



**Assessing the Impact of
Microenterprise Services (AIMS)**

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**HOUSEHOLD ECONOMIC
PORTFOLIOS**

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TABLE OF CONTENTS

FOREWORDv

ACKNOWLEDGMENTSvi

EXECUTIVE SUMMARYvii

HOUSEHOLD ECONOMIC PORTFOLIOS1

- I. INTRODUCTION1
 - A. Purpose1
 - B. Organization of the Study2

- II. REVIEW OF LITERATURE3
 - A. Analyses of the Household3
 - 1. Definition and Composition4
 - 2. External Linkages6
 - 3. Internal Structure and Dynamics7
 - B. Economic Models of Household Decision Making12
 - 1. Household Level Analysis12
 - 2. Intrahousehold Level Analysis17
 - C. Risk and Coping Response Models19
 - 1. Models of Risk19
 - 2. Models of Coping Strategies20

- III. MODEL OF THE HOUSEHOLD ECONOMIC PORTFOLIO23
 - A. Conceptual Model23
 - B. Internal Structure and Dynamics: The Portfolio System26
 - C. Applications of the Household Economic Portfolio Model28
 - 1. Typology of Households28
 - 2. The Role of Credit29
 - 3. Intrahousehold Analysis29
 - 4. Analysis of Risk30

- IV. IMPLICATIONS FOR AIMS PROJECT33
 - A. Recommended Hypotheses33
 - B. Implications for Field Focused Research35
 - C. Implications for Core Impact Assessments37

BIBLIOGRAPHY39

FOREWORD

The Assessing the Impact of Microenterprises (AIMS) Project seeks to gain a better understanding of the processes by which microenterprise programs strengthen businesses and improve the welfare of microentrepreneurs and their households. In addition, it focuses on strengthening the ability of the U. S. Agency for International Development (USAID) and its partners to measure the results of their microenterprise programs. The project's core agenda includes desk studies, focused field research, three major impact assessments, and the development and testing of tools for use by private voluntary organizations and non-governmental organizations to track the impacts of their microenterprise programs. Further information about this USAID-funded project and its publications is available on the AIMS home page (<http://www.mip.org>).

This paper is one in a series of desk studies that addresses specific substantive and methodological issues. The studies are intended to inform the design and implementation of the focused field research, the three core impact assessments and the tools. Each core impact assessment will focus on a specific microenterprise program. Information will be obtained from program participants and a comparable group of non-participants in two main rounds of data collection, with a two year interval between the rounds. Complementary information will be gathered in qualitative interviews and from secondary sources. While this paper furthers the agenda of the AIMS Project, it is also intended to be of interest to others seeking to understand and document the impacts of microenterprise programs.

Carolyn Barnes
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EXECUTIVE SUMMARY

A. Purpose

Microenterprise program credit may be allocated by clients to their enterprises, or used for individual or households purposes. Due to the fungibility of credit, we need a conceptual approach, and a related methodological approach, which encompasses three levels of analysis: the individual, the enterprise, and the household. The approach must be flexible enough to accommodate the fact that the household may be engaged in more than one enterprise. The purpose of this paper is to review different approaches to analyzing the household and to present a conceptual model of the household economic portfolio that will facilitate analysis at all these levels. More specifically, the model is intended to inform the design of the USAID project on Assessing the Impacts of Microenterprise Services (AIMS).

B. Review of the Literature

Each discipline tends to approach the household on the discipline's own terms. Over the last two decades, reflecting a coming together of feminist analyses and mainstream economics and anthropology, there have been three major developments in the analysis of the household. The first, and most notable, has been a move away from models of the household which emphasize sharing, altruism, and cooperation to models which include the possibility of negotiation, bargaining and even conflict. The second major development has been a shift from viewing the household as a bounded unit towards stressing its permeability and its embeddedness in wider structures. This shift has been largely influenced and informed by anthropological analyses of the household as one of several social units that determine production, consumption, and investment decisions. A third major development has been the recognition of the enormous variability in household composition and structure both between and within societies as well as over time. A related issue is how the household is defined.

Reflecting this trend, formal economic models of household decision making have evolved the past two decades. The first major development was the integration of the previously separate production and consumption models into a single model of the household as both producer and consumer. This was followed by subsequent refinement of the integrated household model. The second major development was the disaggregation of the household model to reveal the role of individual preferences, resources, and bargaining power in intrahousehold decision making.

Also, empirical literature on coping strategies has grown rapidly during this period. There are two types of conceptual models inherent in this literature: models of risk per se, and models of responses to risks. The paper focuses primarily on risks associated with the source of livelihood, of income, or (simply) of food. Risk is an important determinant of whether households diversify their sources of livelihood, what economic activities they undertake, what social relationships they negotiate, how they manage their assets, and whether they enter into and can recover from debt.

C. Proposed Model

The model of the household economic portfolio proposed in this paper builds on the three key developments in the analysis of households by economists, anthropologists, and feminist scholars. That is, it recognizes that there may be negotiation, bargaining, and (even) conflict within the household; it presents the household as a permeable unit, rather than a bounded unit, which is embedded in wider social units, networks, and processes; and, it recognizes that there is enormous variability in household composition, structure, and functions both between and within societies and over time.

More specifically, the model distinguishes several cross-cutting divisions within the household, including market versus nonmarket spheres of production and male versus female domains of resources, activities, and power (as well as other socially defined hierarchies). Further, the model assumes that household decisions and activities regarding production, consumption, and investment are affected by the interplay of several levels of organization: the individual, intrahousehold relationships, the household as a whole, and suprahousehold groups and networks. And, finally, the model recognizes that there is a continuum of possible intrahousehold arrangements, including pooled-to-nonpooled income, joint-to-separate preferences, cooperative-to-conflictual bargaining, and joint-to-separate allocation of time and resources.

Recognizing these complexities, the household portfolio model represents household behavior as a circular flow between various household resources and activities and across various household domains and constituent groups. Under this model, the resources of the household are allocated to the various household activities by individual household members acting jointly or separately. And the activities of the household - consumption, production, and investment - act to satisfy shared or competing current needs of the household members and return resources to the household (or to individual members) for use in future periods. Because credit is one important type of microenterprise service, the model is designed to track the use of credit by the household. In tracking the use of credit, we assume that credit is fungible and that it may be allocated to a number of uses.

D. Implications for the AIMS Project

The paper concludes with the implications from the literature review and the proposed model of the household economic portfolio for the design of the AIMS core impact assessments. Hypotheses are recommended which center on changes in the set of household activities and in the flow from activities to resources and on changes at the individual level.

HOUSEHOLD ECONOMIC PORTFOLIOS

I. INTRODUCTION

A. Purpose

There are three basic approaches to assessing the impacts of microenterprise services. The first approach focuses on the targeted enterprise to the neglect of the household in which the client-entrepreneur lives. Some studies based on this approach have yielded unexpectedly low impact results. A common explanation for the low levels of measured impact is that the credit (the most common microenterprise service) is believed to have been diverted away from the targeted enterprise. Given the possibility that credit (or other services) may be allocated to other purposes within the household, a second approach focuses on the client household. However, studies based on this approach often neglect the targeted enterprise, as well as other enterprises in the household to which the credit or services may have been allocated. A third approach focuses on the client to the neglect of both the household and its enterprises.

Due to the fungibility of credit, we need a conceptual approach, and a related methodological approach, which encompasses all three levels of analysis: the individual, the enterprise, and the household. The approach must be flexible enough to accommodate the fact that the household may be engaged in more than one enterprise. The purpose of this paper is to review different approaches to analyzing the household and to present a conceptual model of the household economic portfolio that will facilitate analysis at all these levels. More specifically, the model is intended to inform the design of the USAID project on Assessing the Impacts of Microenterprise Services (AIMS).

The model of the household economic portfolio proposed in this paper builds on three key developments in the analysis of households by economists, anthropologists, and feminist scholars. First, it recognizes that there may be negotiation, bargaining, and (even) conflict within the household. Second, it presents the household as a permeable unit, rather than a bounded unit, which is embedded in wider social units, networks, and processes. And, third, it recognizes that there is enormous variability in household composition, structure, and functions both between and within societies and over time.

More specifically, the model distinguishes several cross-cutting divisions within the household, including market versus nonmarket spheres of production and male versus female domains of resources, activities, and power (as well as other socially defined hierarchies). Further, the model assumes that household decisions and activities regarding production, consumption, and investment are affected by the interplay of several levels of organization: the individual, intrahousehold relationships, the household as a whole, and suprahousehold groups and networks. And, finally, the model recognizes that there is a continuum of possible intrahousehold arrangements, including pooled-to-nonpooled income, joint-to-separate preferences, cooperative-to-conflictual bargaining, and joint-to-separate allocation of time and resources.

Recognizing these complexities, the household portfolio model represents household behavior as a circular flow between various household resources and activities and across various household domains and constituent groups. Under this model, the resources of the household are allocated to the various household activities by individual household members acting jointly or separately. And the activities of the household - consumption, production, and investment - act to satisfy shared or competing current needs of the household members and return resources to the household (or to individual members) for use in future periods. Because credit is one important type of microenterprise service, the model is designed to track the use of credit by the household. In tracking the use of credit, we assume that credit is fungible and that it may be allocated to a number of uses.

The household portfolio model is premised on the fact that individuals within the household have one or more socially ascribed identities: notably gender but also seniority, marital status, parental status, and others. And that individuals or categories of individuals within the household may have separate (even competing) preferences, interests, needs, resources, and constraints and may, therefore, take separate (even competing) decisions and actions. For instance, men and women within the same household may engage in different enterprises; may engage in joint enterprises; or may share resources and income across separate enterprises. Depending on the pattern they follow within a given household, men and women can be expected to respond differently to microenterprise services. The model allows for the systematic investigation of the implications of socially defined divisions within the household.

The model can also be used to classify or stratify different types of households. One way would be to classify households according to their resource base: that is, in terms of their relative wealth. Another way would be to classify households according to their mix of economic activities: that is, according to their portfolio mix. A third way would be to classify households according to their objectives. In this paper, we propose a continuum of household objectives: from survival to security to upward mobility. Given its various applications, the model can be used as a tool in the design, targeting, and implementation, as well as the evaluation of microenterprise services.

B. Organization of the Study

Following this introduction, this paper is organized into three main parts. Section two is a review of the economic, anthropological, and feminist literature on the household: beginning with a review of the major developments in and key dimensions of household analyses; followed by a summary of the formal economic models; and ending with a review of the empirical studies of risk and coping strategies. Section three presents the conceptual model of the household economic portfolio: we specify how it operates at both the aggregate household level and the disaggregated intrahousehold level. And sections four draws out the implications of the review and model for studying the impact of microenterprise services on household economic portfolios, including key hypotheses, variables, and methods suggested by the review and the model.

II. REVIEW OF LITERATURE

A. Analyses of the Household

The analysis of the household - and the conceptual and empirical difficulties inherent in defining the structure and functions of the household - are areas of concern in all the social sciences. However, each discipline approaches the household on the discipline's own terms. Anthropologists have looked at the household largely through the wider lens of family, marriage, and kinship and have been primarily concerned with defining the relationship between the family and the household. Economists came to an analysis of the household from their earlier focus on the individual (as consumer) and the firm (as producer) to the neglect of the family and have been concerned primarily with defining the household in relation to production and consumption. Feminist scholars in both disciplines look at the household through the additional lens of gender: that is, through the socially-defined and ascribed roles and relationships of men and women.

