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HOUSEHOLDS, MICROENTERPRISES, AND DEBT

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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
AIMS Project Director

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EXECUTIVE SUMMARY

This USAID-supported study examines the role of debt as a component of household and microenterprise strategies. Debt can be part of a strategy for increasing current income, investing in the future, or coping with crises. Microenterprise programs offering credit introduce a new source of debt, often into an environment where the use of debt is already widespread. In order to develop a better understanding of the relationships between microenterprise credit programs, types of debt, and the welfare of microentrepreneurs and their households, the study examines the characteristics of different types of debt, the role of indebtedness in the household economic portfolio, and the use of debt in the enterprise.

The Household Economic Portfolio

The conceptual framework for analyzing the role of debt is provided by a model which defines the household economic portfolio as 1) the set of household resources (human, physical, and financial); 2) the set of household activities (consumption, production, and investment); and 3) the circular flow of interaction between household resources and household activities. Household resources and household activities are linked through the allocation decisions of household members and the outcomes of these decisions. Household members allocate their resources to a set of 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. All of the household=s activities must be supported by the set of available resources.

When a debt is incurred, it provides additional resources for support of the household=s activities in the current time period. At the same time, the debt represents a claim on household resources in future time periods. The addition to resources made available from a debt are fungible in the sense that, once they enter the set of household resources, they become indistinguishable from existing resources. The use of a household approach in the empirical analysis of impact improves the feasibility of measuring the impacts of microenterprise credit.

Characteristics of Debt

In general, the reasons for borrowing can be classified into two broad categories. Borrowing for consumption purposes is intended to meet the daily or seasonal needs of the household or to finance contingencies. The second category includes borrowing intended for production and investment purposes. Due to the fungibility of credit, these discrete categories may not be very

useful in practice.

Debt can be incurred from a number of sources, both formal and informal. The contrasts between the formal and informal sources can be at least partially understood by examining differences in the terms of debt. Formal sources of debt are characterized as being primarily for production purposes, secured by collateral, having high transaction costs, and with interest rates that are lower than many informal sources. Borrowing from the formal sector often involves larger loan sizes and longer repayment periods. Because of these characteristics, formal sources tend to be inaccessible to microentrepreneurs and low-income households.

There are a number of possible informal sources of debt, and these vary considerably in the terms of debt. Borrowing from relatives, neighbors, and friends can be distinguished from other informal sources. In particular, borrowing from relatives, neighbors, and friends is characterized by low interest rates, indefinite repayment periods, high levels of social pressures for loan repayment, and potentially high hidden costs. Debts from moneylenders typically carry high interest rates but low transaction costs. Among the informal sources of debt, there can be an interlinking of the credit transaction with other microenterprise transactions, such as the purchase of supplies or the sale of outputs.

Review of Empirical Studies

Selected empirical studies from Africa, Asia, and Latin America were reviewed to extend and refine the understanding of the role of debt in household economic security and in enterprise stability and growth. The empirical studies consistently point to the significant role played by informal borrowing. Even though informal loans tend to be small in size, they often account for a large proportion of total funds borrowed.

Borrowing is an important strategy that low-income households use to deal with economic stresses and to ensure continuity in critical levels of consumption. The empirical studies confirm that consumption borrowing comes almost exclusively from informal sources. When integrated into a strategy for financial management of risk, consumption borrowing can assist the household both in smoothing consumption and in retaining a given stock of fixed and working capital, thus contributing to household economic security.

Both formal and informal sources of debt can be used to support a microenterprise, although small loans for microenterprise start-up capital are generally not available from traditional formal channels. The ability to borrow on favorable terms is one of many factors that can contribute to enterprise stability and growth. The empirical evidence indicates that there is only limited substitution between formal and informal sources of debt, in that microenterprises with higher levels of profits and assets tend to borrow more from both formal and informal sources.

Conclusion

The study reinforces the importance of using a household approach in evaluating the impacts of microenterprise programs. Fungibility remains a crucial issue in determining how a household utilizes debt to maintain or expand its set of economic activities. In general, the entry of microenterprise credit programs may reduce the overall costs of microenterprise debt as well as improve conditions in markets other than the credit market. The study concludes with recommendations for the AIMS Projects field focused research as well as recommendations relative to assumptions, measurement issues, and debt-related hypotheses in the AIMS core impact assessments.

