and labor	- Predict changes in individuals' incomes (amount, reliability, frequency)	
	a.6 Rates of pay for different kinds of work	- Predict changes in household income (amount, reliability, frequency)	- Small-scale surveys can identify a) individual income streams within households: approximate amount, frequency, reliability of income b) categories of expenditure associated with individual income streams (subjective perception of respondents)
	a.7 Form of pay (cash, in-kind)		

TABLE I cont.

<u>Type of data</u>	<u>Variables</u>	<u>Uses of the Information</u>	<u>Methods</u>
2. Income (continued)	<p>b. Formal sector employment:</p> <ul style="list-style-type: none"> - types of jobs available - full time, part time, seasonal - skill or educational level required - rate of pay - period of pay (piece, day, week, etc.) - form of pay (cash, in-kind) - are the jobs for men, women, children, or no restriction - Is labor in surplus, or scarce in different kinds of jobs - Seasonality of labor demand <p>c. Informal Sector Employment:</p> <ul style="list-style-type: none"> - types of jobs available - level and reliability of income - done by men, women, children - seasonality 	<ul style="list-style-type: none"> - Predict possible changes in control jective perception of respondents) over assets and income, and in their uses - Identify possible sources of resistance to change - Identify possible change in how food is acquired (purchased, home-grown), and possible consequences for food adequacy and security - Predict who might gain and lose from altered employment opportunities 	
<hr/>			
3. Assets and Wealth			
3.1 Productive Assets	<p>a. What major productive assets are owned by households? (Proportion type of household)</p> <p>b. Is ownership joint or individual?</p> <p>c. How is access obtained? Distinguish use rights (rights to the product) from ownership (right to allocate). Are rights obtained by purchase, inheritance, through blood or marriage ties etc.?</p>	<ul style="list-style-type: none"> - Predict changes in ownership or access to the use of resources - Identify possible sources of resistance to change - Predict who will and will not benefit from changes in the productivity of assets - Predict who may be displaced from use of assets 	<ul style="list-style-type: none"> - Existing studies - Key informant interviews - Small scale surveys of households, asking about ownership and use of resources (e.g. a checklist format covering, for each listed asset, ownership, use, how obtained) - Previous studies might exist in the anthropological literature

TABLE I cont.

<u>Type of data</u>	<u>Variables</u>	<u>Uses of the Information</u>	<u>Methods</u>
3.2 Publicly-owned assets	a. What resources are freely available to all?	<ul style="list-style-type: none"> - Identify possible changes in availability of free goods (e.g. food, water, fuel, other goods) - Predict consequences for consumption and time use 	<ul style="list-style-type: none"> - Direct observation - Key informant interviews
3.3 Ownership of consumption goods	<ul style="list-style-type: none"> a. Quality of housing (roof, walls, floor) b. Utilities (electricity, water, waste disposal available to household) c. Ownership of goods indicating wealth (e.g. bicycles, automobiles, radios, televisions, cows, goats) 	<ul style="list-style-type: none"> - Estimate general economic level of households - Identify vulnerable population - Predict project or policy effects which may vary depending on total resource level of household 	<ul style="list-style-type: none"> - Direct observation - In small-scale surveys, include questions about ownership of resources - Note that choice of which specific goods are accurate indicators of wealth depends on local knowledge

TABLE I cont.

<u>Type of data</u>	<u>Variables</u>	<u>Uses of the Information</u>	<u>Methods</u>
4. Task Allocation and Time Use			
4.1 Inventory of tasks	a. Major tasks of - household maintenance - home-board production - work outside home	- Use to collect and organize information from subsequent sections	- Existing studies (including anthropological and sociological research) - Key informant interviews
	b. Range of time required for each task		- Direct observation of tasks that can be publicly viewed
<hr/>			
4.2 Organization of Tasks	a. Which tasks can be done together	- Predict possible conflicts with new tasks required as result of a policy change	- Existing studies - Key informant interviews
	b. Which tasks <u>must</u> be done together or in a fixed sequence	- Predict shifts in the time spent on certain tasks or their frequency	- Direct observation - Focus groups
	c. Time restrictions on tasks (e.g. done only at certain times of day, week, year)		
	d. Location restrictions on tasks		
<hr/>			

TABLE I cont.