Over the last two decades, reflecting a coming together of feminist analyses and mainstream economics and anthropology, there have been three major developments in the analysis of the household. The first, and most notable, has been a move away from models of the household which emphasize sharing, altruism, and cooperation to models which include the possibility of negotiation, bargaining, and (even) conflict. This shift has been largely influenced and informed by feminist analyses of household structures which have conceptualized households "as the site of women's oppression and as the locus of conflicts of interest between women and men" (Moore 1994, 87). The net result is "the emergence of a view of the household which sees it as a locus of competing interests, rights, obligations and resources, where household members are often involved in bargaining, negotiation and possibly even conflict" (Ibid.).

The second major development in the study of the household has been "a shift from the analysis of the household as a bounded unit towards a view which stresses its permeability" (Moore 1994, 86) and its embeddedness within wider structures (Guyer and Peters 1987). This shift has been largely influenced and informed by anthropological analyses of the household as one of several social units that determine production, consumption, and investment decisions. The proponents of this view stress that the internal structures and workings of the household "both produce and are produced by larger-scale cultural, economic and political processes" (Moore 1994, 86).

A third major development has been the recognition of the enormous variability in household composition and structure both between and within societies as well as over time. A related issue, of course, is the whole question of how the household is defined. Given their concern about the relationship of the family and the household, anthropologists have taken the lead in defining what actually constitutes a household: they have considered whether the

¹ The conjugal family is a group consisting of a man, a woman and their children. It is also called the elementary or nuclear family.

household should be defined as a family or kinship unit (e.g., the conjugal family)¹ or as those who share a common residence or as those who share a joint function such as consumption, production, investment or ownership. In regard to the latter definition, anthropologists have pointed out that the different functions do not necessarily coincide: that the unit which shares food from a common hearth and the unit which jointly owns the ancestral estate and the unit which jointly cultivates the ancestral land may not be one and the same.

Clearly, the household is an important but complex unit of analysis which is defined and analyzed in different ways. What follows is a brief review of the anthropological and economic literature on the household, including feminist literature from both disciplines.² We will begin with a summary of what the anthropological and feminist literature - as well as the empirical economic literature - have to say about the composition and structure of households, the external relations of households, and the internal working of households. We will then present a summary of the formal economic models of household behavior. It is important to note at the outset that, compared to anthropologists, economists are relatively silent on the definition or composition of the household but have developed more formal models of household behavior. Given their formality, it is relatively easy in the economic models to trace the shift from the aggregate, or unitary, view of the household to the disaggregate, or nonunitary, view of intrahousehold decision making.³

But before we go into the review of the literature on households, a few words are in order about the contributions of feminist scholars (and other heterodox scholars) in both disciplines. To begin with, they have generated and presented the first systematic empirical evidence not only of economic conflict and inequality within the household (Harris 1981; Mackintosh 1979; Barrett 1980; Whitehead 1981) but also of gender differences in the allocation of time, resources, and power within the household. Building on these empirical findings, feminist scholars posed the first systematic challenge against unitary models of the household which arbitrarily aggregate individual members of the household (and their individual preferences, interests, and resources). Further, feminists have noted that socially-defined differences (such as seniority, age, marital status as well as gender) within the household may give rise not only to conflict but also to alternative arrangements within the household.

1. Definition and Composition

In this review of the literature on the household, we must first ask: what is meant by **A**the household@? As noted earlier, economists are relatively silent on the whole issue of the composition and structure of the household and focus, instead, on the activities and behavior of

¹ The conjugal family is a group consisting of a man, a woman and their children. It is also called the elementary or nuclear family.

² Of course, other social sciences have been concerned with an analysis of the household; these social sciences include geography, sociology, demography, political science, and history.

³ Since anthropologists tend to avoid generally applicable models in favor of culturally-specific models, it is more difficult to trace this shift within anthropology.

the household, whereas anthropologists have long studied and debated what is actually meant by the household. Given their interest in the relationship between the family and the household, many anthropologists draw a distinction between the household as a unit and the family, co-resident dwelling groups, and kinship groups. They contend that, whereas the household may encompass these units, or be structured along their lines, it should not be identified with them (Martin and Beittel 1987).

Turning to the economist's interest in the activities and behavior of the household, anthropologists are quick to point out that a functional definition of the household is complicated by the fact that the household can be defined by different functions which do not necessarily coincide: collective production, consumption, investment, or ownership. In this regard, many anthropologists favor defining the household as the unit of consumption: as a unit which organizes the consumption of a collective fund of material goods. So defined, the household is sometimes called the hearth-hold in that all the members of the household are seen to share food from a common hearth.⁴

In brief, the anthropologists contend that there is no necessary relation between the household and the family (nuclear or extended) or the co-residence group or between units of collective production, consumption, investment, and ownership. These basic distinctions have several implications for our understanding of the household as an economic portfolio. In terms of our understanding the relationship between family and household, it is important to note that there are three basic systems of household formation: joint, stem, and nuclear. Under the joint system, all sons bring their brides to the father's house. Under the stem system, only one son remains in the household and brings in his wife (Goody 1996). And, under the nuclear system, all sons establish separate households upon marriage.

However defined or formed, the household often encompasses one or more conjugal units. But, to complicate matters further still, feminist scholars have called into question the universality and stability of the conjugal unit. They have found, that even in those regions and social groups where marriage is near universal, women may spend a considerable portion of their lives without a spouse in residence. For example, in some West African countries, women spend from one-third to one-half of their reproductive years without a spouse in residence (Bruce, Lloyd, and Leonard 1995). Furthermore, in many countries, the number of families and households supported by women is increasing.⁵

In terms of the relationship between different functional units, several points need to be kept in mind. First, we need to specify which unit we are defining as the household: the unit of

⁴ It should be noted that there is the possibility that those who share a kitchen or (even) a hearth may not share food (Goody 1996). For the desirability yet difficulty of defining the household as a consumption unit, see Goody (1996, 4).

⁵ For example, from the 1970s to the 1980s, the proportion of households headed by women rose from 11.5% to 17.3% in Morocco, 12.5% to 21.6% in Thailand, 20.7% to 26.1% in the Dominican Republic, and 14.7% to 19.5% in Peru (Report by K. Ono, United Nations, as cited in Bruce, Lloyd, and Leonard 1995)

production, consumption, investment, ownership, or residence. Second, we need to recognize that the composition of the household is likely to vary with the definition chosen. For instance, the household defined as those who jointly own ancestral property - as a unit of ownership - may well include more than one conjugal unit or none at all (e.g., only a number of male kin). Third, having chosen a particular unit to define the household, we need to analyze household behavior in relationship to those individuals and functions not encompassed in that unit.

Another contribution of anthropologists, an outcome of their study of the process of household formation and dissolution, is their emphasis on variations in household structure. Given their bias towards detailed empiricism, anthropologists recognize that even within given communities there may be different structures or types of households (polygamous, monogamous, female-headed, nuclear, extended) which emerge as responses to the local ecology and economy, differences in asset holding, stages in the developmental life cycle of the household, or population movements. And that different household structures are likely to operate from different resource bases and face different incentives and constraints.

2. External Linkages

In regard to the wider environment of the household, economists focus on the relationship between the household and markets for land, labor, and credit, whereas anthropologists focus on the relationship between the household and wider social groups. They have highlighted the role of suprahousehold levels of organization including both social groups (such as extended family units and kin groups) as well as social networks (such as those who share a trade or share in production). For example, feminist anthropologist Pauline Peters has written about multihousehold livestock herds in Botswana (Peters 1994).

In recognizing that individuals or households may belong to other wider corporate social groups, anthropologists also recognize that these relationships may carry with them patterns of access to resources and obligations which affect individual and household choices. It is this patterning which is referred to by the term Asuprahousehold. These wider levels of social organization are seen to determine - as well as be determined by - household and individual behavior. This interplay of individual, household, and suprahousehold levels of organization has implications for how household income and investment decisions - how overall household economic behavior - should be assessed and analyzed.

But how do anthropologists define or conceptualize the wider social system in which households are embedded? To paraphrase Jane Guyer, a feminist anthropologist, the social system includes a set of social institutions, each represented by a complicated system of rights, duties, sanctions, and consequences (Guyer 1981). So defined, the social system is seen to define the composition, structure, and function of the household, to condition dynamics within the household, and to mediate between the household and its wider environment. So defined, the social system is seen to determine factors that are considered endogenous to the household (i.e., gender roles and relationships) as well as factors which are considered exogenous to the household (i.e., social mechanisms for labor mobilization). In terms of gender relations within the household, this view of the social system goes well beyond cultural designations of men's and

women's work to incorporate gender differences in legal rights or access to markets.

In analyzing the wider social system, anthropologists point out that social and cultural, not just economic, principles govern the social system as a whole and its constituent units (including the household). In response to the economist's focus on economic rationality, anthropologists have highlighted the importance of nonmarket processes and noneconomic principles. They point out that peasant households, for instance, are always engaged simultaneously in market and nonmarket relationships and employ both market and nonmarket modes of mobilizing resources (Jones and Peters n.d.). That peasant households often apply social principles and mechanisms for recruiting and mobilizing labor which have little to do with the size, skills, or flexibility of the labor pool. In some communities, for instance, kin prefer to (or are obliged to) recruit kin whether or not they are the most qualified for the job.

3. Internal Structure and Dynamics

Internal divisions. In some of the formal economic models, as we will see, a division is made between commodity and noncommodity sectors within the household: that is, between the production of market and consumption goods. Anthropologists and feminists have added another cross-cutting division within the household: between individual members of the household, notably between men and women. Depending on the social and economic context, men and women are seen to engage in separate or joint economic activities (or some mix thereof) and to move in and out of the commodity and noncommodity sectors to varying degrees. These divisions within the household - commodity and noncommodity, male and female - interact in different ways to help generate income as well as smooth consumption. Without paying attention to these important divisions within the domestic economy, many anthropologists contend, neither "accuracy in data collection nor confidence in interpretation" can be approached (Guyer 1988, 157).

In this regard, it should be noted that anthropologists and feminist scholars have highlighted several socially-defined categories or identities in addition to gender (such as seniority, age, marital status) which cross-cut and divide the household. Individuals are seen as belonging to one or more these constituent categories: that is, they may be men or women, adults or children, senior wives or junior wives, relatives or nonrelatives. Such categories frequently carry with them assemblages of rights and responsibilities, defined by law or expectation, which govern individual access to and use of resources as much or more than membership *per se* in the household.

In an article entitled "Dynamic Approaches to Budgeting", Jane Guyer draws out the theoretical and methodological implications of conceptualizing the household in terms of these internal divisions as well as the external linkages noted earlier:

"The implications for conceptualizing household structure in terms of internal segmentation into constituent groups is that the lower-level units are not, in fact, entirely enclosed within the larger unit; they are linked to external units as well. The assumption that the domestic group is a tightly functional unit of the kind put forward in Becker's

recent theoretical work (1981) is untenable, even at the straightforwardly descriptive level. It matters who gains control of the output because men and women have different spending preferences, not necessarily because they hold different values but because they are in structurally different situations...On the other hand, it is equally untenable to claim that male and female expenditure patterns do not interrelate at all...The definitional problems, phrased in either-or terms, defy resolution.