HOUSEHOLDS, MICROENTERPRISES, AND DEBT

I. INTRODUCTION

A. Purpose

Debt is an important component of household and microenterprise strategies. Microentrepreneurs may borrow for a variety of purposes, including to invest in productive enterprises, to accumulate assets, or to deal with unexpected contingencies and interruptions of income. Thus, debt can be part of a strategy for increasing current income, investing in the future, or coping with crises. Households may incur debt from a variety of formal and informal sources. These sources differ in their availability and in the terms that they offer. Once a debt is incurred, it represents a future claim on enterprise or household resources.[1]

Programs offering microenterprise credit services introduce a new source of debt, often into an environment where the use of debt is already widespread. The purpose of this paper is to further refine the concept of debt and indebtedness as is relates to studying the impacts of microenterprise services on the household and the microenterprise. In particular, we are interested in understanding the different types of debt, the role of indebtedness in the household economic portfolio, and the use of debt in the enterprise. With this background, we will be better able to understand the relationships between microenterprise services and other types of debt and the implications that these relationships have for evaluating the impacts of microenterprise services.

B. Organization of the Study

Following the introduction, this paper is organized into four principal sections. We begin in section II with a conceptual model of the household economic portfolio. The conceptual model allows us to specify how debt enters into the economic decisions of the household and to address the issue of fungibility. In section III, the various characteristics of debt are described. These characteristics include the purposes, sources, and terms of debt. In section IV, we review a selected set of empirical studies and consider the role of debt in household economic security and in enterprise stability and growth. In this section, we discuss the use of debt in coping with crises, consumption smoothing, income generation, and asset accumulation. In addition, we turn more specifically to the use of debt in the microenterprise and examine the role of debt in business start-up, stability, and growth. Section V discusses the implications for the Assessing the Impact of Microenterprise Services (AIMS) Project and provides recommendations for the AIMS field focused research and core impact assessments. The section closes with a discussion of possible hypotheses that relate to the relationships between microenterprise finance, other forms of debt, and impacts on the household and the microenterprise.

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[1] Throughout this study, we use the term Adebt,@ rather than the term Acredit,@ as a way to indicate that the emphasis of the paper is on the borrower=s perspective, rather than on the perspective of the lender.

II. DEBT IN THE HOUSEHOLD ECONOMIC PORTFOLIO

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.[2] 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, whether through ownership, customary use, common property, borrowing, or social networks. The human resources include the time, labor power, and skills of the household members, which depend on the household composition. Physical resources are the assets of the household and 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. It is important to note that household resources may be owned or they may be accessed through borrowing or through social relationships and social networks.

The set of *household activities* includes the consumption, production, and investment activities that the household undertakes in a given period of time.[3] *Consumption activities* are defined as the satisfaction of material wants and needs through the provision of items such as food, clothing, medical services, liquor, and amusements. *Production activities* include three categories: 1) income generating activities; 2) household maintenances activities; and 3) wage and outside work. *Income generating activities* are any productive enterprises that generate a marketable good or service. This category would include all types of microenterprises. The product of an income generating activity may be agricultural or nonagricultural, and it may be sold or consumed by the household in any given period. A *household maintenance activity* results in a good or service that is strictly for consumption within the household, such as family meal preparation, maintenance and improvement of housing, child care, and water and fuel gathering.[4] *Wage and outside work* is performed outside of the household's own production activities and is for the purpose of earning cash or fulfilling external obligations.

The assets that result from *investment activities* can take many forms, but they are characterized both by their expected endurance into the next period and by their enhancement of the resource base of the household. 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

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[2] This conceptual model of the household economic portfolio is described more fully in the AIMS household desk study (Chen and Dunn 1996) and referenced in the risk desk study (Dunn, Kalaitzandonakes and Valdivia 1996).

[3] These three types of household activities are summarized here. For further discussion, the reader is referred to Chen and Dunn 1996.

[4] 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 in any time period.

accounts (i.e. savings accounts, money loaned out), productive assets (i.e. sewing machine, truck, inventories), or

improvements in human capital through training or education. In summary, investment activities act to build up the resources and asset base of the household.

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 household resources to support the different 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 the household=s decision making process. All of the household=s activities must be supported by the set of available resources. A single type of resource (e.g., family labor) may be distributed among 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 the household=s decisions.[5] In summary, the household allocates its resources to the 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.

As an example of the allocation between a set of resources and a microenterprise, consider an urban microenterprise such as food vending. The enterprise relies on several of the household=s resources. First, there is the time and labor of the vendor. The vendor may allocate only part of her time to the business, while perhaps allocating the remainder to another microenterprise and to household maintenance activities (e.g., laundry, child rearing). In addition, she may receive part-time assistance in preparing the food and transporting it to her stand by one of her older children. The kitchen where the microenterprise food is prepared also doubles as the site for family meal preparation. The kitchen cupboard holds the raw ingredients for both the microenterprise and for family meals. The revenue generated by food vending may be used by the entrepreneur to restock the kitchen cupboards, replace a worn piece of kitchen equipment, pay the school fees for the children, and to contribute to a contingency savings fund.

