



Assessing the Impact of Microenterprise Services (AIMS)

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ASSETS AND THE IMPACT OF MICROENTERPRISE FINANCE PROGRAMS

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EXECUTIVE SUMMARY

The purpose of this study is to examine assets as a potential category to document the impacts of microenterprise services. The paper focuses on the nature of assets, whether assets are an important impact category, and on approaches to measuring assets. It also examines measurement issues. The findings are intended to inform the assessments undertaken by the Assessing the Impacts of Microenterprise Services (AIMS) Project and other endeavors to study the impacts of microenterprise programs.

Significance of Assets

Assets are the stock of wealth in a household or other unit, and therefore, represent its gross wealth. The net worth of the unit is the value of its assets minus its liabilities. Assets are the base for future potential wealth and consumption. An accounting approach looks at the financial values of assets and liabilities, but the concept can be extended to include intangible assets. A categorization and classification scheme is presented for assets, which focuses almost exclusively on tangible assets at the enterprise, household and individual levels. It includes financial, physical and human assets at each level.

Assets are considered an important category to address when assessing the impacts of microenterprise financial service programs. Assets tend to be more stable over time and hence are a better indicator of economic well being than income or expenditures, since these are normally constructed to represent an annual estimate. Assets represent the enduring results of income flows and expenditures. Expenditures may be less than income when building up financial assets, and more than income when assets have been divested or liquidated to generate cash to meet expenditure demands. Patterns of asset accumulation, divestiture or liquidation, and of liabilities indicate strategies employed by households and individuals to plan for, confront and take risks.

The paper summarizes findings from 32 studies on the impact of microenterprise credit programs on asset accumulation. These studies document positive impacts, but the nature and extent of the impacts vary. To date, more attention has been given to enterprise rather than household assets. No studies report on the accumulation of assets by the client, but some assess increased control over assets. Very few studies relate the wealth level of the client or client household to the impacts. Nevertheless, the studies repeatedly suggest that asset accumulation is incremental, and successive microenterprise program loans lead to a build up of enterprise and household assets.

Approaches to Study Assets

The paper considers utilization of assets or net worth as an impact variable, but also points out that “net worth” is an important control variable. Researchers may focus on (1) direct uses of funds from microenterprise credit services to acquire assets, (2) the changes in the asset base or net worth over a fixed period of time, or (3) both of these.

To derive a “net worth” value, all physical and financial assets and liabilities need to be covered. Options exist which focus on a limited range of assets and exclude data on liabilities. The results can be used to document types of changes, or as proxy indicators of change in net worth.

Six approaches to measuring assets are found in the microenterprise literature, with the first and fifth being the most common. These approaches center on:

- attaching a current monetary value to assets and liabilities;
- computing the flow value from productive assets;
- ranking assets based on their assumed monetary value or on other qualities;
- constructing an index which is a composite of measures;
- specifying whether or not a specific asset is held, which may be used to discuss the structure of the holding or other qualitative dimensions; and
- determining the meaning of the assets to the owners and the social effects of the assets.

Difficulties arise with interviewees being able to identify or count specific types of assets and provide a reasonable estimate of the real value of certain types of assets. Some assets may not have a market value, or the respondent may not know it or the original cost of the item. Land may not have a market value because of the prevailing land tenure system. When there is a scarcity of land for sale, it is an asset which money cannot buy and hence it may be excluded as an impact category. Assets may be fungible between the household and enterprise. This needs to be factored into the approach taken to collect information.

Information on debts and cash savings tend to be sensitive topics. In many societies and situations, household members do not share such information among themselves. Hence, there are two levels of difficulties: first, a person may not know about the debts and savings of other household members, and, second, people are often unwilling to share the information with data collectors. Researchers have approached these issues by interviewing more than one person in the household, and by asking interviewees to provide a written rather than verbal response to questions about the value of liabilities and financial assets.

Implications for the AIMS Core Impact Assessments

Trade-offs and options are discussed. The author raises the issue of the reliability of data on the value and number of assets when one household member is expected to provide information for all household members on their physical and financial assets. In comparison, information on the direction and pattern of change among household members might be more reliable if one person is expected to respond on behalf of the household. Hypotheses and approaches to studying assets are recommended for the AIMS core impact assessments. Issues are identified which should be explored in the field prior to the design of the assessments.

ASSETS AND THE IMPACT OF MICROENTERPRISE FINANCE PROGRAMS

I. INTRODUCTION

A. PURPOSE OF THE STUDY

The purpose of this study is to examine assets as a potential impact category when assessing the impacts of microenterprise services. The focus of the paper is on the nature of assets, whether assets are an important impact category and on feasible approaches to measuring assets. It sets forth recommendations for the Assessing the Impacts of Microenterprise Services (AIMS) Project to consider when planning its exploratory field research and core impact assessments. The programs selected to be covered by the core impact assessments shall have established credit services, but may also offer savings and other services. Therefore, the discussion on assets centers particularly on the potential impacts of microenterprise financial services.¹

B. OVERVIEW OF THE AIMS PROJECT

The goal of the AIMS Project is a) to gain a better understanding of the processes by which microenterprise program services strengthen businesses and improve the welfare of microentrepreneurs and their households, and b) to strengthen the ability of USAID and its partners to measure the results of their microenterprise programs. The project includes methodologically rigorous assessment of the impact of microenterprise programs through longitudinal assessments in three different countries. Also, tools will be developed and tested for use by private voluntary organizations and non-governmental organizations (PVOs/NGOs) to track the impact of microenterprise programs. It is anticipated that the tools will employ proxy indicators for some hard to measure variables.

The core impact assessments (CIAs) are expected to mix quantitative and qualitative methods, but to be based primarily on survey techniques. Each CIA will consist of two rounds of data collection, with a two year interval between the rounds. A comparison group of non-participants shall be employed to assist in addressing competing explanations for the changes found in the impact variables.

Both the AIMS series of desk studies and its field focused research on the microenterprise programs selected for the CIAs are aimed at advancing the design of the CIAs and providing information to assist in the design of the tools. The field focused research shall explore issues and variables to guide the CIA research design.

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C. ORGANIZATION OF THE STUDY

This paper begins with a discussion of the concept of assets and a categorization scheme. The characteristics and qualities of assets, and the relationship of assets to income and expenditure are explored. The next part sets out the importance of assets as an impact category in the assessment of the impacts of microenterprise (ME) programs. This section ends with a summary of the findings on asset accumulation from ME program evaluations and assessments.

The next section examines approaches to studying assets. It addresses the different uses of an asset variable in the assessment of ME programs. It continues with a focus on ways assets have been covered in previous ME studies and approaches used to measure assets. The section concludes with a discussion of key measurement issues.

The final section centers on the implications for the AIMS core impact assessments. It sets out the basic parameters that guide the recommendations which follow, and discusses trade-offs in coverage and measurement. Hypotheses are recommended and approaches to studying these suggested. The paper concludes with recommendations for testing the hypotheses and measures of them during the AIMS field focused research.

II. SIGNIFICANCE OF ASSETS

A. DEFINITION, CONCEPTUALIZATION AND CATEGORIZATION

1. Conceptualization and Definition

Assets are the stock of wealth in a household or other unit (Sherraden 1991) and therefore represent the gross wealth of the unit. The net worth of the unit is its gross wealth minus its debt and other liabilities. The gross wealth level is increased through the accumulation of assets, and reduced through claims against it as a result of liabilities. Not only a store of wealth, assets are also factors which produce flows of income and expenditures, and are the base for future potential wealth and consumption. Assets may be categorized by their different degrees of riskiness, the relative ease with which they may be liquidated, whether they are tangible, their yield, and their ability to generate income and to appreciate or depreciate in value (Deaton 1992). While one might think of assets as things or possessions, they are rights or claims related to property, concrete or abstract (Sherraden 1991).