"On methodological grounds alone a strong case could be made for treating both income and expenditure as individually controlled, leaving the specific structures and levels of transfer as an empirical question. But this also constitutes a more powerful set of assumptions when the theoretical focus is shifted from structures to processes of change. Male and female, commodity and noncommodity sectors have interrelated in different ways over the past century. The noncommodity sector has always been both a source of accumulation and a buffer for fluctuations in the commodity economy. Family forms of insurance and support, which often depend crucially on female resources, have been counted on to pick up some of the costs of economic changes...Women have shifted their activities into the market in response to changing constraints and possibilities. In the process both men and women have redefined their rights and obligations toward one another and their wider social networks. When it comes to tracing the implications of patterns of household income and expenditure, neither production nor welfare can be understood without attention to the shifting interrelationship of gender-specific decisions" (Guyer 1988, 160-161).

Allocation of resources. Feminist scholars have long recognized that a household is not an undifferentiated grouping of people with shared and equal access to resources for and benefits from production. Rather, households are themselves systems of resource allocation. Individual members are assumed to share some goals, benefits and resources; to take independent positions on some; and to be in conflict over others. And anthropologists, as noted earlier, have long recognized that households as well as their individual members belong to other groups through which they may gain access to productive resources or benefits and to which they may have obligations.

From the combined anthropological and feminist perspective, the household economy often depends not only on a number of activities, by different members of the household, but also on multiple alliances within and beyond the households. And household decisions and behavior are affected by the interplay of the different roles and relationships of individual members at different levels of social organization. Clearly, this understanding complicates the picture of how the household actually functions in terms of income, production, and investment decisions.

In general, it has been easier for both anthropologists and economists to accept the possibility of independent and complementary earning than to accept the possibility of independent and autonomous spending. But anthropologists have been more likely than economists to follow the lead of feminist scholars in recognizing the reality of autonomous spending patterns, the fact that individual income is not necessarily pooled, and the fact that household expenditure patterns are affected by who in the household earns the income. In regard

to whether or not income is pooled, there is widespread empirical evidence that men often spend some of their income on goods for their own personal consumption (alcohol, cigarettes, status consumer goods, sexual favors) whereas women usually pool all of their income (often, thereby, losing control over its expenditure).

In regard to the allocation of pooled income, there is widespread evidence that women often control only part of their own earned income and even less of the pooled income. But that when women (rather than men) control income, the budget share of food is higher while the budget share of alcohol and cigarettes is lower (Hoddinott and Haddad 1994) and, as a result, the effect on child survival probabilities is almost 20 times greater (Thomas 1991). Further, that when women (rather than men) control income, the allocation of resources tends to be more egalitarian. To illustrate, a study in Nepal found that when the male head of household was absent, food was allocated in a more egalitarian manner (Gittlesohn 1992). The evidence that women often display greater altruism, particularly in relation to children, has given rise to the twin notions of *Good mommies* and *Bad daddies* (Folbre 1992).

Incomplete income pooling has implications for household resource allocation, in terms of both labor and expenditure decisions. In making labor allocation decisions, individuals may place a premium on those activities that afford them independent income, even if those activities are not the most highly remunerated activity from the perspective of the household as a whole. As regards expenditure decisions, individuals may not have access to the aggregate income of all household members, but only to their individual earnings net of any transfers to and from other participants in the household.⁶ Analyzing incentive structures within the household helps to explain the abundant evidence of women's search for and protection of independent income sources as well as their preferences for allocating their labor to activities where they control the product, for example, to dairy processing for household consumption and sale rather than to the unpaid work in the household cereal field that is under the husband's control.

In terms of intrahousehold functioning, feminists have noted that socially defined differences within the household may give rise not only to conflict but also to alternative arrangements regarding resources, income, and investments. To illustrate this point, feminist scholars have shown that income pooling arrangements can involve from, at one extreme, a generalized combining of income and assets for an unspecified time period to, at the other extreme, merging limited economic resources for specific expenditures within a limited time frame (Fapohunda 1988). In this continuum of possible arrangements, the household with a unified budget is just one of several possibilities: it represents a special case and not a generalized model. Contributing to the likelihood of a continuum of arrangements is the fact that the household is only one of several key social units that channel the income and expenditure flows of individual members.

One final note on the allocation of resources: more precisely, on the allocation of time.

⁶ For similar concepts in economics, refer to Katz 1992.

Under the gender division of labor in most societies, men and women have distinctive work roles and routines. There are certain observed uniformities in the sexual division of labor: most notably, that women often do work that is compatible - does not conflict - with their responsibility of taking care of children; that men often do work that is seen to be too heavy or too technical for women; and that women work longer hours than men (if one counts both market and nonmarket work).

Bargaining power and decision making. Given their focus on inequalities within households, feminist scholars posed the first systematic challenge against unitary models of the household which arbitrarily aggregate individual members of the household (and their individual preferences, interests, and resources) (Folbre 1988). In contrast to the unitary models of the household, feminist analyses see individual members of households as having separate (if not competing) preferences, interests, and resources which in turn, give rise to separate (if not competing) decisions and actions. In taking separate or joint decisions, feminist scholars contend, individual household members are often involved in bargaining, negotiation, and possibly even conflict (Moore 1994).

Feminist and other heterodox scholars have put forward a number of models for the analysis of households based on the assumption that household members bargain and negotiate (Folbre 1984, 1988; Fapohunda 1988; Sen 1987). In these models, questions of power and ideology become prominent (Hart 1993). The focus on power is a response to the recognition that the outcome of bargaining and negotiation between household members is a question of relative power. And the focus on ideology is a response to the recognition that the bargaining power of individuals cannot be defined simply with reference to economic factors, such as access to resources.

In game theory, the bargaining power of individuals is seen to depend largely on their fall back (or breakdown) position and their ability to threaten other people (their threat point). The fall back positions or threat points of individuals are often defined in terms of individual market earnings or assets. However, some scholars have argued that the bargaining power of individuals cannot be defined purely with reference to individual assets. The economist Amartya Sen has argued that bargaining power is partly determined by the perceived economic contribution of individuals (by others) and the perceived self-interest and self-worth (of individuals themselves) (Sen 1987). And the economist Nancy Folbre argues that bargaining power is significantly affected by socially-defined differences between individuals. Folbre calls for "political economic analysis of structures of inequality" within the household: more specifically, she calls for analysis "of structural factors that place women and children in different social and economic (rather than merely biological) positions from adult men" (Folbre 1988, 256-257). In the Folbre analysis, "gender and age inequalities become analogous, though by no means identical, to class

⁷ In response to the formal bargaining models (e.g. Nash) that treat differences in threat points - in access to individual assets - as "externally given", Folbre contends that differences in threat points are "internally given": that is, affected by cultural and political implications of membership in certain demographic groups (Folbre 1988, 256-7).

differences" (Ibid., 257).⁷

In regard to perceived contribution or value of individual household members, some anthropologists -- cultural anthropologists in particular -- are quick to point out that there are forms of valuation other than economic such as social or religious valuation. For example, in societies where the elderly are revered or deferred to they may receive special favor although they are not perceived as significant economic contributors. While Nancy Folbre - returning to Sen's focus on the perceived economic contribution of individuals - points out that there are "rotten kids" who do not revere their parents and will not support their parents unless they are seen to contribute economically or unless they withhold property with which to bargain (Folbre 1992).

As part of these debates, anthropologists, feminists, and institutional economists have long argued that wider legal and institutional factors also determine which individuals can claim what resources and how household resources are distributed. For example, in many developing countries, customary law and practice restrict women's rights to land. Therefore, changes in women's effective land rights could have greater impact on women's bargaining power than, as most neoclassical economists would contend, changes in the relative earnings of men and women.

Feminist and other heterodox scholars make a related, equally significant point: namely, that the principles which guide household decision-making are not equivalent to the principles of economic rationality (Martin and Beittel 1987). As we noted earlier, they describe social mechanisms for resource allocation which are based on principles of reciprocity or redistribution and are, therefore, quite distinct from market mechanisms based on principles of economic rationality.

One final note regarding the decision-making process. Anthropologists have shown that decision-making results from a variety of interactions between household members: of varying degrees of formality and informality, including suggestions, expectations, and disagreements. Often in taking a (so called) decision, individuals - conditioned by prevailing social norms or rules - will not exert their individual taste, preference, or interest but simply reaffirm what they think will meet with social approval (Gittlesohn 1992). Indeed, anthropologists contend that the appropriate roles and relationships ascribed to individuals by reason of their gender, seniority, marital status, or other socially defined characteristics are significant determinants of which individuals take what decisions, and why.

Production, consumption, and reproduction. Anthropologists and feminists complicate the specification and analysis of production and consumption in at least three ways. First, as noted earlier, they show that in certain societies the unit of production, consumption, and investment may not be the same (Guyer and Peters 1987). Second, they provide empirical evidence that men

⁷ In response to the formal bargaining models (e.g. Nash) that treat differences in threat points - in access to individual assets - as "externally given", Folbre contends that differences in threat points are "internally given": that is, affected by cultural and political implications of membership in certain demographic groups (Folbre 1988, 256-7).

and women may produce separately or jointly and that men and women may move in and out of the commodity and noncommodity sectors to different degrees. Third, they highlight that subsistence production in agrarian societies covers a wider range of human activity than unpaid household work in capitalist countries. For example, the unpaid family labor used on farms and time spent on food, fuel, and water collection are critical components for household analysis. And finally, they highlight the reproductive sector as a productive sector in which home-produced goods as well as future labor are produced.

More fundamentally, some anthropologists have critiqued the emphasis on a distinction between production and consumption decisions and activities. They argue that the distinction tends to place consumption as an outcome, hence secondary and after the fact. Whereas studies, especially in agrarian societies, show that consumption is the heart of production. For example, a farming family will make its production decisions or engage in its production tasks in reference to assessments of its consumption expectations (for food or other expenditures). To that extent, consumption then becomes as much a determinant of production activity as production outcomes are a determinant of the levels of consumption. Further, these anthropologists criticize the view of consumption only in terms of material goods or as basic needs. Their objection is that consumption so defined typically includes only food or cash for medicines but does not include expenditures on gifts, ceremonial and ritual activities, or a wide range of social investments which serve ultimately to (re)produce the social relations that make production possible (Douglas and Isherwood 1979).

In a similar vein, feminists have critiqued the distinction between production and reproduction. They argue that the distinction overvalues and overestimates production in relation to reproduction (Moore 1994). More specifically, it underestimates how the labor force is created, sustained, and reproduced. The feminists argue that we should "take into account what have been termed the relations of reproduction, and cease to think of these relations as being necessarily secondary to relations of production" (Ibid.).

One final note on the temporal dimension of production. Some anthropologists argue that the economists' perspective on time was developed largely within the context of higher income economies and modern (western) social structures where time is used by individuals who are engaged in one activity at a given time. The implicit concept of specialization in work is often not appropriate in rural settings which are characterized by marked seasonality and multiple, often overlapping, activities. In contrast, anthropological perspectives on time have been developed from observation of time allocation and careful inquiries about how members actually spend their time in specific contexts.