<u>Type of data</u>	<u>Variables</u>	<u>Uses of the Information</u>	<u>Methods</u>
4.3 Task Allocation	a. Which tasks are performed by individuals of particular age, sex, status, what proportion of the time	<ul style="list-style-type: none"> - Predict possible conflicts of current tasks with new tasks required as a result of a project or a policy change - Predict which tasks are likely to shift and from/to which individuals - Predict consequences for quality of the work performed - Predict changes in total work burden of individuals 	<ul style="list-style-type: none"> - Existing studies may be available for some tasks - Key informants may be useful but may provide idealized rather than accurate information - Direct observation of the performance of tasks is necessary to determine actual distribution of tasks
4.4 Social norms regarding work	<ul style="list-style-type: none"> a. Restrictions on types of work or place of work based on sex, age, status, religion b. Degree to which these restrictions are observed c. Social norms governing earnings by age, sex 	<ul style="list-style-type: none"> - Predict which individuals will take advantage of changing work and income-earning opportunities - Identify possible sources of resistance to changes resulting from project - Identify possible sources of social stress, family disruption and violence as a result of changes due to a project or policy 	<ul style="list-style-type: none"> - Previous studies - Key informants most useful for information on norms - Focus groups may be useful to determine which restrictions are followed in practice, especially for activities which are difficult for an outsider to observe

TABLE I cont.

<u>Type of data</u>	<u>Variables</u>	<u>Uses of the Information</u>	<u>Methods</u>
4.5 Time burden of individuals	<p>a. Amount of time spent in each of various tasks identified by methods in previous four sections</p> <p>b. Time constraints on individuals (available leisure; amount of time spent sleeping; working; in recreation; flexibility in allocation of time)</p> <p>c. Work burden of individual</p>	<ul style="list-style-type: none"> - Identify possible conflicts with project-related tasks - Predict possible changes in the performance of tasks (who does them; how well; how much time is spent) - Assess whether time will be shifted, reduced, increased, for a given task as a result of the time requirements of the project; or whether the task will be displaced to another person altogether - Predict changes in the work burden of certain individuals; consequences for their welfare; the welfare of children - Assess available leisure, amount of sleep, as a measure of welfare of individuals 	<ul style="list-style-type: none"> - Previous studies of time use patterns may exist in a few cases only; check UCLA database of Time Allocation Studies (Johnson, 1988) - Information from direct observation of tasks, the time they require, how they are organized, and their allocation among individuals can be combined with information on household size and composition to estimate work burden on particular individuals - Small-scale surveys can ask questions on: <ul style="list-style-type: none"> a) the frequency of performance of certain tasks b) the frequency of available help, or number of helpers, for the task c) age and sex of helpers, to estimate work load d) the range of time different activities take e) how tasks are organized (sequence of steps; are they done alone or always in conjunction with other tasks?) - 24-hour activity recall or spot checks - Direct observation of time use of individuals

TABLE I cont.