B. Debt and the Household Economic Portfolio

The conceptual model of the household economic portfolio can be used to clarify the role of debt in the household economy. When debt is incurred (in other words, when credit is received), there is an addition to the set of resources that are available in the current time period for support of the household=s activities. In Figure 1, this addition to the household resource base is denoted by C, a flow from the debt to household resources. By augmenting household resources, the debt increases the potential flow of resources to activities (A), thus increasing the household=s options

[5] The model presented here treats the household as a single decision making unit. For a discussion of models that describe intrahousehold decision making, the reader is referred to the household desk study.

in selecting activities.

On the other hand, repayment of the debt implies that some portion of the household=s resources will flow out of the household economy and back to the lender. This outflow from the household=s resource base is denoted by D in Figure 1. To the extent that the borrower must pay interest and incur other costs associated with the loan, this outflow of resources (D) will exceed the original amount of the loan (C).[6] The ability of the household to repay the principal and interest on the debt is referred to as its repayment capacity.

The repayment capacity of the household is linked to the flow of income and other resources that are generated by the household=s activities (B). If the household has used the addition to resources provided by the debt to increase production or investment activities, then there may be an increase in the size of the resource flow coming out of the household=s activities. In this case, the debt has been used to increase repayment capacity. If the addition to resources provided by the debt is allocated to consumption activities, however, there will not be an expected increase in B. While credit invested in consumption activities does not directly increase repayment capacity, it may indirectly play an important role in protecting the productive capacity of the household. We will return to the issue of repayment capacity in section IV, when we look specifically at debt and household economic security.

C. The Fungibility Issue

The model of the household economic portfolio can also be used to illustrate the concept of fungibility. As the model indicates, household decision making is concerned with the allocation of a <u>set</u> of resources to a <u>set</u> of activities. A given resource, such as household labor, may be allocated to a number of activities, just as a given activity may draw from several different resources. The addition to resources made available from a debt are fungible in the sense that, once they enter the set of household resources, they become indistinguishable. Thus, it may not be possible to determine which of the household activities were supported by the debt. The issue of additionality, which is related to fungibility, refers to the problem of determining whether a given activity would have been undertaken in the absence of receiving the loan. Because there are many possible activities that a household can undertake with a given set of resources, there are empirical difficulties with knowing how a debt is allocated and whether a specific debt was the single factor to make a given activity possible.

The fungibility issue has led to the argument that empirical analysis of the impacts of microenterprise finance programs is infeasible. As we have seen, however, it is possible to create a conceptual model of the household economic portfolio and to identify the role of debt in

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[6] More correctly, we would say that D exceeds C so long as there is a positive real rate of interest. The model presented here abstracts from time issues, such as discounting and inflation, as they are not central to the main argument. It should be noted, however, that inflation does play an important role in the household=s saving and borrowing decisions.

contributing to the resource base of the household. This higher resource base, in turn, permits the household to select additional activities, or to engage more deeply in a given set of activities. By following a household approach in the empirical analysis, it may be feasible to derive appropriate measures of the client-level impacts of microenterprise credit.

III. THE CHARACTERISTICS OF DEBT

There are many different types of debt. As a starting point for understanding debt and indebtedness in the context of households and enterprises, we begin with some basic information about the characteristics of different types of debt. In this section, we introduce the purposes for which a borrower might go into debt, the sources to which a borrower might turn for a loan, and the terms under which a borrower might enter into debt. As we will see, the purposes, sources, and terms of debt are interrelated and tend to follow certain predictable patterns which, although not necessarily true in every setting, provide useful generalizations for understanding debt from the borrower's perspective.

A. Purposes of Debt

In general, we can classify the reasons for borrowing into two broad categories: 1) consumption purposes and 2) production and investment purposes. In the first category, the purpose of borrowing is to meet the daily or seasonal consumption needs of the household or to finance contingencies (e.g., rituals, medical problems). This borrowing may be motivated by predictable variations in income or by some crisis leading to an unforeseen drop in income or a sudden need for extra cash. In the second category, the purpose of borrowing is to undertake a production or investment activity, as defined earlier in the model of the household economic portfolio. While these two categories are useful conceptually, in practice it may be difficult to determine the precise use of the borrowed funds due to the fungibility of credit and the joint allocation of household resources to activities.