B. Economic Models of Household Decision Making

In this section, we review formal economic models of household and intrahousehold decision making. The purpose of this section is to describe the evolution of economic thought in building household models and to introduce the reader to the most influential developments in this evolution. The first major development was the integration of the previously separate production and consumption models into a single model of the household as both producer and consumer.

This was followed by subsequent refinement of the integrated household model. The second major development was the disaggregation of the household model to reveal the role of individual preferences, resources, and bargaining power in intrahousehold decision making.

1. Household Level Analysis

In summarizing the economic models of household decision making, there are two themes that emerge. First, the models differ in the extent to which they treat production and consumption decisions separately or simultaneously in an integrated model. As we shall see, the standard models of neoclassical microeconomic theory treat production and consumption separately. The Chayanov model represents an early effort to integrate household production and consumption. Becker's "new home economics" refines the neoclassical consumption model and provides the basic foundation for the household production model (Barnum and Squire 1979). The household production model is useful for understanding decision making relative to the household economic portfolio, since it can be used to integrate information on the production and consumption activities of the household.

The second theme that emerges is the importance of understanding market conditions and the relationship between the household and markets for land, labor, and credit. The models of household decision making presented here make different assumptions about market conditions, with some models assuming perfectly competitive, complete factor markets. Other models assume, or can be used to represent, markets that are imperfect, incomplete, or nonexistent. In addition, the models make different assumptions about the extent to which the household is integrated into product and factor markets. In constructing a model of household decision making and the household economic portfolio, we want the flexibility to incorporate market assumptions that are consistent with the actual conditions faced by the households in the study areas.

Neoclassical microeconomic theory. Neoclassical economic theory, which represents mainstream economic thought, recognizes two key units of analysis at the microeconomic level: consumers and firms. In neoclassical theory, however, consumers and firms are treated independently; all consumption activities are modeled in terms of the household (or individual consumer), while all production activities are modeled in terms of the firm. The complete separation of consumption from production is not especially useful for modeling the household economic portfolio, particularly in developing countries where most households engage in a mix of market and nonmarket production. On the other hand, the more useful, integrated models of the household economy rely heavily on many of the basic concepts and conclusions from these parallel neoclassical theories of the consumer and the firm.

The theory of consumption is based on the household (or individual) as the unit of analysis. The objective of the household is to maximize its utility, or level of satisfaction, by consuming the optimal combination of goods and leisure. The household is assumed to purchase everything it consumes, paying a given price for each good. The total amount that the household can consume is constrained by its income level, which is determined by the amount of labor time it sells at the going wage rate.⁸ The optimal combination of goods and leisure occurs where the contributions to household satisfaction (marginal utility) of each additional consumption item or

leisure time are the same.

The concept of a household utility function and the assumption that the household seeks to maximize its utility are critical contributions of neoclassical consumption theory. In fact, all of the economic models of household and intrahousehold decision making described below begin with the concept of household or individual utility and the assumption that the decision maker's objective is to maximize utility. However, neoclassical consumer theory lacks an explicit linkage to the household's production activities. In order to understand the role of microenterprises in household decision making and the household economic portfolio, we need to incorporate ideas from the neoclassical theory of the firm.

The theory of production is based on the firm as the unit of analysis. The firm seeks to maximize its profits⁹ by selecting the optimal levels and combinations of inputs and outputs. The physical relationship between inputs (otherwise known as factors of production) and outputs is represented by a production function. In the competitive model, the firm is assumed to pay a given price to purchase inputs and to receive a given price when selling its outputs. The amounts of inputs the firm can purchase and outputs it can sell are considered unlimited. Also, it is interesting to note that the standard model does not consider the firm to be capital constrained. The optimal combination of inputs and outputs occurs where the contribution to profit of each additional unit of an input is equal to the price of the input and the contribution to profit of each additional unit of output is the same.

There are several important concepts from neoclassical production theory that are useful in building a model of the household economic portfolio. First, production theory provides a framework for understanding how the household would (or should) allocate its resources to the various economic activities in order to maximize profits. The household's productive resources correspond to the inputs, or factors of production, in this theoretical framework. In addition, production theory provides the basis for clear conceptual definitions of technical, allocative, and economic efficiency. This provides us with a benchmark for the profit maximizing household and allows us to predict how the household might react to changes in prices or technology.

In the modification of a scheme originally proposed by Dillon and Hardaker (1980, 3-6), Ellis (1988, 41-42) describes seven principles underlying neoclassical production theory. Armed with these principles, we are well on our way to understanding the production- and profit-related aspects of microenterprise in the household economic portfolio. As listed by Ellis, the seven key principles of neoclassical production theory are 1) variable versus fixed resources; 2) diminishing marginal returns; 3) substitution between inputs; 4) enterprise choice; 5) the most limiting, or constraining, resource; 6) opportunity cost; and 7) comparative advantage.

⁸ Income from assets can be easily incorporated into the model.

⁹ Other possible objectives include output-constrained cost minimization and input-constrained output maximization.

The Chayanov model. The earliest model to integrate production and consumption decisions in the analysis of the peasant household was first proposed in the 1920s by A.V. Chayanov, a Russian agricultural economist (Thorner et al. 1966), and later developed by Mellor (1963), Sen (1966), Nakajima (1986), and others. In the Chayanov model, the household seeks to maximize its utility, where utility is derived from the consumption of goods produced on the farm, purchased goods, and leisure. By combining utility maximization from consumption theory with the production function from production theory, the Chayanov model provides a foundation for the integrated models of household decision making, including the farm household model discussed below.

The conclusions of the Chayanov model are linked to key assumptions regarding the interaction between the household and markets. Most notable among these assumptions are that the household lacks access to a wage labor market and that the household has unlimited access to land. These assumptions lead to a prominent feature of the Chayanov model, namely, the demographic cycle (or "life-cycle") hypothesis. Chayanov proposed a positive link between the household's level of work effort and the consumer to worker ratio (c/w) within the household. When the labor market assumption is relaxed, so that the household is assumed to have access to complete, perfectly competitive wage labor markets, then the household's level of work effort is determined by the given wage rate. The Chayanov model demonstrates the importance of understanding the labor market conditions faced by our study populations.

The new home economics model. In a refinement of the neoclassical theory of consumption, Becker (1964, 1991) provides an alternative model of time allocation within the household. Utility is redefined in the Anew home economics model so that, rather than being based on purchased goods and services, the utility of the household is based on home produced commodities. The household members combine their time and human capital with purchased goods and services to create these home produced commodities, otherwise known as AZ-goods. In general, most items purchased by the household must be combined with household labor in order to contribute to utility levels. An example of a Z-good would be meals prepared at home, where the purchased groceries, fuel, and kitchen equipment are combined with the time and skill of the family member cooking the meals. The model is sometimes referred to as the Ahousehold production model, since it is based on the idea that households are the producers of Z-goods. It is important to recognize, however, that Z-goods are for home consumption only, and that the household gains income in this model solely through wage work.

Several features of the new home economics model are of particular interest. First, it clearly establishes the household, rather than the individual, as the unit of analysis. Second, it develops the theoretical concept of Z-goods, or goods that are produced for consumption by the household. Third, it provides a logical structure for exploring the links between utility maximization and the allocation of time to productive activities. More specifically, the model postulates that the time (or labor) of household members is allocated according to the opportunity cost of each member's time. Fourth, in putting a premium on family labor, it points to the significance of female and child labor. In our model of the household economic portfolio, we need to be able to represent the trade-offs involved in allocating time between the various income-generating activities as well as activities oriented toward household consumption. Finally,

we note that the new home economics model is based on the assumption of full access to wage labor markets. In this model, the values of wage work, home production, and leisure are all assigned an opportunity cost equal to the market wage rate.

The farm household model. A full model of the household as both producer and consumer is available in the farm household model proposed by Barnum and Squire (1979) and further developed in Singh, Squire, and Strauss (1986). While originally intended as a representation of the agricultural household, the farm household model can be usefully applied to nonagricultural households as well. The model can be used to represent a household that earns its income from some combination of wage work and enterprise(s). The total time available to household members is allocated between wage work, work on the enterprise(s), and leisure. The farm household model is based on the assumption that the household seeks to maximize its utility, where utility is derived from the consumption of home produced goods (C), purchased goods (M), and time spent in leisure (T_L):¹⁰

$$U = f (C, M, T_L) .$$

The household's efforts to maximize its utility are constrained by 1) the production function(s); 2) the total time available to the household; and 3) the availability of cash income. The production function(s) describes the input-output relationships in the household enterprise(s). It relates the level of output (Y) that can be produced for given levels of land (A), labor (L), and other variable inputs (V):

$$Y = f (A, L, V) .$$

The time constraint simply requires that the total time (T) available to the household for all of its activities be equated with the time allocated by household members to the enterprise(s) (T_E), net time allocated to wage work (T_W), and time allocated by household members to leisure (T_L):

$$T = T_E + T_W + T_L .$$

Note that the net time allocated to wage work (T_W) can be positive or negative. If the household is a net employer of wage labor, then T_W is positive, and the time available for leisure and enterprise work is increased. If the household is a net seller of wage labor, then T_W is a negative number, and the time available for leisure and enterprise work is decreased. Thus, the total amount of labor available for the production of Y is $T - T_L$. Finally, the income constraint requires that net household earnings should equal expenditures on market goods, where p is the price of enterprise output, w is the wage rate, r is the price of variable inputs, and s is the price of market goods:

¹⁰ The basic features of the farm household model are presented here. There are many specific modifications and refinements of this general model.

$$p(Y - C) - wT_w - rV = sM.$$

The important contribution of the farm household model is that it provides a theoretical framework for analyzing the interactions between the various activities of the household: production for the market, production for home consumption, wage work, and consumption of purchased goods. On the other hand, there are several sets of assumptions that underlie the general model and limit its applicability. These assumptions fall into three categories: 1) market assumptions; 2) altruism assumptions; and 3) certainty assumptions. Each of these sets of assumptions play an important role in shaping the conclusions that can be drawn.

The market assumptions of the farm household model portray the household as operating in fully working, complete factor and product markets. When these assumptions are maintained, the farm household model provides exactly the same predictions as the neoclassical production model with respect to the level of output that the household will produce in its enterprise(s). Under these conditions, the farm household model is said to be recursive: first, the level of production is determined (based on factor and product prices); then, the resulting profits influence the household's choices regarding consumption and labor supply. Recursivity, also known as separability, simplifies the empirical estimation of the model.

In our analysis of the household economic portfolio, there are several areas in which the standard market assumptions may not be appropriate. For example, assumptions about the wage labor market may break down if the members of the household face sporadic and limited employment opportunities; if there are qualitative differences between family and hired labor; or if men and women face different employment opportunities. It should be noted that, at least in rural areas, wage labor supply, as well as wage labor demand, is limited seasonally due to the crop cycle. In addition, if we include the production of Z-goods in our model of the household, the market assumptions break down due to the nonmarket nature of Z-goods. It is also worth noting that the farm household model assumes that the household has access to complete, competitive credit markets.

The altruism assumptions of the farm household model allow the interests of the different members of the household to be represented by a single utility function. The household is assumed to maximize this joint utility function, with each member altruistically subordinating his or her individual goals and preferences for the good of the entire household. Alternatively, the competing interests within the household are assumed to be reconciled by a benevolent dictator, who ensures that the household utility function reflects the overall good of the household. The criticisms of this assumption are well known (Folbre 1986), and there is mounting empirical evidence that refutes the altruism assumption.¹¹ In the following section, we will review economic models of intrahousehold decision making. The intrahousehold models widen the analysis to include differences in preferences and opportunities and the existence of conflicts and unequal

¹¹ Refer to the earlier section (II.A Analyses of the Household) for a discussion of gender differences in the allocation of income within the household.

power relationships within the household.