<u>Type of data</u>	<u>Variables</u>	<u>Uses of the Information</u>	<u>Methods</u>
5. Consumption			
5.1 Food	<p>a. Growth outcomes, growth rates of children by age and sex</p> <p>b. Specific foods or types of foods allocated to certain individuals (by age, sex, work or pregnancy status, kinship status in household)</p> <p>c. Specific foods or type of foods allocated or withheld during illness, pregnancy, lactation</p> <p>d. Meal patterns of individuals: frequency of formal meals at home, away, and informal consumption (wild food, street food, snacks at neighbors'), illness</p> <p>e. Food intake (quantity) of specific individuals</p>	<p>- Identify vulnerable groups, groups at risk of inadequate food intake</p> <p>- Predict who will benefit in food availability at household level</p> <p>- Anticipate possible changes in access to food if consumption pattern changes</p> <p>- Assess degree to which household food availability is a proxy for food available to each member</p>	<p>- Growth outcomes can be measured in a small-scale survey measuring height, weight, and age of children and comparing height/age and weight/height with a standard. This the best measure of adequacy of food consumption</p> <p>- Key informant interviews and focus groups can indicate whether specific foods or types of food are preferentially given to certain types of individuals, and what foods are given or withheld in illness, pregnancy, etc.</p> <p>- In a survey, questions may be included on allocation of foods to individuals and on allocation in sickness. For example, a checklist of local foods may be presented with questions like "is this food mainly given to children?" babies? boys? girls? adults? men? women?" "If your child is sick, do you increase feeding of any foods? Which? Decrease? Which?"</p> <p>- A food-frequency questionnaire may be administered to certain individuals in a sample of households; principal caretaker may answer for younger children</p> <p>- Meal pattern information may be obtained from local informants and from direct observation inside households</p> <p>- Note that household food consumption cannot be used as a proxy for adequacy of consumption by individuals.</p>

TABLE I cont.

<u>Type of data</u>	<u>Variables</u>	<u>Uses of the Information</u>	<u>Methods</u>
5.2 Health Care	a. Morbidity of individuals by age, sex	- Identify vulnerable groups	- Previous studies and government or agency reports may exist on available types of health care (but reliability may be questionable)
	b. Infant and child mortality by age and sex	- Predict likely pattern of use if available services are changed	- Direct observation at health service locations can indicate who uses the services; how much time is required; and what services, personnel, and supplies are available
	c. Frequency of use of different categories of health care services	- Predict who is likely to benefit first from changed services; who in long-term - For what kinds of problems are services likely to be used	- Focus groups and local informants can provide information on what services are used for what complaints; who is responsible for providing the care; time costs and other constraints to to use. Information on sex bias will probably not emerge from this method
	d. Time and cash costs of services	- For which members	
	e. Number of hours services are open; who staffs them during which hours (doctor; nurse; lay health worker); sex of staff members		
	f. What medicines/vitamins are dispensed; under which circumstances		- In a small-scale survey, questions may be included on: a) morbidity of children and adults (accurate retrospection probably limited to 2-4 weeks; may distinguish diarrhea, fever, respiratory problems) b) use of services. Accuracy is probably better if questions refer to the last illness episode of the individual rather than "usual practice". It is helpful to distinguish first source of care; second source of care (if applicable); etc.

TABLE I cont.

<u>Type of data</u>	<u>Variables</u>	<u>Uses of the Information</u>	<u>Methods</u>
5.3 Education	a. Educational levels of household members by age, sex	- Indicate preference for investment in certain individuals	- Information may be available in government or other agency reports
	b. Current school enrollment of individuals by age, sex	- Identify groups not receiving services	- Direct observation of schools can indicate relative attendance of boys and girls, members of different ethnic classes
	c. Proportion of girls and boys in school by age/grade level	- Predict who will benefit first from changes in availability of services or access to them - Predict who will benefit from a change in the returns to education of specific individuals	- Direct observation of communities can suggest degree of non-attendance (in some circumstances) - Focus groups can address questions of who is sent to school and why, and what barriers to attendance exist - In a small-scale survey, questions on educational level, literacy, and current enrollment can be included in the household listing