In later sections, we will examine in more detail the relationships between the purposes of debt, household economic security, and enterprise stability and growth. For now, however, we can note that the purpose of borrowing can have an impact on repayment capacity. When borrowed funds are used for production or investment activities, there is usually some potential that these activities will enlarge the household's resource base, thus increasing repayment capacity.[7] Borrowing for consumption purposes can not be expected to directly increase repayment capacity. However, to the extent that it prevents the liquidation of assets or allows the household to maintain necessary levels of working capital, then consumption borrowing can actually help a household to maintain a given income level and, thus, serve to protect its repayment capacity.

B. Sources of Debt

Debt can be incurred from a number of sources, which are generally classified as either formal or informal.[8] Rather than falling clearly into two distinct categories, the sources of debt can actually

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[7] This effect can be seen in Figure 1 as an increase in the flow of income and other resources from household activities to household resources, as denoted by B in the Figure.

[8] The new microenterprise finance programs combine some characteristics from both formal and informal sources. The purpose of the AIMS Project is to evaluate the impact of these programs on borrowers. In this section, however, we concentrate on the existing alternatives to the new microenterprise programs.

be thought of as existing on a continuum:

> Instead of a simple dichotomous definition, it may be more useful to think of financial transactions as lying along a continuum that ranges from casual loans among friends and relatives, through loans made by merchants and traders, through loans and deposits handled by various types of informal credit and savings groups, through pawnshops that may operate with government license, through finance companies that have a corporate charter but are not regulated, through credit unions that in some countries are regulated and in other countries are not, and to banks that are closely regulated by a central bank. The middle part of this continuum is a grey area in many countries that does not lend itself to dichotomous categorization. (Adams and Fitchett 1992, 2)

While there is some gray area between the formal and informal categories, formal sources can be distinguished by their officially recognized status and the fact that they are subject to at least some government regulation. Sources of debt that fall into the formal category include banks, credit unions, cooperatives, and donor-funded lending programs. These formal sources tend to be inaccessible to microentrepreneurs and low income households in many places, for reasons which will become clearer when we consider the terms of debt (below). In particular, consumption borrowing from formal sources is rarely available to the poorest households, who have little collateral.

There are a number of possible informal sources of debt. The availability of these sources differ greatly both between and within countries. Informal sources can be divided into at least six categories: 1) moneylenders; 2) relatives, neighbors, and friends; 3) rotating savings and credit associations; 4) wealthy households; 5) merchants, landlords, and traders; and 6) pawnbrokers. Professional moneylenders are generally full-time lenders, who use their available financial base to earn additional income. There are also some part-time lenders, including widows and others who do not readily fit the stereotypical moneylender image. Relatives, neighbors, and friends are a significant source for informal borrowing.[9] Rotating savings and credit associations (ROSCAs) are a type of group finance that incorporate both savings and debt components in a round robin arrangement. Wealthy households, such as large landowners in rural areas, can be distinguished as a category from moneylenders in that the interest income that wealthy households earn is usually not their primary source of income. The fifth category of informal lenders involves shopkeepers, merchants, landlords, and traders. This source of debt is often associated with interlinked transactions in which the loan is accompanied by additional transactions that might involve input supplies, labor arrangements, or product sales. For example, an input supplier might provide inputs on credit, or a merchant might provide a loan to a microenterprise on condition that the outputs of the microenterprise be marketed through the merchant.

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[9] Borrowing within social networks can act to solidify long-term, reciprocal relationships. These relationships can make additional contributions to a household's economic security and help it to cope with risks over time.

It was once commonly believed that the development process would result in the increasing availability of formal sources of borrowing, while informal sources would be displaced and eventually disappear. It is now recognized that the segmentation of the credit market into formal and informal sectors is likely to continue for some time. The reasons for this continued segmentation can be found in differences in the strengths and weaknesses of the two sectors. The contrasts between the formal and informal sectors can be at least partially understood by examining differences in the terms of debt between the two sectors.

C. Terms of Debt

Debt from different sources can be distinguished on the basis of several characteristics, referred to here as the terms of debt. These terms of debt affect the availability of debt to the potential borrower. The terms of debt also can affect the borrower=s assessment of the desirability and feasibility of incurring debt from alternative sources. We can use information on the terms of debt to generalize about the differences between the formal and informal sectors.

1. Costs, size of loan, and repayment schedule

The most obvious cost associated with a loan is the amount of the *interest payment*. There can be a wide variation in interest rates among the different sources of debt. In general, there will be a narrower range in the interest rates charged by different lenders in a given country=s formal sector, due in part to regulation. The interest rates charged by the formal sector will tend to be greater than the nominal interest rates charged by relatives and neighbors but less than the interest rates charged by other lenders in the informal sector.