Finally, the farm household model does not incorporate the role of risk and uncertainty and its influence on household decision making. We know that households face several different types of risks. Depending on the household's level of economic security, the risk environment of the household may affect decisions related to microenterprises.¹² At the end of this literature review, we will return to this topic and briefly discuss risk and coping response models from economics and anthropology.

2. Intrahousehold Level Analysis

In recent years, there has been a growing literature on economic models of intrahousehold decision making (Haddad et al. 1996). The intrahousehold models depart from the household models= assumptions of joint household utility functions and altruism and replace them with conflict, bargaining, and unequal power relationships between the husband and wife. The social norms and external (institutional) conditions that influence intrahousehold interactions can be explicitly incorporated into these models.¹³ Unlike the aggregate household models, the intrahousehold models provide a theoretical framework for analyzing observed differences between men and women in time allocation, expenditure patterns, access to resources, and enterprise choice.

The following discussion organizes the intrahousehold models according to whether they assume that income is pooled or separate (nonpooled). The first group of models assume separate utility functions but pooled income. This means that there is a single budget constraint in the model and the household bargains to allocate expenditures from this pooled budget. The second group of models assume separate utility functions and separate budgets. In these nonpooled income models, the utilities of the husband and wife are linked through income transfers and the joint consumption of Z-goods.

Pooled income models. The pooled income intrahousehold models replace the joint utility function with separate utility functions for the male and female (Manser and Brown 1980; McElroy and Horney 1981; Lundberg and Pollak 1993). The pooled income models are also referred to as household bargaining models, since differences between the husband and wife are reconciled through cooperative or noncooperative bargaining. Each spouse attempts to maximize his or her utility function by choosing the best combination of purchased goods, Z-goods, and the allocation of labor between wage earning and Z-good production.

A basic assumption behind the household bargaining models is that men and women will only continue to participate in the marital arrangement so long as their utilities within the

¹² A separate AIMS Project paper (Dunn, Kalaitzandonakes and Valdivia 1996) explores in more detail the role of risk in microenterprise and household decision making.

¹³ Recall that in the farm household model, the only external variables to enter the analysis are market prices and wage rates.

arrangement exceed the utility levels they could obtain outside the arrangement. The level of utility that an individual could gain outside the marital arrangement represents his or her fall back position.¹⁴ The fall back position is generally assumed to be the utility that each spouse could obtain after divorce or separation. However, Lundberg and Pollak (1993) define the fall back position as a kind of stalemate in which the husband and wife cease to cooperate and there is a drop in the provision of Z-goods.

A major contribution of the household bargaining models is that they provide a formal framework for incorporating the role and consequences of power into economic models of household decision making.¹⁵ Differences in the bargaining power of the marriage partners are associated with differences in their fall back positions. The fall back positions are influenced by economic and noneconomic factors reflecting the opportunities that exist outside of marriage. Examples of variables that affect the fall back positions include conditions in the labor market, conditions in marriage markets, rules governing property rights, laws governing divorce, and physical, financial, and human capital assets held by the individual marriage partners. Within this context, a possible impact of microenterprise services might be to alter one or both partners' fall back positions, thus changing the partners' relative bargaining power.

Nonpooled income models. In a refinement of the household bargaining models, the nonpooled income models maintain the assumption of separate utility functions while adding to it an assumption that the husband and wife have separate (nonpooled) income. In the general collective bargaining model (Chiappori 1992), the husband and wife each choose their own consumption and labor supply by maximizing separate utility functions. Income transfers between the spouses= separate subeconomies are made on the basis of an income sharing rule.

The conjugal contracts model (Carter and Katz 1996) expands the possibility for interaction between the gender-specific spheres of economic activity and resource allocation. In addition to income transfers, the husband and wife also collaborate on the production of Z-goods. In the conjugal contracts model, bargaining power is reflected in both the exit option as well as A voice@, or the degree to which the partners can influence the size of the income transfer. As in the pooled income models, exogenous changes in economic or social conditions can affect intrahousehold resource allocation by changing the bargaining relationships between the marriage partners.

Two other related models, the reciprocal claims model (Katz 1992) and the separate spheres model (Lundberg and Pollak 1992), depict the household as a site of largely separate gender-specific Aeconomies@ linked by reciprocal claims on members' income, land, goods, and labor. Under the reciprocal claims model, individuals may cooperate in determining optimal levels of income transfers but often fail to cooperate in determining optimal levels of resource allocation.

¹⁴ In the language of game theory, which provides the foundation for these models, the fall back position corresponds to the *status quo* point, or the outcome that would obtain in the absence of an agreement.

¹⁵ For a discussion of the incorporation of the language of power into intrahousehold models, see Pollak (1994).

This noncooperative equilibrium, what Lundberg and Pollak call the "noncooperative standoff", is assumed to be largely influenced by the complementarity or substitutability among gender-specific purchased and home-produced goods. "For example, when the man provides a subsistence crop and the woman transforms it into family meals, the couple's Z-goods are clearly complementary. On the other hand, if both the man and the woman also have the option of purchasing the services of each other on the market, an element of the woman's purchased goods can serve as a substitute for the man's Z-good, and vice versa" (Katz 1992, 42). Under both models, each spouse makes decisions within his or her own sphere, optimizing as best they can subject to the constraint of their individual resources (Lundberg and Pollak 1992, 36). By delinking a wife's budget from that of her husband, a woman is seen as being able to respond to changes in her husband's allocation of his labor according to her own needs, and vice versa (Katz 1992).

These models have an advantage over others in capturing what Amartya Sen refers to in his cooperative conflict model as "the coexistence of extensive conflicts and pervasive cooperation in household arrangements" (Sen 1987, 5). In his model, in addition to this coexistence, Sen examines the role of perception biases - biases in the perception of both individual contributions (by others) and individual interests (by individuals themselves) - as well as bargaining power in explaining family decisions regarding human capital investment and the gender division of labor.

C. Risk and Coping Response Models

In general, the economic models relating households and risk are based on the concepts of probability and expected utility. Risk is either defined as the variance in outcomes, such as variance in profits or income, or it is defined as the probability of a negative outcome (a loss). When the household faces considerable risk and uncertainty in outcomes, an expected utility function replaces the standard utility function as the preferred model for analyzing household decision making. The degree to which the household would choose a smaller, but sure outcome over a larger, but uncertain outcome reflects the household's level of risk aversion. A household that is very close to the edge of survival may tend to exhibit a high level of risk aversion, since a negative outcome could translate into failure to survive. A household that is more secure economically may be much more willing to take a risk, based on the possibility of receiving a large payoff under a positive outcome.

Over the past two decades, the empirical literature on coping strategies by anthropologists and economists has grown rapidly. This is particularly true of studies in South Asia and sub-Saharan Africa. This literature - as well as related studies by feminist scholars, geographers, demographers, and historians - has influenced the way risk is modeled in economics. There are two types of conceptual models inherent in this literature: models of risk *per se*, and models of responses to risk. In this discussion, we are concerned primarily with risks associated with the source of livelihood, of income, or (simply) of food.

1. Models of Risk

Despite important variations across regions and time, the empirical literature on risk

shows some broad regularities. To begin with, virtually all studies distinguish between recurrent risks, which are usually more predictable and less severe, and periodic risks, which are usually less predictable and more severe. The most common example of recurrent risk is seasonality: that is, predictable seasonal fluctuations in income and food security in normal years. Of particular concern in normal years are lean seasons, especially what is called the "hungry season": namely, that season in the year when large numbers of people typically consume less food than other seasons. In rural peasant societies, the hungry season typically falls before the main harvest, when people's stocks are down and when there are few agricultural jobs. The predictability of recurrent risk leads households to adopt various precautionary or insurance strategies.

The most common examples of periodic risk in rural areas are droughts or floods. There are three critical dimensions to periodic risk: the likelihood that it will occur, the exact time when it will occur, and the severity with which it will occur. Of course, the exact timing and severity of periodic crises are not predictable. But there are areas - notably in South Asia and sub-Saharan Africa - where periodic risks are likely. For instance, between 1960 and 1980 in one state (Gujarat) in western India, there were eight widespread droughts, which affected more than 20 per cent of inhabited villages, and localized droughts in one or more arid areas every year (Chen 1991). In areas where periodic risk is likely, but not predictable, households adopt precautionary strategies. Whereas in areas where periodic risks are less likely, households can afford to be less precautionary.

There are two other key dimensions - one temporal, one spatial - in modeling risk. First, whether the crisis - and associated period of risk - is short-term or prolonged is a key determinant of the ability of communities and individual households to cope. If a drought continues for several years, even wealthy households often have to resort to various coping strategies. Second, whether the crisis is localized or widespread - that is, how many geographic areas or social groups are affected - is a key determinant of the ability of communities to offer social security or insurance to vulnerable households (or individuals) or, conversely, of the ability of vulnerable households (or individuals) to turn to other households for support.

2. Models of Coping Strategies

Precautionary strategies. Against the predictability of recurrent risk and the likelihood of periodic risk, households adopt various precautionary or insurance strategies¹⁶ which typically include: diversification of livelihoods, consolidation (or building up) of stocks and savings, and social investments in reciprocal or redistributive systems among households (Chen 1991; Huss-Ashmore 1988; Shipton 1990). The diversification of livelihoods may take various forms. In farm households, it may take the form of scattered fields and diversified crops, seeds strains, or animal species (Shipton 1990). More generally in rural areas, it involves mixing farming, herding, trading, and/or migrating for seasonal employment opportunities.

¹⁶ The precautionary and response strategies might also be referred to as *ex ante* and *ex post* strategies, respectively (Dunn, Kalaitzandonakes and Valdivia 1996).

Diversification, a strategy of engaging in multiple activities, is an important way of promoting flexibility and countering risk and uncertainty. Normal recurrent and abnormal periodic risk are most easily weathered by those households which have access to two or more economic activities. Effective management of multiple activities can help smooth seasonal peaks and troughs in consumption; it can even promote new peaks. Diversification is, therefore, a key dimension of most household livelihood systems.

To smooth seasonal peaks and troughs, most households try to build up inventories and savings during peak seasons which they can draw upon during slack seasons. Drawing upon stored inventories is a widely-practiced seasonal strategy. The precise content of household inventories vary and may include home-produced goods, such as food grains, or purchased goods (Chambers 1981).

Some informal mechanisms for social security, insurance, or redistribution exist in most societies in the developing world. Most notably, there are norms of reciprocity and exchange - and of caring for vulnerable members - among most marriage, lineage, or kinship groups. In many societies, norms of social obligation are implicit in patron-client relationships and patrons are expected to help clients during crises. In sub-Saharan Africa, tithes, tributes, ceremonies, and other redistributive mechanisms exist in many societies (Shipton 1990). In rural India, norms of social obligation are implicit in the traditional contractual arrangements between service or artisan castes and other caste groups; these norms help vulnerable households to tide over the lean seasons (Chen 1991).