TABLE II

Intrahousehold Analysis Procedures

<u>Steps</u>	<u>Outputs</u>	<u>Approximate Time Required</u>
A. Review of Project Idea or Plan		1-2 weeks
1. Project or policy idea is presented		
2. Objectives of the project or policy change are specified		
3. Linkages between inputs of project or policy and expected individual outcomes are spelled out in detail, using the following questions regarding intrahousehold issues. A detailed scheme or model of these links between the project inputs or policy-induced changes and individual outcomes is prepared.	*A flow chart or other framework specifying the linkages between project (or policy) inputs and expected outcomes.	
4. Missing information needed to complete the model is identified.	*Written specification of a model of expected effects on individual income, command over resources, task performance, time burden, and consumption.	
a. Who will participate in project activities?		
b. Will the project require or cause a change in household structure, composition, or function?	*Written identification of gaps in knowledge, necessary to assess these effects.	
c. Will the project change any person's access to productive resources, or any person's control over what is produced (including control over income from his/her labor)?		
d. Will the project affect any person's wage rate (returns to labor) or the rate of return to assets under any person's control?		

TABLE II (continued)

<u>Steps</u>	<u>Outputs</u>	<u>Approximate Time Required</u>
e. Will the project require changes in the inventory of tasks performed by household members, or in the organization of tasks? f. Will the project change the allocation of tasks among members or the time use of members? g. Will the project change any person's access to consumption goods (food, health care, education, etc.) which affect welfare?		
B. Integrating Information from Existing Sources		1-6 weeks
5. Published and unpublished literature is reviewed to fill in missing information on projects' or policies' effect on individuals		
6. Literature review is used to identify people who have worked in the area of the proposed project or policy		
7. These people are contacted for the information they can provide. Additional written information and personal contacts may be identified		
8. The written model for project effects on individuals is updated, and the remaining areas of missing information are identified	*Updated written specification of model of expected effects *Updated written indication of missing information.	
C. Planning for Field Work		1-2 weeks
9. These are used to prepare a set of topic guidelines* (questions appropriate to direct observation and to different categories of informants) to be followed during on-site data collection.	*Topic Guides *Data collection plan	

* See Scrimshaw & Hurtado (1986) for a thorough discussion of methods.

TABLE II (Continued)

<u>Steps</u>	<u>Outputs</u>	<u>Approximate Time Required</u>
D. Preparations are Made For On-Site Data Collection		1 month
10. Geographic area(s) for on-site data collection are identified; government and agency concurrence obtained if necessary	*List of geographic areas for data collection, with reasons for selection	
11. Identify skill areas required for data collection; identify person or team to conduct the field work	*List of people, qualifications and availability	
12. Identify persons in-country who may help with data collection effort.		
13. Select team; prepare contracts; deploy in field	*Administrative paperwork required to field team	
<hr/>		
E. Field work		1-2 weeks
14. Contact with local sources of information		
14.1. Team visits knowledgeable social scientists, program administrators, government officials to obtain opinions and information required to complete intrahousehold analysis of proposed project. Hiring of additional team members.		
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15. Field Data Collection		minimum 4 weeks in most cases
15.1. Team travels to area of proposed project (Repeated in several areas if appropriate to nature of project). Hiring of local assistants.		
15.2. Data collected using topic guides, updated as needed.		
a. Direct observation of representative sample of households, schools, clinics, markets, shops, or other locations as appropriate to the proposed project or policy. Observations used to obtain data and to verify the accuracy of verbal reports.		

TABLE II (continued)

<u>Steps</u>	<u>Outputs</u>	<u>Approximate Time Required</u>
b. Informal interviews with local informants chosen to represent varying perspectives and points of views c. Focus groups of local population conducted as appropriate d. Model of project is updated and remaining knowledge gaps identified	*Updated written specification of model of expected project or policy effects.	
16. Survey Research		minimum 2-4 additional week most cases
16.1. If necessary, a small scale household survey may be undertaken, using the results of the previous data collection effects as a basis for designing a survey instrument.		
17. Integration of Data Into Project Plan		1-3 weeks
17.1. Proposed project or policy plan is reviewed and elaborated or modified as needed.		
17.2. Completed model of expected effects is prepared.	*Completed written model of predicted effects *Project or policy implementation plan	
17.3. A plan for the timing and date requirements for monitoring of the intrahousehold effects of the project is developed	*Written project monitoring plan	

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