Assets may be acquired and held for a variety of reasons. The composition of a household or other unit's stock of assets reflects its strategies for maximizing well-being, present and future. Such strategies take into account income generation, production for internal consumption, need for liquidity or financial savings, and attitudes toward risk. An asset may be acquired because it meets one or a combination of these (Corbett 1988).

An asset may represent values or have meaning to the owner, decoupled from its financial worth. For example, owning a home may be more meaningful to a poor household than the value of the house (O'Bryant 1983). Or, having a store of wealth in physical assets which can be easily liquidated in times of crisis may be more significant than owning a piece of productive machinery that would increase enterprise productivity, but be difficult to sell.

The concept of assets may be extended beyond a normal "accounting" approach, to include intangibles. In a study of household responses to poverty and vulnerability in poor urban communities, Moser identifies household relations and social capital as important assets (1996)². Sherraden (1991) identifies six types of intangible assets: access to credit, human capital, cultural capital, informal social capital, organizational capital, and political capital. He considers both the impact of programs on asset accumulation and the effects of asset accumulation on intangibles, such as attitudes, personal efficacy and social status (Sherraden et. al 1995). Sherraden (1991) argues that a secure asset base creates an orientation toward the future: an orientation toward the future begins in part with assets, which in turn shape opportunity structures, which in turn are quickly internalized. When assets are held, people tend to begin planning for their management and use. Self-esteem may be enhanced and children may gain from their parents a disposition toward asset accumulation and management.

² Moser also classifies labor, economic and social infrastructure and housing as assets.

2. Categorization and Classification of Assets

The categorization scheme presented below adopts the common practice of conceptualizing enterprise assets as distinct from the assets of a household or individual. In reality, the assets of an individual are likely to be sub-sets of the total assets of a household. This may also be true for the assets of an enterprise. Individual and enterprise assets are separated in the scheme below since they can be analyzed as distinct units. The purpose of the scheme is to identify categories of assets at the household, enterprise, and individual levels. Since the categories for an individual and household are the same, the listing is not repeated. The listing of items under each category is intended to be illustrative and represents items that are likely to be significant among microentrepreneurs, their enterprises and households in developing countries.

In regard to intangible assets, only human capital has been included. This decision is based on a) the importance of household labor among poor households, b) the potential of education for opening new avenues for generating wealth, c) the relative ease of attaching a monetary value to many human asset variables or proxy measures, and d) the qualitative nature of the other types of intangible assets. The exclusion of other types of intangible assets is not intended to diminish their significance. Indeed, access to credit is the foundation for an impact assessment of microenterprise credit programs. Rather, it is suggested that these other intangible assets should be regarded as other types of *resources*. Assets are but one kind of resource.³

It is recognized that in reality a single asset may be acquired and used for both the enterprise and the household, or by the household and an individual or individuals within the household, and that this may change through time. An asset or group of assets may be transferred between an enterprise, household, or individual(s) as preferences and demands shift through time. Through empirical investigation the researcher may determine to what extent a specific asset should be classified as representing the wealth of an enterprise, an individual or individuals, or the entire household.

Household and Individual Level Assets:

Financial Assets:

cash, savings accounts, deposit/checking accounts and interest earnings
loans and gifts (that contain the explicit agreement of repayment)
financial instruments such as bonds

Physical Assets:

buildings and land, and improvements to these
livestock
permanent crops and trees with marketable crops or value
other physical items which maintain or increase in value such as gold jewelry
physical items that decrease in value; consumer durables such as household
appliances, shoes and clothing; transportation

³ See Chen and Dunn (1996) for a discussion of resources and ways AIMS might consider these in its assessments.

Human Assets :

skills and knowledge
labor inputs
self-esteem

Enterprise Level Assets:**Current Assets:**

inventory of finished products/stock
raw materials
cash, deposit/checking accounts, accounts receivable
loans

Fixed Assets:

premises, building, and utilities such as indoor water supply and telephone
components of production such as machinery, equipment, and tools
means of transportation such as car, truck, bicycle, or rickshaw

Human Assets:

management and technical knowledge and skills
time and capabilities of household members

Assets may be conceptualized and categorized in other ways. A common approach is to classify household assets into two categories: *productive and non-productive* (Belbase 1991; Dunn 1994; and Hulme and Montgomery forthcoming). Under this scheme, land, livestock, and equipment are classified as productive assets and housing, furniture, radios, bicycles and other consumer durables as non-productive. However, some of the items listed as non-productive may be used to generate a cash income stream. For example, a house may be used to generate income through rental of a room and a refrigerator can be used to store items for sale and for household consumption. Furthermore, the labor force of a household, especially poor ones, may be its major productive asset (Belbase 1991). The productive - non-productive categorization is based on an assumption about *how* an asset will be used and thus can be misleading since use can vary through time.

In comparison, the classification of assets proposed above is based on attention to impacts at three levels: household, enterprise and individual. It establishes three categories under each level, based on the characteristics of the assets. The enterprise level uses the two categories normally applied - current and fixed - and adds human assets. The household and individual levels have similar categories: financial, physical and human. Since the term microenterprise is normally used to refer to off-farm enterprises, agricultural land, crops and livestock are classified under household. However, when the ME program being assessed covers on-farm enterprises, one might choose to categorize land, crop and livestock assets as “enterprise” assets. The actual situation will determine which level is appropriate. Furthermore, one may choose to add individual and enterprise assets to the household asset category to derive total household gross assets. This would yield information on all assets under the household unit.

B. KEY CHARACTERISTICS AND QUALITIES OF ASSETS

1. Financial Assets, Enterprise Current Assets and Liabilities

The *financial assets* category for households and individuals is similar to the concept of *current assets* employed for enterprises. Both include cash, cash savings, financial instruments and funds extended in loans. The enterprise current assets category also includes movable physical assets such as raw materials, finished products and stocks of merchandise.

Cash savings may or may not earn interest. Money saved in a cash box and safeguarded by a money keeper does not generate interest payments. Also, deposit accounts and funds paid into a rotating savings and credit association (ROSCA) do not normally earn interest. In contrast, interest is normally earned on savings accounts, building society accounts and postal savings schemes. Thus, the structure of savings implies whether there is the potential to maintain or increase the real value of the principal. Realizing this potential is largely determined by real interest rates in contrast to nominal rates on savings accounts.

Informal loans made to friends, neighbors and business customers represent savings and sometimes earn interest, in cash or in-kind. Informal loans are classified as current assets of the enterprise or financial assets of the household or individual. In many contexts such loans are not recoverable in a timely manner and, hence, not very liquid.

Liabilities include the outstanding principal and interest on loans from the informal and formal sector. Enterprise liabilities may be in goods rather than cash. Household or individual liabilities may also be in cash or kind, such as grain or livestock. Included in the liabilities of a household or individual may be dowry or bridewealth owed, representing a sizable long term debt. Equally important, there may be anticipated obligations, (e.g. related to dowry or bridewealth) that are expected but not yet incurred. The welfare gain from an accumulation of assets may be attenuated by an anticipated need to provide for future liabilities of this sort.⁴

2. Household and Individual Level Physical Assets

Physical assets vary in properties and qualities. They may maintain, increase or decrease in value. Especially in developing countries, physical assets such as animals, stocks of grain and gold jewelry are often held with the express intent of savings (Robinson 1994; Shipton 1990). In countries with actual or potentially high rates of inflation, property that maintains its real value is considered important and worth risk of loss (e.g. theft) since cash savings are likely to lose real value. Even investments in interest-bearing savings products may lose their real value, due to nominal interest rates.

Houses and other buildings, and land with key infrastructure, permanent crops or trees, are all physical assets. These are considered to maintain or increase in value. Improvements to these

⁴ Dunn (1996) focuses on debt and the impact of microenterprise credit.

further increase their value. Registration of real property owned represents increased security of the asset.