Finally, in modeling recovery from risk, it is important to consider whether the crisis affected only the level of consumption in a particular household (or community) or whether it also affected the level of productive assets, working capital, and other factors of production. And whether it did so only in the short term or also for the medium or long term.

Response strategies. Despite significant contextual differences and local variation in the precise form or content of strategies, most studies report a remarkably common repertoire of coping strategies. During regular seasonal lean periods or periods of recurrent risk, the most frequently observed responses are diversifying livelihood or income sources; drawing down physical stocks; drawing upon social relationships; seeking alternative employment (e.g., through seasonal migration); borrowing; and, if necessary, reducing or modifying consumption. After the lean season passes, and throughout the rest of a normal year, households try to replenish their physical, financial, and social assets.

Once a severe crisis hits, the most observed responses are (if possible) adapting or intensifying activities and (if not) further reducing or modifying consumption; postponing marriage and other social obligations; liquidating savings and stocks; mortgaging or selling assets; entering "asymmetric interpersonal dependencies" (Shipton 1990); and migration. If and when all else fails, households (or individuals) resort to more drastic measures such as distress migration in search of relief, killing infants, selling children, sloughing off elders, and suicide (Shipton 1990).

Despite a clear overlap and some back-and-forth movement between coping strategies, most studies present a staged model - a common sequencing - of coping strategies. Typically, the models refer to early, middle, and late stages of the crisis. Responses during these stages of the crisis are characterized as being of low, moderate, and high severity and as involving measures which are most, moderately, or least reversible. A recovery phase, and related recovery strategies, are included in some models (Shipton 1990).

One of the key markers of the different stages of response is how households manage their assets. Indeed, at least one model classifies the three stages of household coping strategies in terms of how assets are handled, as follows: holding onto key productive assets; disposal of land and other key productive assets; and being without assets or destitute (Corbett 1988).

The particular mix or sequence of strategies adopted by individuals and households is seen to result from both exogenous (or external) factors as well as endogenous (or internal) factors. The most commonly cited exogenous factors are the prevailing economic, technological, ecological, and social conditions (Agarwal 1990). The most commonly cited endogenous factors are the composition of the household, especially the worker-dependent ratio; ascribed gender (and intergenerational) roles and relationships, especially as they relate to coping mechanisms; and the degree of intrahousehold cooperation between men, women, and children. Intrahousehold cooperation is seen as critical to the ability of poor households to tide over seasonal troughs and more severe crises. However, some studies report increased levels of divorce and abandonment during crises: notably, Megan Vaughan's study of the 1949 famine in southern Malawi (Vaughan 1987). Moreover, many studies note that women cooperate from a weaker bargaining position than men and assume a major share of the burden in relation to coping mechanisms (Agarwal 1990).

In summary, the empirical literature suggests that there are four important dimensions to considering or comparing household coping strategies. To begin with there is the type of strategy characterized by whether it involves adjustments in work, consumption, assets, or social relationships. Second, there is the level at which the strategy is negotiated: that is, whether the strategy involves relationships or transactions within the household, between households, at the wider community level, in the marketplace, or with government services, personnel, or policies. Third, there is the degree to which the strategy is reversible: that is, whether and how easily the household can recover after the period of risk or crisis is over. And, finally, the sequencing or timing of household strategies: that is, which households adopt which strategies in what sequence, and why (Chen 1991).

Implications for modeling the household. Clearly, risk of either variety - predictable recurrent or unpredictable periodic - is an important aspect of household planning and responding to risk is an important aspect of household behavior. More specifically, risk is an important determinant of whether households diversify their sources of livelihood, what economic activities they undertake, what social relationships they negotiate, how they manage their assets, whether they enter into and can recover from debt, and more.

Central to many models of the household portfolio is the whole issue of diversification.

As noted above, diversification of activities - of sources of livelihood/income - is both a precautionary strategy against possible fluctuations or shortfalls and a response strategy to actual fluctuations or shortfalls. In other words, households diversify to protect themselves against risk and, once risk occurs, to protect themselves from taking more drastic, less-reversible actions. Indeed, the dividing line between diversification as a precautionary strategy and as a response strategy is very fine.

In the context of evaluating the impact of microenterprise services, the overarching question becomes in any given context: have microenterprise services helped households of different types manage risk or cope with insecurity? More specific questions might include: have microenterprise services helped client households diversify activities, negotiate social relationships, manage their assets, reduce overall debt or recover from other sources of debt, or strengthen their fall back position? The conceptual framework of the household economic portfolio, detailed below, can be used as a framework for investigating such questions.

III. MODEL OF THE HOUSEHOLD ECONOMIC PORTFOLIO

Drawing on key concepts from the anthropological, economic, and feminist literature on the household, we propose here a conceptual model of the household as a portfolio of economic resources, economic activities, and the flows between them. This model, represented in Figure 1 and described below, is designed to facilitate the analysis of economic behavior at several levels. First, we are interested in the individual member of the household and the intrahousehold dynamics between members. Second, the model can be used to analyze the household as a whole, at the aggregate level. And finally, we are interested in the interaction between the household, its members, and the wider social or economic environment. In Figure 1, the narrow arrows represent individual decisions and actions, the wide arrows represent aggregate household decisions and actions, and the entire interaction is assumed to occur within, and be influenced by, wider forces representing formal and informal institutions.

A. Conceptual Model

The *household economic portfolio* can be defined as a) the set of household resources, b) the set of household activities, and c) the circular flow of interaction between household resources and household activities. A model of the household economic portfolio is illustrated in Figure 1. *Household resources* are the set of human, physical, and financial resources available for use by the household in a given period of time. The human resources include the time, labor power, and skills of household members, which depend on the household composition. Physical resources include any tangible items that are at the disposal of the household members such as land, buildings, tools, raw materials, input stocks, inventory, equipment, livestock, personal items, and so on. Financial resources include cash and other forms of liquid savings.

In this model, resources may be held jointly by the household members, or they may be held separately by individual members of the household. In addition, it is important to note that resources may be owned or they may be accessed through borrowing or through social relationships and *social networks*. That is, the set of resources available to the household may include more than just the resources that are individually or jointly owned by the household members. Households may have access to significant resources through social networks or through a common (suprahousehold) resource pool. Social relationships and networks can be drawn upon for securing human, physical, or financial resources on a reciprocal or nonreciprocal basis. Examples of social networks, which can vary greatly by setting, include family and kin networks, patron-client relationships, factional or political loyalties, and wider pooling or exchange networks. In addition, the household may have access to collective goods or common resources through the public sector or from common property resources.

Household activities are the set of consumption, production, and investment activities that the members of the household undertake in a given period of time. *Consumption activities* are defined as the satisfaction of material wants and needs through the provision of items such as food, clothing, medical services, liquor, ceremonies, and amusements. Consumption activities are not generally expected to contribute to the physical or financial resource base of the household, except

to the extent that durable or excess consumption items are carried over for use in a later period. However, consumption does play a critical role in maintaining the health and vigor of the human resource.

Production activities can be broken down into three categories: 1) income generating activities; 2) household maintenance activities; and 3) wage and outside work.¹⁷ *Income generating activities* are any productive enterprises that generate a marketable good or service. This category would include all types of microenterprises, as well as activities such as the renting out of land and housing. The product of an income generating activity may be agricultural or nonagricultural, and it may be sold or consumed by the household. The distinguishing feature of an income generating activity is that it results in products that are partially or wholly marketed. A *household maintenance activity* results in a good or service that is strictly for consumption within the household.¹⁸ Examples of household maintenance activities include daily meal preparation for the family, clothes washing and repair, maintenance and improvement of the house, child care, and water and fuel gathering.¹⁹ Wage and outside work is performed outside of the household for the purpose of earning cash or fulfilling external obligations.

Investment activities involve the use of household resources in order to create the potential for additional income in future periods. The products of investment activities are the resulting investments, or assets. These investments can take many forms, both tangible and intangible, but they are characterized both by their expected endurance into the next period and by their enhancement of the resource base of the household in future periods. The products of investment activities may be real property (i.e. land, housing), physical stores of wealth (i.e. jewelry, livestock), financial stocks or interest bearing accounts (i.e. savings accounts, money loaned out), productive assets (i.e. sewing machine, truck, inventories), strengthened social networks, or improvements in human capital through training or education. To the extent that durable consumer goods such as bicycles, stoves, and refrigerators are used in income generating activities or household maintenance activities, they can also be considered as investments. In summary, investment activities act to build up the resources and asset base of the household.

As with resources, activities may be jointly or individually undertaken. For example, both the husband and the wife may allocate their labor and other resources to a joint income generating activity. Alternatively, an income generating activity may be the separate domain of only the

¹⁷ This categorization of household activities draws from Kusterer (1989) and is consistent with the idea of the household as a diversified conglomerate. However, Kusterer divides the rural household's productive activities into 1) household production for home consumption; 2) cash crop farming for market sales; 3) self-employed nonagricultural business activities; and 4) off-farm labor.

¹⁸ The products of household maintenance activities share some similarities with the Z-goods discussed in the literature review.

¹⁹ It is important to recognize that, particularly in agricultural areas, the distinction between income generating activities and household maintenance activities can be blurred. While markets may exist for the products of certain household maintenance activities (e.g. collected firewood), the distinguishing feature of goods and services generated by household maintenance activities is that the household does not participate in those markets.

husband or the wife. Prevailing sex roles may dictate that certain household maintenance activities, such as weaving, cooking or house repair, are solely the domain of one member of the household. Investments, also, may be joint or individual.

There are two links between household activities and household resources, and these are illustrated in Figure 1 by flows in both directions. The top flow, denoted by A and running from resources to activities, represents the allocation of joint or individual household resources to support the different joint and individual household activities. This includes cash expenditures, labor inputs, and other tangible inputs. The human, physical, and financial resources of the household provide the base of support for the household's activities and are allocated to the various household activities through various joint and individual decision making processes. All of the household's activities must be supported by the set of available resources. A single type of resource (e.g. labor) may be distributed across more than one activity, and each activity will typically require a number of different resources.

The bottom flow, denoted by B and running from activities to resources, represents the income and other additions to resources that are created by the household's production and investment activities. This flow reflects the outcome that results from joint and individual decisions within the household. In summary, the household members allocate resources to consumption, production, and investment activities which, in turn, act to satisfy current household wants and needs while returning resources to the household for use in future periods.

In this model, the household is represented by a circular flow between household resources and household activities. The set of household resources provides the base of support for the household activities. These resources become available through individual and joint ownership, collective (suprahousehold) ownership, borrowing, and social networks. The human, physical, and financial resources of the household are allocated through individual and joint decision making to the various household activities. The consumption, production, and investment activities of the household act to satisfy current household wants and needs and return resources to the household for use in future periods.

B. Internal Structure and Dynamics: The Portfolio System

The process by which households rearrange over time their mix of resources, labor, and activities to cope with changing economic and social objectives or contingencies is, what we would term, their *portfolio system*. The term *system* is chosen deliberately to convey a systems perspective in which interactions between different individuals - and their individual constraints, preferences, activities, and objectives - within the household can be accounted for. With that perspective in mind, a portfolio system can be seen as the mix of strategies, both individual and collective, developed or drawn upon by a household over a given period of time for economic and social objectives. Or, the portfolio system can be seen as the process by which different strategies are employed in adjusting to changing requirements for production, income, security, power, or status. The preferences and actions of individuals are seen to determine the circular flow of the household economic portfolio. As represented in Figure 1, the circular flow between household resources and activities (and back again) is seen to flow through a single unitary channel (the

wider arrows) and parallel individual channels (the narrow arrows). The nature of this flow depends on the composition and structure of the household as a whole; the constraints facing the household as a whole; and the constraints, preferences, and strategies of its individual members.