In societies where rural land is governed by a communal land tenure system, household land is usually held by the male head of household on behalf of all the household members. In some of these societies, parcels of household land can be allocated to individual members and the rights to these inherited (Barnes 1995). Permanent crops are those that produce a crop over a number of years (such as tea and coffee) and represent a store of wealth over time. Trees producing marketable items such as fruits and nuts represent a potential multi-year flow of income. In some geographic areas, rights to the permanent crops or income-producing trees can be transferred without conferring rights to the land.

Many physical assets decrease in value but serve to increase efficiency and have long-term but indefinite usefulness (Sherraden 1991). Furniture, appliances (electric, gas, charcoal, and battery driven), kitchen utensils, pots and pans, and clothing exemplify types of items classified as consumer durables. Transport such as bicycles, cars, and trucks also depreciate in value.

3. Enterprise Fixed Assets

The fixed assets of an enterprise consist of the property held that is utilized in production, such as machinery, equipment and tools. The concept includes the premises, such as building and land. Especially among poor microentrepreneurs, the infrastructure on the premises such as piped water and telephone, represent installations that can be utilized in generating income. Transport may be owned and shared between household enterprises as well as used for non-income generating household purposes.

Business registration certificates and licenses also represent important investments of time and money which add to the security of an enterprise, but most permits are not tradeable. Medallions for taxis, however, are usually tradeable assets that appreciate in value.

4. Human Assets at the Household and Individual Levels

The skills, knowledge and amount of labor available within a household indicate actual and potential income flows and hence potential for accumulation of additional assets.⁵ Households tend to place a high priority on education and training of members, in part to raise the value of members in the labor market. For poor households this type of investment represents a relatively higher cost than for others. Education in most countries implies expenditure on school fees, books, transport, uniforms, classrooms and building funds, exam fees and the like. School attendance implies loss of labor for economic activities, although it may mean that children perform their economic tasks after school hours. The returns to investment in education are long term, but investment in education may

⁵ The human asset base also requires expenditures on its maintenance and enhancement. The wealth level of a household is better indicated in terms of per capita wealth than an absolute amount, since the former takes into account demands on the stock of wealth.

be used as an indicator of future income earning potential and hence of the asset base of the household.⁶

At the individual level, a person represents a store of labor, knowledge and skills, which can be enhanced. The individual may also control the labor of specific members of the household. A microenterprise program client is likely to gain self-esteem and greater control over resources as a direct or indirect result of program participation. Increased empowerment in turn is likely to influence the accumulation of more assets.

5. Human Assets at the Enterprise Level

Labor inputs, skills and knowledge are utilized in an enterprise. Lessons learned and experience gained within the enterprise enhance the human resource base of an enterprise, which in turn increases the value of the human assets.

The skills and capabilities of the owner and household labor used in an enterprise represent the store of wealth brought to bear on the quality and quantity of production and sales. People with more education, experience and higher occupational skills are considered as having a) more potential to produce higher quality outputs, b) greater ability to increase sales, and c) higher capacity to manage physical property to reduce waste or destruction.

C. RELATIONSHIP OF ASSETS TO INCOME AND EXPENDITURES

1. Income

Income refers to the flow of money, goods and services.⁷ The concept includes the sum of cash and in-kind flows. However, in conducting research two methods are commonly employed that omit assessing in-kind flows. One method centers on gathering information solely on cash income. The second method normally looks at: income from employment (including wages, salaries in cash and/or in kind plus any other benefits); income from sale of agricultural products grown, gross entrepreneurial income, property income (imputed rents of owner-occupied dwellings and actual payments received for use of its financial and physical assets), and transfers. (UNDP N.d.).

The *full income* concept expands the range of coverage to include income in-kind and the value imputed to services derived from endowments and assets, such as durables, housing, and time of household members, regardless of how the time is spent. Imputing the income flows derived from non-financial assets is necessary if the asset is used by the owner (Grootaert 1982).

⁶ The physical health of the household members may also be classified as part of the human asset base. Because of the large number of factors which contribute to determining the physical health of an individual and due to the complexities of measuring improvements in health, the AIMS project has decided to exclude health from its core impact assessments.

⁷ For more information, see the AIMS report on the measurement of income by Anne Inserra (1996).

2. Expenditures

Expenditure data may cover all expenditures of cash or on credit, or *total consumption expenditures*, including consumption obtained from home production, gifts and in-kind payments. The more complex consumption expenditure approach includes the value of goods and services produced by the household and utilized for its own consumption, net rental value of owner-occupied housing, and the gross rental value of free housing occupied by the household. It also includes sales taxes on goods and services. (UNDP N.d.) Some constructs include additions to savings, amounts invested or loaned, repayments of loans, and outlays for other financial transactions. Other constructs impute the flow of consumption from durable goods, such as electric appliances and shoes (Delaine et. al. 1991).

3. Differences Between Assets, Income and Expenditures

The gross value of assets are a *stock* of wealth, while net wealth is the gross value of assets minus liabilities. The stock of wealth tends to be more stable over time than income and expenditure, since the latter refer to *flows* and reflect short-term fluctuations. Assets act as a buffer against fluctuations in income and against demands for cash to meet extraordinary expenses. At any one time, assets can be built up, depleted or exhausted. Expenditures may be less than income when building up financial assets. Expenditures may be more than income when assets have been divested or liquidated to generate cash to meet expenditures.

Income and expenditure studies are normally bound by a time period. While the recall period may be relatively short, the information is usually aggregated to present an annual estimate. It is widely acknowledged that studies in developing countries show that household expenditure levels exceed income. When inflation is taken into account, expenditures are more equal to income (Paxon 1992). The gap between income and expenditures may also be explained by the disposal of assets and seasonal fluctuations.

In summary, data on income, expenditure, and stock of assets consist of different ingredients. (See Inserra 1996.) *Full income* and *consumption expenditure* take into account the flows from assets, while simpler measures do not. Assets embody a longer term perspective of wealth than do income and expenditure measures since the latter are normally constructed for a single year. Gross asset value is more meaningful when considered in relation to total liabilities, since information on both permit calculation of net worth.

D. RELATIONSHIP OF MICROENTERPRISE FINANCE PROGRAMS TO ASSETS

Assets are considered an important category to address in the study of the impact of microenterprise finance programs since they represent the gross wealth level of a unit. Assets may be used as a proxy indicator of wealth, but a more precise measure includes attention to liabilities as well as the value of the assets. Receipt of a loan represents a liability, but the use of the loan may enhance or stabilize the net wealth level. Programs that offer savings services provide a means to earn interest on cash savings. These savings are part of the asset base of an enterprise, individual or household.

Patterns of accumulation, divestiture or liquidation, and liabilities indicate strategies employed by households and individuals to plan for, confront, and take risks. The following impacts may occur as a direct or indirect consequence of microenterprise (ME) credit programs. First, loans may be used directly or indirectly to accumulate an asset. The asset acquired may lead to increases in income and further accumulation of assets. The financial benefit that can be derived from loan-based acquisition of assets depends on the rate of return to capital versus the loan rate and the degree of leverage in financing the acquisition. Acquisition of an asset to be used in generating income is qualitatively different from the acquisition of a consumer durable. Both, however, may affect attitudes and behaviors, which in turn positively affect the management of assets (Yadama and Sherraden 1995) or increase the volume of business. The latter occurs when non-income producing assets help to cement social relations or networks and hence increase the volume of business carried out by a microenterprise.

Second, the loan funds may assist a household to better manage its existing asset base or reduce its liabilities. Access to credit can enable households or individuals to meet the demand for cash without having to sell or pawn key assets used in generating income. Or, a ME loan may be taken to pay down high-priced debt and hence reduce liabilities. Third, access to credit may permit households and individuals to take risks. This access provides a security or fall-back position if difficulties are encountered.