Our conceptualization of the household portfolio system is based on several important assumptions. First, that individual members of the household may have separate (if not competing) preferences, constraints, and resources and may, therefore, take individual as well as joint decisions and activities. Second, that individual members of the household are involved in negotiation, bargaining, and (even) conflict. Third, that individual members of the household may decide to cooperate in certain decisions or activities but to not cooperate in others. And that, as a result, both extensive conflicts and pervasive cooperation may coexist within the household (Sen 1987). Fourth, that the strategies of individual members reflect differences in their bargaining power which, in turn, reflect differences in their access to resources (both physical and social) and in their socially defined roles and relationships.

The set of activities pursued by the household are a mix of the individual activities of its members which may interact in a variety of ways: from multiple, separate activities to more coordinated, integrated activities (Guyer 1988). These alternative patterns of interaction are best illustrated by the activities of men and women within the household. In some situations, women might pursue only self-provisioning and nonmarket production while men are wholly engaged in market production: a pattern of *separate, parallel activities*. In other situations, women may join men in market production. For example, there may be joint agricultural production of a given crop for which men perform certain operations and women others: a case of *integrated activities*. Or, in other situations, men will withdraw from agriculture, leaving women to complete all operations, while the men migrate for alternative employment: a case of *substitutable activities*. No matter which pattern emerges, the decision to pursue a given pattern can be either explicitly taken and tightly managed or more implicitly taken and less managed. At both the individual and household levels, explicit and implicit calculations of relative risk, short- versus long-term gains, and tradeoffs between expenditures, savings, and investment are being made.

Several dimensions of the portfolio system have special relevance for assessing the impact of microenterprise services: namely gender; risk, and nonmarket modes of production. Given that some component activities of the household portfolio are likely to be women's special responsibility, that women are more likely than men to move across the different sectors of production (commodity and noncommodity), and that women are likely to have different preferences, constraints, and resources than men, the gender dimensions of the portfolio system deserve special attention. Given that households at different levels of security and wealth face different risks and manage risks differently, and given that the poorest households tend to be most vulnerable to risk, the risk management dimension of portfolio systems also deserves special attention. Given that subsistence production in agrarian societies covers a wider range of activity than in capitalist societies, unpaid family labor on family farms or in family firms and time spent on food, fuel and water collection are critical dimensions of portfolio analysis.

C. Applications of the Household Economic Portfolio Model

1. Typology of Households

There are variations in the composition and structure of household portfolio systems, reflecting variations in household composition and structure. However, in any given area at any given time, a typology of portfolio systems (or, more simply, of households) can be developed. Such typologies can be used to identify and map patterns of change in each type of household. If adequately specified and analyzed, a typology of portfolio systems could provide a very useful analytic framework for understanding the impact of microenterprise services in specific settings.

In terms primarily of economic objectives, the typology of portfolio systems in any specific area can be hypothesized to fall within a broad continuum of different household objectives. The poorest households, which fall at one end of the continuum, would be expected to pursue short-term *survival* objectives. Typical of such households pursuing survival objectives is, most likely, a great intensification and diversification of labor activities. Encompassed within the survival objective would be the desire not only to meet daily subsistence needs but also to save for contingencies and to avoid risk or forced sale of assets. Status considerations would necessarily be sacrificed to income or survival concerns.

The richer households can be grouped at the opposite end of the objectives continuum. These households with stable resource bases would be expected to pursue longer-term *mobility* objectives: diversifying their assets and investing their resources. Encompassed within the mobility objective would probably be significant calculation of the trade-offs between increased income, power, or status and between investments in known or unknown areas of production.

Those households in the middle level of income and welfare, and which fall at the midpoint of the continuum, will probably pursue stability or *security* objectives: attempting to maintain or stabilize the household's resources and social networks. Encompassed within the stability objective would probably be the desire not only to stabilize assets and incomes but also to minimize risk while looking ahead to possible avenues of economic and social mobility. The calculation of trade-offs between status, risk aversion, and income or between consumption, savings, and investment would most likely be less straightforward than for those households at either end of the continuum. The key distinctions between these three points on the objectives continuum are the level of income or welfare of the household, the time-frame applied in mobilizing and allocating resources (short or long term), the approach to risk management, and the degree of diversity of activities or strategies.

We can use the conceptual model to identify households with lower levels of economic security as being those households with a smaller set of resources. Their resource bases would include fewer physical and financial resources, and they would support their economic activities largely through their available labor. This implies a reduced capacity to support household activities, possibly including lower consumption activities and fewer production and investment activities. This suggests at least two possible indicators of the household's level of economic security: 1) the income and other additions to resources flowing from the household activities to the household resource base (a flow measure) and 2) the value of household resources (a stock measure).

Our conceptual model can be used to describe and analyze differences between households in terms of differences in the composition of their economic portfolios. For example, farm households would have more agricultural enterprises in their productive activities and a greater emphasis on land and in-kind income in their resource bases. Rural, nonfarm households would rely more heavily on wage work, which can be highly seasonal in nature, while still using considerable labor in natural resource related household maintenance activities. The income generating activities of urban households would concentrate more heavily on wage work and a variety of nonagricultural enterprises. Compared to rural households, urban households would depend more heavily on purchased consumption items and have less extensive household maintenance activities.

2. The Role of Credit

The role of credit in the household economic portfolio can be interpreted relative to the conceptual model, as illustrated in Figure 1. When credit is received, it creates an addition to the resources available in the current time period for support of the household activities. Because of the fungibility of credit, it may be allocated to any one or all of the activities. If credit has been received in a previous period(s), then some portion of the resources generated by the household's activities will flow out of the household economy to the lender in the form of a debt repayment. Note that if the credit has been used in production or investment activities, then it may increase the size of the resource flow generated by the household's activities, thus increasing the repayment capacity of the household. If the resources of the household are low in any given period, then credit may be used to smooth consumption. If the credit is allocated to consumption activities, it is not expected to increase the flow of income in the current period. Thus, credit invested in consumption activities does not directly increase the repayment capacity of the household.

3. Intrahousehold Analysis

As noted earlier, our conceptual model is based on several critical assumptions about intrahousehold behavior. One of these relates to the process of intrahousehold decision making. The assumption here is that individual members of the household do not (necessarily) face the same constraints, share the same preferences, or enjoy a similar utility. A second relates to internal divisions within the household by gender and other socially defined categories. The assumption here is that individual members as well as constituent groups of members may engage in separate and/or joint production activities and make separate and/or joint consumption and investment decisions.

For example, within farm households, women and men might engage in producing separate crops. Or, women might engage more in nonagricultural activities while men are primarily responsible for agricultural activities. And, within nonfarm households, women might engage more in local labor markets while men regularly migrate, at given seasons of the year, to outside labor markets. Or, women's enterprise activities may depend more on home-produced inputs whereas men's enterprise activities may depend more on purchased inputs.

The needs, constraints, and preferences of individual household members are seen to determine the circular flow of the conceptual model. For example, since individual members of the household may control separate flows and stocks within the household, they may agree or differ on the direction and speed of the flow. When credit is received by the household, the individual who controls it determines how it is allocated across different possible household activities. So that when credit is received, the man or woman who controls it may invest it in his or her own separate activities and resources.

When individual members face different constraints, they may take decisions on the direction and speed of the flow of inputs, expenditures, and income which, from a household perspective, appear irrational or inefficient. For example, if women do not have as much control as men over household resources, they may make secret allocation decisions (e.g., women often maintain secret savings for contingencies) or they may make seemingly irrational decisions (e.g., women may invest in a less-productive enterprise, over which they have control, than in the most productive enterprise in the household portfolio).

In brief, the model allows for a wide range and complex interplay of production, consumption, and investment activities within any given household. In Figure 1, the wide arrows represent total flows for the household while the narrow arrows represent flows associated with individual economic domains. For the flow from resources to activities (path A), the narrow arrow might represent a) the allocation of individually held resources to activities (individual or joint) or b) the allocation of resources (individual or joint) to activities within individual domains. For the flow from activities to resources (path B), the narrow arrow might represent a) the assignment of individually generated income or other resources to a joint budget (sometimes called a joint *Apurse@* or *Apot@*); or b) the assignment of jointly generated income or other resources to an individual budget.

4. Analysis of Risk

The conceptual model of the household economic portfolio can be used to help clarify the links between risk, the decisions made by the household, and the outcomes of those decisions. In addition, it provides a framework for understanding the role of microenterprises in the overall household economy and the ways that risk enters into decision making about microenterprises. These decisions are shaped by the risk attitudes of the members of the household and the risk environment that they face.

It is easier to understand the role of risk in household decision making if we consider a dynamic interpretation of the conceptual model. At the beginning of each period, the household makes the key economic decisions of 1) selecting the set of production, consumption, and

²⁰ The dynamic model described here is abstract in the sense that it assumes that all activities have a uniform duration. In reality, production, consumption, and investment activities are nonuniform in duration.

investment activities to undertake in the period and 2) allocating the set of household resources to the selected activities. The activities then take place during the given time period.²⁰ At the end of each period, the results of the activities flow back to the set of household resources in the form of income, assets, and adjustments to human capital. This results in an adjustment to the household resource base. At the beginning of the next period, the household starts with this adjusted resource base, which may be different in size and composition than it was in the previous period.

The results, or outcomes, of the household's activities depend in part on the risk environment in which the household operates. The risk environment is the amalgamation of relevant risks from a number of the possible categories. For example, a market risk in the form of adverse price movements could reduce the profits of a microenterprise, leading to a smaller income flow at the end of the period. At the same time, the microenterprise could suffer a loss of output due to technological risk. While the household has control over which activities it selects and the levels of those activities, the outcomes of those decisions are at least partially determined by the risk environment in which the household operates.

How, then, does the household take the riskiness of outcomes into account when making its activity selection and resource allocation decisions? The answer depends on several factors, including the risk attitudes of the household and the availability of alternative risk management strategies. A household's risk attitudes reflect its relative willingness to operate under different levels of risk. The less tolerance that a household has toward a chance of loss, the greater the *risk aversion* of the household. Households that are risk averse will seek mechanisms for reducing and managing risk. Possible risk management strategies are discussed in detail in a related paper on risk (Dunn, Kalaitzandonakes and Valdivia 1996). Financial services and microenterprise credit can play important roles in altering the impact of risk on the economic decisions made by the household and its members.

²⁰ The dynamic model described here is abstract in the sense that it assumes that all activities have a uniform duration. In reality, production, consumption, and investment activities are nonuniform in duration.

IV. IMPLICATIONS FOR AIMS PROJECT

The purpose of this section is to draw out implications from the literature review and the proposed model of the household economic portfolio for the design of the core impact assessments, the key component of the AIMS project. First, we consider a set of hypotheses, grounded in the model, that relate microenterprise services to their impacts on the household as a whole (at the aggregate level) and on individuals within the household. Next, we make some specific recommendations for the AIMS field focused research, which shall precede and inform the design and implementation of the core impact assessments. And, finally, we make some more general recommendations for the core impact assessments.