ME program savings accounts may be voluntary or involuntary. Easy access to a savings account facility permits depositors to earn interest on their savings and represents a low security risk (see Robinson 1995). Voluntary savings may represent liquidity, whereas involuntary accounts do not. The formal terms and informal practices will influence the ease of liquidation. Voluntary savings services are likely to lead to a) a shift from non-interest bearing cash savings to interest bearing savings instruments, b) an increase in the absolute amounts saved, c) lower risk to saving, and d) lump-sum expenditures on assets or consumption. However, the extent to which interest rates represent real rather than nominal rates relates to the willingness of persons to use the savings services and on the ability of customers to maintain the financial value of their savings.

E. FINDINGS ON THE IMPACT OF ME PROGRAMS ON ASSET ACCUMULATION

1. Introduction

The purpose of this section is to highlight the findings from previous microenterprise evaluations and assessments about the impact of ME programs on asset accumulation. The information is primarily extracted from the *Overview of Studies on the Impact of Microenterprise Credit* by Jennefer Sebstad and Gregory Chen (1996). Their study reviews the findings from 32 research and evaluation reports on the impact of microenterprise credit. The reports reviewed by them and this author often do not contain information which would enable the reader to determine a) information gathered on other asset categories or variables but not reported upon, b) the scope and

depth of the inquiry, and c) how the information was collected. Many do not explain what items or groups of items are included in their measure of asset categories.⁸

2. Findings on Enterprise Assets

Of the 32 reports reviewed by Sebstad and Chen, seven of the ten that looked at the impacts of credit on *microenterprise current and fixed assets* found a positive change in the value of *fixed assets* among borrower enterprises. Two found no change (Guinea and Sri Lanka) and one found mixed effects (Malawi). Several studies pointed out that a significant proportion of borrowers (up to 30%) had no fixed assets at all. A study from Kenya showed no growth in fixed assets but a significant change in current assets, although the sustainability of the change was questioned (Buckley forthcoming).

A large number of studies consider impacts on *human assets*, by utilizing proxy indicators. The findings generally indicate that the most significant employment impacts are related to increased use of *family labor*, or increased hours of work by owners or current workers. One of the more rigorous studies concluded that microenterprise credit tends to have more impact on job stability and improved labor productivity than job creation (Nelson 1984).

The five studies which looked at impacts on *business management practices* such as record keeping, cash management, use of bank accounts and management of customer credit consistently found little or no impact in this area. The studies that looked at technologies, a proxy indicator of enterprise management, found impacts confined to a small group of borrowers who had taken multiple loans.

3. Findings on Household Assets

Ten studies looked at the accumulation of *physical assets*, and most found positive change. Three ODA case studies found an increase in total household assets among borrowers. In Bangladesh, increases ranged from 6 to 12 percent and the structure of assets changed in favor of productive assets, suggesting more secure income. In Sri Lanka, 82 percent of all clients increased their household assets, due mostly to increases in non-productive assets related to enhanced living standards. In India, household assets increased for both women and men borrowers, but more so for men (Hulme and Mosley forthcoming).

The findings from Africa are more mixed than those from Asia. A study from Guinea shows little impact on assets except for running water in homes, while a study from Senegal shows modest impact on asset ownership, with more impact for women than for men (Creevey et al 1995; Vengroff and Creevey 1994). Churchill's study from South Africa found that loans had more impact on the accumulation of household physical assets such as electricity, indoor plumbing, telephones, and vehicles, than on food expenditures (1995).

⁸ The review by Gaile and Foster(1996) identifies asset variables used in a select number of rigorous impact studies.

In several studies, borrowers report increased expenditure on specific types of household assets such as housing, land and livestock. Evidence from Bangladesh suggests that successive loans lead to a build up of productive assets over time (Montgomery, Bhattacharya and Hulme 1995).

Only a couple of studies report findings on the impact of loans on *cash savings*. These found an increase in the number of people who save regularly, but the amount of change was not measured (Chen 1992; Churchill 1995). A number of ME credit programs require clients to save in order to qualify for loans, but there is little evidence to show that clients save over and above this amount. Few studies report specifically on debt and divestiture of assets. Hahn's study (1993) from Senegal reports that 42 percent of the ME program borrowers had difficulty repaying their loans: of these, 55 percent sold assets, 14 percent borrowed money, 14 percent were "given" money by another person, and 10% used their own funds to repay their loan.

A small number of studies report on the impact of ME credit on the *human assets base* of the household: the decision to invest in more human capital and the decision to reallocate the use of the human capital assets it already has. Five reports consider the impact of credit on *children's education*, either by examining changes in expenditures on school fees, children's school enrollment, school attendance, or educational attainment. The findings are mixed. Two studies show positive results, but the findings from other studies are less so. Pitt and Khandker's Bangladesh study shows that credit has an impact on boy's schooling but not girl's. Peace and Hulmes' cross regional study and Creevey's Guinea study found no evidence to support the hypothesis that credit has a positive impact on children's education. The cross regional study even suggests that, in some cases, credit may have a negative impact on children's education by increasing the demand for child labor.

The only systematic look at the impact of credit on *reallocation of the household labor supply* was Pitt and Khandker's study from Bangladesh. They found that credit to women increased women's labor supply but reduced men's, while credit to men had no effect on women's labor supply, while also reducing men's.

In regards to an *individual's assets*, none of the studies reported specifically on the financial or physical assets of the individual. However, the Pitt and Khander study from Bangladesh reports on the non-land assets of two household sub-groups: female members and male members. They found that credit to women increased women's non-land assets but credit to men did not lead to increases in their non-land asset holdings.. Other studies look at the impacts of credit on women's control of assets, but it is difficult to draw a general conclusion from the findings.

4. Conclusions

To date, more studied attention has been given to enterprise rather than household assets. Researchers tend to cover the three enterprise asset categories -- current, fixed and human -- but few focus on net worth of the enterprise. In comparison, most of the household data focuses on physical assets, with relatively little attention to household financial assets, financial liabilities, and human assets. In regards to the individual level, no studies report on the accumulation of assets by an individual, but one includes attention to the assets of women in comparison to men. At this level, the focus has been primarily on the control of assets.

Gender dimensions have been taken into account in a few studies by attention to schooling, intrahousehold ownership of non-land assets, and sex of the client. Very few studies relate the wealth level of the client or client household to the impact of credit on different asset categories. The findings emerging from recent studies which look at the wealth level of the client vis a vis which asset categories are affected by ME credit, are insufficient to draw a defensible conclusion. However, the studies repeatedly suggest that asset accumulation is incremental, and successive loans lead to a build up of enterprise and household assets. This includes studies which compare clients with non-clients, or first time borrowers with recurrent or former borrowers.

III. APPROACHES TO STUDYING ASSETS

A. INTRODUCTION

The purpose of this section is to provide an understanding of the range of approaches used to study assets and the key issues related to measurement. The review of approaches incorporates information primarily from the microenterprise evaluation literature that illuminates approaches to a) utilization of assets as impact and control variables, b) breadth of asset coverage, and c) measurement of assets. While other literature on specific asset items (such as livestock, housing and land) and on household surveys was examined, it was found to be less useful since a) AIMS is unable to carry out several rounds of data collection on a relatively large sample, and b) an impact assessment requires careful attention to accurate measures in order to capture small, incremental changes.

B. USES AS A VARIABLE

1. Impact Variables

In a study of the impact of ME programs, the program is the presumed cause (independent variable) of changes found in the selected impact variables (dependent variables). As implied above, assets or net worth are considered an important dependent variable category to study in the impact of microenterprise program services. Impacts can be direct and secondary. A direct impact is an outcome or result. There is clearly a traceable link between the cause and effect: the program and the phenomena labeled the outcome. The secondary impacts are the indirect effects. Given the fungibility of funds between the enterprise, household and individual client, the indirect effects may occur along a circuitous path.

2. Control Variables

The basic aim of an impact assessment is to estimate the impacts of an intervention by attempting to isolate the non-program factors that may also account for changes found in the impact variables. The most common way to separate non-program factors from the program impacts is to compare program participants and nonparticipants with similar characteristics. Since there are political and ethical issues involved in employing an experimental research design that would randomly assign potential clients to a nonparticipant or participant group, studies usually use a non-random control or comparison group to gather data on nonparticipants.

A major issue is accounting for dissimilar characteristics from the outset in the program clients in comparison to others in the population. Studies inside and outside the microenterprise impact literature often use the wealth level of the household as a control variable. Educational level is also commonly used by researchers as a control variable. In the microenterprise impact literature, for example, Mustafa et al (1995) consider the aggregate education level of the family, number of working age members of the household, and land ownership.

The discussion in this paper is directed at assets as an impact category, but the examination of measurement approaches and issues is applicable to including assets as control variables and distinguishing differences among clients.

C. EXTENT OF ASSET COVERAGE

1. Approaches

There are basically two approaches to studying the impact of ME credit programs on asset accumulation. The first approach centers on documenting the direct use of the loan funds. The second focuses on assessing changes in asset accumulation during a bounded period, normally from the date the first loan was received to the date of the interview. In both approaches data may be gathered by detailing information under an asset category for a particular level (i.e. enterprise, household or individual), or by obtaining information on a group of items under each category.

In the first approach, information is gathered on how clients used their loans. The most common method is to learn whether the loan funds were allocated to an enterprise activity, household use, or savings. Sometimes more precise information is obtained, such as the amount or proportion of the loan expended by asset category and level. The use of ME loans to pay-off debts is also a line of inquiry (e.g. Sebstad and Walsh 1991; MKNelly and Watetip 1993; Montgomery, Bhattacharya and Hulme 1995).

In the second approach, there is also variation from very general to more detailed coverage. In this approach researchers seek to understand changes in the asset base over a fixed period of time. In principle, the broadest coverage would be to inquire about items under all of the asset categories for the enterprise and household (with the latter being an aggregation of data on individuals or groups of individuals within the household), and about liabilities. No microenterprise impact evaluations have been identified which cover all asset categories for all levels and include attention to liabilities. The most comprehensive coverage of assets appears in Pitt and Khandker (1994), Sebstad and Walsh (1991), and Hulme and Mosley (forthcoming). In comparison, some studies focus primarily or exclusively on enterprise assets (e.g., Ecyes 1992).

As mentioned previously, few studies look at individual or intrahousehold impacts. The studies by Creevy (1994 and 1995) include gathering information on a select range of assets for both the female client and her spouse. Pitt and Khandker (1994) obtained information on the non-land assets of both the female and the male household members.

2. Coverage Options

Examples of limited and more extensive coverage of assets are provided in two modules developed by Dunn (1994). The program assisted activities module covers:

- enterprise assets - information on buildings, equipment and inventories of assisted activities,
- household assets - a limited range of consumer durables,
- individual assets - liabilities of individual and value of individual savings.

Dunn's comprehensive household module includes the following categories of assets.

detailed information on land and buildings,
income earning assets on and off the farm,
household and personal belongings,
household liquid or semi-liquid assets, and
capital invested outside the household.

The study by Pitt and Khandker covered the current value of the following non-land assets:

household and transport assets (housing structure, bicycle/motorbikes, boat/rickshaw,
handcart/bullock or horse carts, and other transport)
agricultural equipment and animals (ploughs, other agricultural equipment, draft cattle,
dairy cattle and calves, goats/sheep, poultry and other animals)
non-agricultural equipment and other goods (tools, processing equipment, furniture
household utensils and kitchenware, electronic goods and appliances, gold/silver
jewelry. (McKernan, pers. com.)

An alternative to asking about separate asset categories is an open-ended approach to capture all asset categories. Respondents are asked which assets have been acquired and disposed of since the initial bounded period (Creevey N.d. and 1995).

The most common approach tends to be the collection of information on the current, fixed and human assets of at least one enterprise and on a limited range of household physical assets.

D. MEASUREMENT APPROACHES

1. Overview

Six approaches to measuring assets are found in the microenterprise impact literature, although the first and fifth are the most common. These approaches center on: 1) attaching a current monetary value to assets and liabilities, 2) computing the flow value from productive assets, 3) ranking assets, based on their assumed monetary value or on other qualities, 4) constructing an index which is a composite of measures, 5) specifying whether or not a specific asset is held, which may be used to discuss the structure of the holdings or other qualitative dimensions, and 6) determining the meaning of the assets to the owners and the social effects of the assets. A single study may combine different types of measures for different asset categories.

2. Financial Values

The first and second approaches are the most complex. In the first, a monetary value is derived for each asset or an asset category and for each or a group of liabilities. This permits the researcher to calculate the net worth at a particular point in time and enables her to assess changes in net worth for a bounded period. The net worth may be calculated for a single enterprise, more than one enterprise, the household or an individual.

Figure 1: Example of Collection of Data on Value of Household Assets

	Value at X time	Value Now
House		
Land		
Livestock		
Gold Jewelry		
Furniture		
Cash Savings		

Two methods tend to be used to estimate the value of each item in the enterprise fixed assets and household physical asset categories. The simplest method is to ask: What is the current value? or If it were sold, how much could you earn? (e.g., Ritchie, Bhuiya and Rashid 1995; Dunn 1994; and Minot per.com.). This question may be asked about an asset group or for specific assets. Figure 1 provides an example of the former and applies to a one-shot survey.

Another method for determining the value of assets involves obtaining information which permits the analyst to depreciate the value of the asset and adjust for inflation⁹ (see Daniels, Mead and Musinga 1995). An example appears in Figure 2. In this example, information is collected on each asset.

FIGURE 2: Example of Method of Collecting Data on Physical Assets to Permit Calculation of Depreciation

Fixed Assets	Year Purchased	Purchase Price	# Life Years Left
Tools and Equipment			
1. Item A			
2.			
3.			
Machinery			
1.			
2.			

The second approach, used by Bolnick and Nelson (1984), involves computing the value of the service flow from assets owned and rented, and for labor. This was done after encountering problems in the field stemming from the fact that some entrepreneurs owned assets, while others leased them on various terms. The intention was to measure the (constant price) change in value of assets held, but they found that this did not work. As a result they chose to estimate the value of capital service

⁹ It should be noted that the value of land is never depreciated.

flows. The capital stocks that are owned are converted into their corresponding capital service flows, so that the rental flows can be directly added to or compared with them. The service flow from an owned fixed asset can be determined by using a capital recovery ratio that can be added directly to other owned assets plus annual rentals to obtain capital service flow. For the analysis of labor, information is obtained on both the number of workers and the person-time service flows. In regards to valuing land since it does not depreciate, the rental value is used. When respondents and enumerators in the Nelson and Bolnick study found it difficult to provide correct economic lifetime and scrap values for assets, the field - report value was replaced with an “accounting” value.

3. Other Approaches

The third approach involves construction of a ranking system. A ranking implies that one answer is better than another. This approach is not common in the ME evaluation literature: it was found only in a poverty profile questionnaire developed for CARE Bangladesh (Ritchie, Bhuiya and Rashid 1995). Figure 3 provides an example of the ranking of responses for one item.

Figure 3: Example of Ranking

Construction of house owned by household	
Fully tin roof	2 points
Partially tin roof	1 point
Thatch roof	0 points

The fourth approach involves development of an index, which is a number that is a composite of two or more other numbers that may be of different measures. Although no examples were found of an index based on asset holdings or liabilities, Schuler and Hashemi (1994) constructed an index of women's empowerment. Five domains of empowerment with a number of indicators in each domain were defined. Then groups of variables within each domain were scored to obtain a single indicator for each of the domains and then these were combined into a single score. This index included indicators of the decision-making power within the household to make small and large purchases. An index could be developed that would aggregate information collected across asset categories that have different measures to present a single indicator which represents a summation of asset accumulation.

The fifth approach records the presence or absence of an asset. This approach is commonly used for consumer durables in national household accounts and poverty studies. The information may be aggregated and the level of statistical significance of differences between groups presented. Figure 4 presents an example of a comparison of changes in having/not having a particular consumer durable during a bounded period for savings club members compared with non-members.