A. Recommended Hypotheses

In our model of the household economic portfolio, the household is represented in terms of a set of resources, a set of activities, and flows between resources and activities. The model is explicit in its recognition that there can be a variety of joint or separate arrangements in the organization of resources, activities, and interactions. Therefore, the set of hypotheses recommended below include hypotheses at both the household and individual levels. First, we consider hypotheses regarding the impacts of microenterprise services on the household as a whole.

The first group of hypotheses (H-1, H-2, and H-3) are concerned with the impacts of microenterprise services on household income and the portfolio of activities that generate income. The hypotheses focus on changes in the set of household activities and in the flow from activities to resources, as represented in our model of the household economic portfolio:

- H-1: Participation in microenterprise services leads to an increase in household income.
- H-2: Participation in microenterprise services leads to increased diversification in the set of production activities.
- H-3: Participation in microenterprise services leads to an increase in the reliance of the household on high-return production activities.

The first hypothesis (H-1) relates to an increase in the flow of income that results from the household's activities. This is a central question in the evaluation of the impacts of microenterprise services. A positive increase in household income is evidence of a positive outcome (impact) for the household. The second hypothesis (H-2) refers to a possible change in the mix of activities in the household economic portfolio. The theoretical and empirical literature is mixed on the expected results, and an increase in diversification is not evidence *per se* of positive impact. However, diversification is a pivotal concept in the literature on risk management and the hypothesis can be tested without the need for collecting any data in addition to the data already collected for H-1. The test of H-2 would contribute to the body of empirical knowledge on diversification as a risk management strategy as well as provide a information on the impacts of microenterprise services on the economic structure of the household. The third

hypothesis is recommended and justified in a related AIMS project paper on risk (Dunn, Kalaitzandonakes and Valdivia 1996, 22).

The second group of hypotheses are concerned with the impacts of microenterprise services on the investments of the household. These hypotheses focus on the set of household resources, as represented in our model of the household economic portfolio:

- H-4: Participation in microenterprise services leads to an increase in key physical assets.
- H-5: Participation in microenterprise services leads to an increase in savings.
- H-6: Participation in microenterprise services leads to an increase in expenditures on the education and training of household members.

The first hypothesis in this group (H-4) is designed to test whether participation in microenterprise services improves the ability of the household to move to higher levels of economic security through the accumulation of assets. For households at higher income levels, this process is expected to entail the building up of productive assets, thus signaling a movement of the household toward increased mobility and improved opportunities for generating future income. For households at lower income levels, we expect to observe that participation in microenterprise services will lead not so much to the accumulation of productive assets as to the accumulation of consumer durables. Therefore, we recommend that the measurement of *key physical assets* include both productive assets and consumer durables found to be prevalent in the study area. The accumulation of productive assets is considered a critical variable in assessing the household's ability to manage risk (Dunn, Kalaitzandonakes and Valdivia 1996). Hypothesis H-5 also assesses whether microenterprise services improve the ability of the household to manage risk by helping households to accumulate savings. *Savings* are broadly defined to include the relatively liquid stores of value most commonly used in the study area as self-insurance assets.

The last hypothesis in this group (H-6) measures whether microenterprise services lead to long-term investments in human capital. Increased investments in human capital are positive can be expected to yield positive impacts for both current and future generations. We recommend that these effects be disaggregated by age and gender as we expect households to invest differently in men and women, boys and girls.

In addition to impacts on the household, we are also interested in the impacts of microenterprise services on the individual client-entrepreneur. Many of the microenterprise programs have a large proportion of female clients, and there is some evidence that participation in microenterprise programs leads to the empowerment of these women. Therefore, the recommended hypotheses at the individual level relate to the empowerment of female clients as well as to structural changes in the household economic portfolio and the portfolio system:

- I-1: Participation in microenterprise services leads to increased control by the client over resources within the household.

I-2: Participation in microenterprise services leads to an increase in the amount of women's time spent in self-directed employment and wage work.

The first hypothesis (I-1) is intended to test whether the client-entrepreneur gains increased influence over decision making within the household as a result of her participation in the microenterprise program. This hypothesis will need to be sharpened during the field focused research to improve its ability to be tested empirically. In other words, the hypothesis needs to be operationalized.²¹ The second hypothesis (I-2) tests whether participation in microenterprise services leads to a change in the woman's labor allocation so that she becomes increasingly involved in market-oriented activities for which she receives remuneration. An increase in the woman's market involvement is associated with an improvement in her bargaining position within the household. However, care should be exercised in tracking any adverse changes that might simultaneously occur in the time allocation of adolescent and pre-adolescent girls in these households, since they may be taken out of school to perform the nonmarket tasks formerly performed by the woman.

Admittedly, these hypotheses do not cover all components of the household economic portfolio and the portfolio system. In addition, the hypotheses as formulated here are quite general and require further elaboration. To begin with, we may need to formulate different hypotheses for each group of households on the survival-security-mobility spectrum outlined above. Second, we may need to formulate different hypotheses for some of the constituent groups of household members, notably for men and women. Thirdly, we may want to integrate time trends and threshold effects into the hypotheses. And, finally, we may want to reformulate the hypotheses to reflect the wider context.²¹ But we recommend and anticipate that these (and other) hypotheses will be validated and explored during the field focused research and that, after the field focused research and during the design of the core impact assessments, all of the hypotheses will be reformulated.

B. Implications for Field Focused Research

The purpose of the AIMS field focused research is to inform its core impact assessments: more specifically, to provide the necessary information that will make the team better prepared to engage in quantitative data collection under the core impact assessments. The field focused research, much of which will be qualitative rather than quantitative in nature, can inform the core impact assessments in at least four ways: 1) by providing critical information on the contextual environment, 2) by pretesting and refining key hypotheses, 3) by identifying relevant and significant context-specific variables and indicators, and 4) by pretesting and refining key methodologies. It should be noted that it is possible, and probably desirable, to follow-up on some subsets of this information during the core impact assessments in order to a) gain a more in-depth understanding of critical contextual information, b) validate the information collected in the

²¹ For a discussion of wider contextual variables, see the desk study in this series on that topic (Snodgrass 1996).

field focused research, and c) document changes and dynamics over time.

In addition to collecting information on the wider context, we recommend a three-step approach to gathering critical information on the study community. To begin with we recommend defining the household as a unit of consumption, identified as all those who share food from a common hearth. The membership of the household so defined may or may not encompass - and, therefore, should not be identified with - all those who share a common residence or all those who collectively own property, engage in production, or take investment decisions. In a peasant community, for example, a household so defined may not encompass all those who jointly own ancestral land, or jointly cultivate the ancestral land, or share a common ancestral residence.²² We recognize that the appropriateness of this definition will need to be tested in each context. Such a test should investigate a) whether, in specific contexts, the unit of consumption is easily distinguishable from other units (e.g., of residence, ownership, or production); b) whether distinguishing the unit of consumption from other units makes sense or poses problems; and c) whether there are local terms or concepts referring to the unit of consumption or other units which should be used in implementing the core impact assessments. A related test to determine how best to define and identify the head of household should be carried out at the same time.

Secondly, a wealth ranking exercise should be completed in order to stratify the households in the study community into levels of economic security as per the typology detailed above (see Dunn 1994). This should be done through discussions with local informants both individually and in groups to get a) local perspectives on household ranking and b) context-specific typologies of household portfolio systems.

Thirdly, a representative (and responsive) household from each strata should be identified for an in-depth case study (3-5 case studies in each study area). In designing these case studies, we recommend that the study design should be flexible enough to incorporate local contextual variation but should not be so open-ended as to miss essential points.

The essential information to be collected in these case studies should include:

- 1) Criteria for identification of the household unit and the household head. These criteria, appropriate to each specific context, could then be used as screening questions in the core impact assessment questionnaire.
- 2) Description of household economic portfolio. There would be one for each case study, representing differences in household economic portfolios at each level of economic security. This is a fleshing out of the household economic portfolio (Figure 1) and the portfolio system for each specific study setting and each level of household

²² In many societies, the unit of consumption is often nested within other features such as residence and production. For the desirability but difficulty of defining the households as a unit of consumption, see Goody 1996:4.

economic security. More specifically, the description should include a listing and description of resources, activities, allocation patterns, use of debt and social networks.

3) Description of intrahousehold divisions and dynamics. This should include segmentation of production activities into separate male-female spheres (if any) and analysis of distinct male-female resource pooling and resource allocation decisions. Other social distinctions that divide household production or decision making, such as age or marital status, should also be investigated.

4) Analysis of risk management strategies. This should include both precautionary or ex ante strategies (income smoothing) and response or ex post strategies (dealing with shocks to income). As a whole, the case studies should point to one or two key past crisis events in the study area during which the responses of different households can be compared. Each case study should highlight the possible differences in risk management at the different levels of economic security.

5) Analysis of debt. As per the recommendations in the related AIMS paper on debt (Dunn 1996), this should look at purposes, sources, and characteristics of debt.

6) Investigation of local social, cultural, and economic factors affecting households. This should focus on those social, cultural, and economic factors which are seen by the study community to affect microenterprises and the use of microenterprise services. These are likely to include local kinship and marriage systems; local norms regarding female behavior; and the nature of local labor, product, and credit markets.

C. Implications for Core Impact Assessments

The case studies recommended above are intended to feed directly into the design of the core impact assessments by indicating a) key hypotheses to be tested and related questions to be asked in the core impact assessments; b) appropriate ways to frame and word specific questions in the quantitative survey instrument; and c) topics to be investigated in supplementary modules to the core survey instrument. Further, we recommend that the case study households should be tracked during the core impact assessment phase to provide longitudinal qualitative and quantitative data on key issues. Given the need to categorize households by context-specific, locally developed typologies, which we have recommended be developed during the field focused research, many of the implications of the household portfolio model for the core impact assessments can only be determined during and after the field focused research.

However, there are some general implications of the household portfolio model for the core impact assessments. One of the key assumptions of the household portfolio model is that households differ not only in composition, organization, and function but also by level of economic security. The implication of this assumption, as noted above, is the need to develop context-specific household typologies using informants from the study community and to classify the study sample accordingly. Once this has been done, the key hypotheses can be reformulated to predict likely impacts at different levels of economic security.

A second key assumption of the household portfolio model is that individual members of the household may have separate (and competing) as well as joint preferences, constraints, resources, and activities. A related assumption is that individual members of the household belong to one or more socially-defined categories: man vs. woman, senior vs. junior, married vs. unmarried. The implication of these related assumptions is that the key hypotheses at the individual level may need to be refined to reflect the possibility of different types of impact on these different categories of household members.

A third key assumption of the household portfolio model is that resources, including resources received from outside such as microenterprise credit, are allocated across any or all of the various activities of the household (production, consumption, and investment) in ways that, from the perspective of the household as a whole, appear totally fungible. However, another key assumption of the household portfolio model is that men's and women's constraints, preferences, activities, and decisions are separate until proven joint. Analytically, the implication of these related assumptions is that what appears fungible at the household level may reflect competing (rather than substitutable) preferences and constraints at the individual level. Methodologically, the implication of this assumption is that the core impact assessments should carry out separate interviews of men and women within each household or otherwise determine the degree of jointness and separateness in terms of preferences, constraints, resources, and activities within the household.

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