Figure 4: Example of Comparing Accumulation of Consumer Durables Between Two Groups

Durable	Mean Cohort Rosca Participation	t-statistic
Gas heaters	.323	3.66**
Kitchen fans	.272	3.29**
Automobiles	.063	2.19*
Refrigerators	.054	.03

*=significant at 5%; **=significant at 1%

The dependent variable is the within cohort increase in the rate of ownership of the durable good. Each regression contains a constant; GDP growth; consumer price inflation and controls for total household income, and number of children, number of adults.

Adapted from Besley and Levenson. (1995) The Role of Informal Finance in Household Capital Accumulation: Evidence from Taiwan.

Information gathered on the presence or absence of an asset may be complemented by additional information. For example, the collection of information on financial assets may seek to determine the pattern or structure of savings rather than the monetary value of those savings.

The sixth approach involves a qualitative assessment of the meaning of the assets acquired and the social effects of asset accumulation. To some extent the former is included in studies which assess increased control over own or household resources by female clients as a result of ME program participation. This is taken further in the work done by Sherraden et. al. (1995). Particularly among the very poor and women, ownership of an asset may enhance their self-esteem which becomes reflected in economic and social behavior. For example, self-esteem or social status may be enhanced from just owning goats, regardless of the amount of equity in the goats. The enhancement of social status, in turn, may increase the number of customers and volume of business of the microentrepreneur.

E. KEY MEASUREMENT ISSUES

1. Difficulties in Enumeration and Valuation

Difficulties arise in identifying or counting specific types of assets and providing a reasonable estimate of the real value of certain types of assets. Some assets may not have a market value or the respondent may not know the market value or original cost of the item. In general, the ability to remember the cost of an item or amount of savings or debt is likely to increase with a person's level

of poverty.¹⁰ However, due to households often consisting of an aggregation of independent economic units, a person may not know about the value of the assets held by another member.

The most intensive method is to devise a balance sheet for a particular point in time. If an evaluation is one-shot, the information is also recorded for an earlier, specified point in time. The balance sheet accounting method is explained by Goldmark and Rosengard in *A Manual to Evaluate Small-scale Enterprise Development Projects* (1985). They state that when no balance sheet statements are kept by an enterprise (which is the norm for microenterprises) the researcher should attempt to reconstruct them only if the enterprise has little inventory and few fixed assets. One may assume that this advice reflects the difficulty of reconstructing a balance sheet when many assets are involved.

A cautionary note about valuation of fixed and current assets is sounded by Buckley (forthcoming). He states that:

This was probably the most “difficult” area of the questionnaire and the findings should be treated with caution. The two biggest difficulties in collecting reliable data involved the correct valuation of assets and the proper separation of assets... there was a noted tendency for respondents to overestimate the real value of their assets (especially fixed assets) by ignoring depreciation and appreciating the value to correspond with the current, new purchase price of the particular item. (p 407 draft)

Two other issues arise with employing the method exemplified in Figure 2. This method does not take into account that the value of a fixed asset may appreciate in economies with foreign exchange shortages or import restrictions (Sebstad and Walsh 1991). Secondly, if the respondent was not the person who purchased the item then she may not know the exact cost.

Another general issue concerns the quality of the assets. If one focuses only on the quantity or presence/absence of a physical asset, important nuances may be missed. For example, if the researcher looks only for the presence/absence or quantity of items, investments in upgrades will be ignored. Information on the value of the asset tends to capture the qualitative dimension, but this may be missed if information is collected only for a sub-group rather than on individual items.

Difficulties arise related to adequately accounting for the number of certain types of assets and their value. For example, when small stock such as chickens and goats are numerous they are difficult to count and interviewees are unlikely to know the exact number owned. In terms of value, the age of a larger animal (e.g. cow) relates to its value but respondents are unlikely to know about

¹⁰ Because homes are the most valuable asset owned by a majority of American families, researchers have investigated the differences between owners' estimates of their home value and appraisers' estimates (Kish and Lansing 1954). They concluded that the discrepancies between the two estimates were great, but errors tended to be offset within price classes and overall, the difference in the mean housing value obtained from owner-occupants and from appraisers was small. A later study confirmed that errors of estimate may be large for individual properties but the errors are largely offsetting for reasonably sized samples. It also found that errors of estimate are related to socioeconomic characteristics of the home owners: the higher the level of schooling the greater the underestimation of market value (Kain and Quigley 1972).

the age of each animal if they have several. In such cases, the responses are normally a general estimate.

In regards to land, it may not have a market value because of the land tenure system, for example, communal land tenure. In such cases, information may be obtained on size of the holding, sometimes specifying the size of the cultivated holding, as a proxy for its value, in order to permit comparisons between sample groups. This method is weak, however, when the study covers different agroecological zones since the quality of the soil and rainfall patterns have more relevance than size to the productive potential of the land.

In other contexts there may be a scarcity of land for sale, hence, it is an asset which money cannot buy: there is not a market for land or land is not readily available even if one had the means to purchase it. In these cases, households cannot choose to accumulate land. Therefore, land may be excluded as an impact category (e.g. Pitt and Khandar 1994).

Housing is a physical asset which may represent a significant portion of the wealth of a household. Home construction and home improvements may be an incremental process. Poor people tend to incrementally buy the materials needed for the construction or improvements. For example, poor people will buy items such as bricks when funds permit, cement at a later time and so forth to accumulate the materials necessary for making the improvements. These small purchases need to be taken into account when documenting changes in the physical assets of households, since they represent an interim stage towards increasing or maintaining the value of the real property.

In some contexts, the working poor may accumulate houses in urban or peri-urban locations to generate a flow of income and as longer term investments. Moreover, in urban contexts some people own their house but rent or lease the land on which the house resides. In such situations, the value of the house but not the land should be considered as part of the household's asset base. Thus, an impact assessment needs to take these possibilities into account.

A large number of items can be listed as consumer durables which decrease in value over time. It is generally considered infeasible to obtain information on the value of each durable or group of durable items or to provide a ranking of these. The ranking of them is not advisable unless one takes into account the quality of the items. In regards to obtaining the value of each, this tends to be a low priority. Asking questions related to money tends to be very sensitive and at times awkward for the interviewer, especially when the person is poor. Therefore, assets, which may represent a more significant store of wealth and income earning potential, may be considered a higher priority.

2. Fungibility of Assets

In reality, assets may be used for one or more businesses, and between the household and enterprise(s). Buckley (forthcoming) points out that an inevitable difficulty arises with interviewees in distinguishing between household assets and business assets, especially when the business is undertaken at the person's home. Taking this into account, Daniels in Kenya and Minot in Laos specifically asked about percent of home/building used for business versus household (per.com.). In principle, this apportionment question could be incorporated for all physical/fixed assets and used to account for assets employed in more than one enterprise.

Another method was used by Sebstad and Walsh (1991) in Kenya to capture the fungibility of capital among household enterprises. Using the loan period as the boundary, interviewees were asked if they drew profits or working capital from other household enterprises to a) help repay the loan, b) invest in the loan assisted enterprise or c) invest in other household enterprises. A binary yes/no answer was recorded.

Sebstad and Walsh question the necessity and appropriateness of reconstruction of full balance sheets for microenterprises with a very low equity base. Because of the fungibility of capital between household enterprises and between enterprises and the household, they conclude that changes in the “net worth” of the household over the loan period is a better indicator of impact than changes in the “net worth” of a single or group of household enterprises. This tends to be substantiated by Graham's study in Kenya where most of the enterprise assets are current assets, which are intermingled with household financial assets. The type of microenterprise and its size are factors influencing the extent to which fixed assets are distinct from household physical assets.

3. Accounting for Liabilities and Savings

Conceptually debts and cash savings, which are components of enterprise current assets, may in reality represent the financial position of the individual. Enterprises do not accumulate their current assets and liabilities: their owners do. Therefore, information on liabilities, cash savings and financial instruments collected for the “enterprises” of microentrepreneurs are likely to represent the financial asset position of the entrepreneur, unless otherwise specified when collecting the data.

Financial assets and liabilities may be studied at the enterprise, household or individual client level. Outstanding debts must be taken into account since borrowing is dissavings. The amount borrowed, term of the loan and interest rate should be recorded for both cash and in-kind debt (such as grain). However, since in-kind debt consists of small and frequent loans (Cuevas 1986), the reliability of the information on the value of these may be questionable.

Of all the categories, financial savings and debt are the most sensitive topics. In many societies and situations, household members do not share such information among themselves. For example, Phil Raikes (pers. com.) found that savings accounts introduced through the coffee cooperative union in Kisii District, Kenya, were extremely popular with male farmers since they were better able to hide money from their families! Even when one knows about the financial assets and debt of other household members, she/he may be reluctant to share the information with an outsider for fear of how it will be used.

Because of the sensitivity of obtaining reliable information on debt and financial assets, special techniques may be employed to obtain information at the household level or information gathered to determine a pattern rather than a monetary value. An example of the latter is finding out if the microentrepreneur has a savings account, whether it is used, and whether the amount in the account has increased, decreased or remained about the same for a bounded period.

The World Bank's Living Standards Measurement Survey (LSMS) collects information on household savings and debt but places the questions at the end of the interview so as not to jeopardize the other sections and to permit rapport being established between interviewer and respondent.

(Grootaert 1986). LSMS interviewers are instructed to exercise extreme confidentiality in obtaining responses to the questions on credit and savings. No other person should be present when this section is asked. The respondent is to be the “best-informed person”, usually the household head. Interviewers are told whenever possible to interview each adult in the household about saving and debt, and sum their responses. (Ainsworth 1988)

Respondents may be asked to provide a written rather than verbal response. This technique appears promising. It was successfully employed by M. Sherraden (pers.com) and also provided as an option to LSMS respondents. The reliability of the data, however, still relates to the interviewee actually knowing the information.

One might interview more than one person in each household in order to aggregate the information at the household level and about other household enterprises. However, the more persons interviewed in a household the more time it takes since it often requires additional visits to the household in order to interview the other people. If the others are available, it is usually awkward to conduct an interview in private, especially since husbands are often suspicious if they are asked to leave when their wives are being interviewed. Even if the person responding to the question writes the answer, the presence of another household member is likely to cause uneasiness and distract the respondent's attention.

An option to obtaining the value of savings and debt is to look at the structure. An example of assessing patterns of financial asset holdings rather than monetary values was the questionnaire used by Creevey in a multi-country evaluation of a UNIFEM program (Creevey N.d.). Questions about the female client and about her husband related to whether or not each had a savings account, investments, or shares in an enterprise or company.

4. Human Assets

In many societies people place a high value on education. Therefore, an ME financial services program may not impact significantly on the level of education attainment during a bounded period. However, there may be a quantitative change in the amount of funds expended to increase the quality of the education received, for example, by sending a child to a better school or spending more on textbooks. Expenditures may serve as a proxy indicator of increases in the human asset base.

Also, among poorer households there is often a significant difference between a child being enrolled in school and that child attending school. Children are often pulled away to assist with household income-generating activities. Therefore, both the total amount expended on education and complementary questions about school attendance and changes in labor allocation are important proxy indicators of an increase in the human asset base of a household.

VI. IMPLICATIONS FOR THE AIMS IMPACT ASSESSMENTS

A. PARAMETERS GUIDING THE RECOMMENDATIONS

1. Premises and Assumptions

A set of premises and assumptions influences the parameters and contents of the discussion in the following sections. First, the AIMS core impact assessments (CIAs) should be focused to produce methodologically defensible results. Second, AIMS should avoid looking for impacts at only one level (i.e. enterprise, household, or individual), since impacts are likely to be found in all three levels, pending on the circumstances. But, not enough is known to be able to predict *a priori* at which level the impacts will be felt.

Third, information has a cost. The more time it takes to conduct an interview the greater the potential for interviewee and interviewer fatigue leading to non-sampling errors. Fatigue and impatience may also bias responses in qualitative interviews. In addition, there are costs in planning, collecting, processing and analyzing the data. Therefore, AIMS needs to determine the most significant and reliable information to collect.

Fourth, multiple methods should be employed to ameliorate the weaknesses in qualitative and quantitative methods. Certain types of questions lend themselves more to qualitative than quantitative interviews. In AIMS both methods should be employed.

Fifth, the survey instruments should be relatively easy to administer by non-professional enumerators after a few days of training. The questionnaires should consist largely of closed-ended questions. Open-ended questions should be included to obtain the views of respondents and capture unanticipated responses. However, since open-ended questions are prone to coding errors when the information is categorized and aggregated, the number should be limited.

The surveys may be supplemented by a set of case studies, which would collect more qualitative information. The case studies would focus on information on *how* and *why* certain changes occur (Yin 1994) They would assist in providing disproving -proving evidence that changes in the impact variables are linked to receipt of the microenterprise program services (GAO 1990). Given the skills required to obtain the information without biasing responses, experienced, properly trained practitioners or professionals should be utilized to conduct the qualitative interviews.

2. Discussion of Trade-offs and Options

Trade-offs exist in balancing the extent of coverage, depth of coverage, and data reliability. The decision about which of the following options to follow should take into consideration the reliability of the information obtained, the significance of that information and its sensitivity to showing gradual changes, and the inclusion of other variables in the study (e.g. income) which indicate economic welfare.

The CIAs could focus on either 1) changes in the net worth of households (and/or enterprises), or 2) changes in key asset categories using different measures for different hypotheses. The first option involves deriving estimates of the financial value of the gross assets and liabilities in order to calculate net worth. Changes in net worth would be calculated using the information obtained in the first and second data collection rounds.

The second option involves using different measures, depending on the hypothesis and variables. For some, financial values would be obtained, and for others changes would be measured using non-financial values. The following are suggested criteria for selecting which assets to focus upon:

- those that are most important to households and enterprises,
- those that are indicative of changes in the level of household economic security or enterprise stability and growth,
- those that are most likely to be impacted by ME services,
- those that are feasible to measure, and
- those that are relatively easy to measure, but significant.

Selection between the two options needs to factor in the reliability of the information collected. Figure 5 rates the relative reliability of information on the stock of assets under each asset category for the three levels. Ratings are given for each asset category on the relative reliability of information on a) the number and value of assets and b) the direction or pattern of change. ***It assumes that the information is obtained from one person, the ME program client, and that the person is willing to provide the information.*** Two listings are given at the enterprise level, for the client's own enterprises and for the enterprises of other household members. The relative weighting is based on the discussions in the previous sections about measurement issues.

As implied in Figure 5, information on the value and number of assets is prone to involving a great deal of response error if collected from only one person. It suggests that if information on net worth is desired, then more than one person in the household should be interviewed. Alternatively, information should be sought on the direction or pattern of change, although this information is less robust. A middle path would be obtaining the value of some asset categories for which relatively reliable and significant information can be gathered and looking at the direction or relative change in other categories. This path will not lead to determining net worth, but changes in the different categories would serve as proxy indicators of economic well being and could be utilized to construct an index.

Household Level

Participation in ME financial service programs leads to a gradual increase in net worth of the household.

Sub-hypotheses:

leads to improvements in housing.

leads to increased value of physical assets utilized in income-generating activities.

leads to increased value of financial assets (value of financial assets minus liabilities)

Participation in ME financial service programs leads to increased expenditure on education and training of its members.

Participation in ME financial service programs leads to better management of the existing asset base.

Enterprise Level

Participation in ME financial service programs leads to increased net value of current and fixed enterprise assets among the working poor.

Participation in ME financial service programs leads to diversification of enterprises (existing and additional) by the very poor.

Participation in ME financial service programs leads to better management of the asset base.

Individual Level

Participation in ME credit programs leads to increased accumulation of financial and physical assets over which the client has control.

Participation in ME credit programs leads to greater self-esteem.

The above hypotheses relate to whether clients' households increase their economic security, whether enterprises become more stable or grow, and whether clients become more "empowered". At the household level, one hypothesis relates to increased net worth, another to enhancement of the household human asset base, and the last to better use of existing resources. It is suggested that information be collected on net worth in a manner that would permit testing sub-hypotheses. This is proposed since calculation of net worth is subject to errors of recall, while specific sub-sets of net worth may be more sensitive indicators. Two other indicators are recommended for the household level in order to capture changes not reflected in net worth which may be significant among the very poor households. It is anticipated that increases in income will lead to increased investment in the education and training of household members, a proxy indicator for enhancement of the household

human asset base. More funds should be expended on education, which is highly valued and tends to be a prerequisite for increasing the wealth level of an individual or household.

Also, it is expected that very poor households will better manage their existing asset base since access to financial services presents them with an alternative to depletion of key assets during times of crises. Better management of the existing asset base can be measured by a variety of indicators. One is to determine that key physical assets utilized in income-generation were not sold during periods of financial crisis. Other indicators are: reduced amount of interest paid on a given debt level, and purchasing items in bulk or with cash rather than on credit.

At the enterprise level, increased net value of the clients' current and fixed enterprise assets is anticipated among the working poor. The extremely poor are not expected to be engaged in activities which require much investment in fixed assets and are expected to have greater fungibility of financial/current assets between the enterprise and household. Moreover, it is expected that impacts will be realized in better management of fixed and current assets. Indicators of this may be improved enterprise-related debt terms and options and buying in bulk. It is also hypothesized that extremely poor households will diversify existing enterprises or begin new enterprises, hence expanding their base of income flows.

At the individual level, it is anticipated that the ME program client will gain increased control over financial and physical assets acquired as a result of the program. This greater control is an indicator of increased empowerment. Also, the meaning and significance clients attach to this empowerment and changes in the asset base should be investigated. It is hypothesized that the self-esteem of clients will increase. Qualitative measures will need to be developed to test these hypotheses.

3. Suggested Approach for the Impact Assessments

AIMS should focus on assessing the direct uses of ME program loans and savings to acquire assets as well as the secondary impacts of program participation. Information should be collected on how loan funds were allocated, and if used on more than one thing, the relative amounts allocated to each. If the client has received more than one ME program loan or withdrawn program savings more than once during the bounded period, each instance should be documented to determine the use. This suggestion takes into account that the concept of fungibility suggests that loan funds can be used for expenditures which would have been incurred anyway or for crises events, but argues that how the loan funds are used will help in interpretation of the survey results and will increase our understanding of the fungibility process.

While it is recommended that the CIAs include a focus on changes in net worth, the emphasis should be placed on the changes between the two data collection points rather than on establishing the net worth base. This is a subtle but important distinction. Furthermore, to help with interpretation and verification of the results, complementary information of a qualitative nature should be obtained. This is extremely important since the range of measurement error may make it difficult to know how much of the change is genuine and how much reflects measurement problems.

During the second round, questions should be asked to identify sales of assets and accumulations since the first interview, using standardized probe questions on kinds of assets to assist respondents with recall. For example, for housing, information would be obtained on improvements made and materials purchased and on-hand for future improvements. For other physical assets, the information collected would include: item and number, which member owns the asset, date and mode of acquisition and estimated current value. The sale of assets would cover: item and number sold, who owned, how much obtained from sale, year and month sold.¹¹ The results for the client and comparison samples would be compared to identify differences in the average asset values between the two groups.

In regards to consumer durables, it is suggested that a short list be devised of items likely to be purchased. It might include: appliances (radio, refrigerator, gas stove), and furniture. The field focused research conducted prior to the CIA should help to determine which items to include. The second round of data collection would focus on changes in whether or not this item is present and if there had been any upgrades. Open ended questions would elicit information on other consumer durables acquired during the bounded period but not on the shortlist and on the sale of any consumer durables during this period. For all acquisitions, the mode of acquisition should be elicited, that is whether a gift, bought on credit, or purchased outright, and the source of funds.

Indicators of better management of the resource base should be devised. Examples are increased buying in bulk, increased (voluntary) cash savings in interest bearing accounts (whose rates reflect real not nominal interest earnings), and maintenance of the main household income-generating assets during times of crises.

In regards to human assets, it is suggested that information be gathered on the amount of money spent on education and training of household members, disaggregated by sex. The expenditure data would serve as a proxy indicator of improvements in the human asset base of the household. Information on the funds expended would be recorded, along with complementary information, during the first and second rounds. The data would be compared, taking into account inflation, to determine increases in investment in education and training.

The data collected under household physical assets would permit the researcher to extract information on the individual client. Additional questions would determine the control over physical assets accumulated by the client.

At the enterprise level, it is suggested that information be collected on at least one of the client's enterprises. It could be the main microenterprise, the enterprise for which the loan was intended or the enterprise which received the largest proportion of the first loan. During the first round the value of the fixed assets and current assets should be collected. AIMS will need to decide whether information on current assets is limited to the enterprise or represents the position of the individual client. Better management of assets can be measured indirectly by improved enterprise-related debt terms and options, and purchasing in bulk.

¹¹ An IFPRI/Bangladesh study on possession of assets provides a good format for these questions.

In regards to diversification of enterprises, qualitative information should be collected about all household enterprises. For example, information during the first round would be obtained on types of income-generating activities, the household member in control, and the relative contribution of each to household income. Changes in these would be documented in the second round.

The above recommendations pertain to the survey instrument. If case studies are included in the CIAs, it is recommended that information be collected on *why* and *how* the asset changes occur in order to rule out explanations which would rival the claim that the changes occur due to participation in the ME program. In addition, the case studies should illuminate planning for and management of assets, and the flows of income and expenditure on assets.

4. Additional Concerns

The approach set forth in this paper distinguishes between enterprise and household or individual assets. However, microentrepreneurs may not conceptualize a boundary between these vis a vis a particular asset. This was the situation encountered by Buckley (forthcoming). It has also been found in microenterprise research in the U.S.: Sherraden (6/96) points out that the boundary or lack of it between enterprise and household assets is, in and of itself, a key issue with important ramifications.

5. Recommendations for the Field Focused Research

The exploratory field focused studies in the countries where the CIAs are to be carried out should use in-depth interview techniques to test the hypotheses identified above. The interviews ought to be held with ME program clients in geographic areas not to be included in the CIAs, to reduce the chance of contamination of the CIA results. The clients could be asked to explain what changes had occurred in their own asset base and that of their enterprises and households. They could also be asked to explain how and why these changes occurred. Through these interviews a short list of important physical assets should be identified. Also, the field focused studies should explore feasible ways to study increased control over assets accumulated by the client and increased self-esteem.

During the in-depth interviews, the researcher should test the validity of the ratings given in Figure 5. In doing so, the investigator should determine the feasibility of obtaining information on more than one enterprise. For example, she might test the accuracy of information on enterprises owned by other household members. This would be combined with assessing the importance of covering more than one enterprise to capture the most common impacts.

In addition, the researcher should explore the feasibility of gathering information on the net worth of an enterprise and the household, and on whether microentrepreneurs distinguish between enterprise and household assets, physical and financial. The results should illuminate factors which relate to whether or not boundaries exist, and the feasibility of obtaining information on financial liabilities and assets. These factors should be considered in a review of ME program records and previous studies to determine the size and nature of the microenterprises of the clients, and the relative wealth level of the clients. It is anticipated that boundaries exist for enterprises outside of the trading sub-sector and for the working poor but not the extremely poor. In addition, the relative

reliability of information essential for construction of net worth and the ease with which it can be collected should be determined.

Besides testing the hypotheses stated above, other hypotheses are likely to emerge about assets through the interviews. The result should be to refine and narrow the hypotheses stated in the previous section and to determine whether reliable data can be obtained.

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