Transaction costs represent another potentially significant cost of debt. Transaction costs are the costs associated with gathering information about a loan, applying for or requesting a loan, negotiating the terms of the loan, and carrying out the terms and conditions of the loan agreement. These costs may be in the form of direct cash outlays, such as for transportation or application fees. Often, the most significant transaction costs occur in the form of the value of time spent.[10] The borrower=s transaction costs are generally believed to be highest when borrowing from the formal sector, due to the amount of time expended in traveling to the location of the lender and in completing the loan application process.

While loans from relatives and neighbors may offer the lowest nominal interest rates and apparently low transaction costs, these loans may potentially include high hidden charges in the form of ongoing reciprocal obligations. For example, the debtor may be obligated to provide free food and lodging to the creditor for an extended period of time. Loans extended to support microenterprises may carry the obligation to employ a relative of the creditor or to share the microenterprise profits with the creditor. Thus, the creditor may charge a low nominal interest

[10] The value of time spent is sometimes referred to as Aopportunity cost.@

rate while receiving additional monetary and non-monetary benefits over the life of the loan.

The *size of loans* that are secured from relatives and neighbors tends to be small. The other sources of informal credit may offer either large or small loans, but these generally tend to be smaller than the loans offered in the formal sector. The formal sector tends to specialize in larger loans.[11] This leads to the frequent empirical observation that, while the largest number of loans tend to be from relatives and neighbors, the largest amount of money lent comes from the combination of the formal sector and informal lenders other than relatives and friends.

Generalizations about the length of the *repayment period* are somewhat tenuous. For example, the terms of debt from relatives and neighbors often do not include the specification of a repayment period. Repayment periods for other informal lenders vary. For example, a pawnbroker generally offers loans for a very short period of time. Loans from merchants, landlords, and traders are often linked to a relevant production cycle. The terms of debt from the formal sector will include a specified repayment period and, where the size of the debt is large, that repayment period may extend over a fairly long period of time.

2. <u>Collateral, social sanctions, and default</u>

Also important among the terms of debt are the nature of the assurances that the borrower will repay the lender and the sanctions that can be imposed in the event of default. A hallmark of the formal sector is its requirement that the borrower offer restricted types of *collateral* (i.e. land and immovable assets) in order to receive a loan.[12] In the informal sector, collateral may sometimes be required, but there is a wider range in the types of pledges that will be accepted, including moveable assets, household items, and promissory notes. Many loans in the informal sector are extended without any type of collateral or pledge. However, the borrower of an unsecured loan may experience an equally strong (or stronger) incentive to repay the debt, due to the types of social pressures and *social sanctions* that can accompany default.[13] Higher repayment rates in the informal sector are often attributed to the strength of social sanctions as well as to the higher quality of the information that informal lenders have regarding the creditworthiness of potential borrowers. Default in either the formal or informal sectors can also be discouraged if it is associated with loss of access to future borrowing.

3. <u>Other conditions on borrowing</u>

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[11] A key explanation for the formal sector=s specialization in larger size loans is the higher levels of transaction costs faced by <u>lenders</u> in this sector.

[12] Two explanations are offered for the collateral requirement. One explanation is that the lower interest rates charged in the formal sector lead to problems of excess demand, and the collateral requirement serves as a rationing device to limit the number of eligible borrowers. A second explanation for the collateral requirement in the formal sector is that, in the absence of good information about the creditworthiness of the borrower, the lender relies on collateral as a signal of creditworthiness as well as providing protection against the risk of default.

[13] These social sanctions are sometimes referred to as Anon-traditional forms of collateral.@

A number of other conditions can affect the borrower's assessment of the availability and the desirability of different sources of debt. One such condition involves the lender placing *restrictions on the purposes* for which the loan funds can be used. Restrictions that formal sector loan funds can be used for only production and investment purposes represent an important example. Low income borrowers, especially, will not normally be able to secure consumption loans from formal sources.

There may be other eligibility restrictions imposed by the lender that create *restrictions on access* to certain sources of loans by certain groups of potential borrowers. Obvious examples include the necessity of being a member of a social network in order to borrow in that network and the necessity of forming a suitable group in order to participate in group-based, joint-liability borrowing programs. For some sources of formal credit, such as credit unions and cooperative banks, access is restricted to households in which one member holds a specified type of formal sector employment. In this case, the collateral for borrowing is a claim on the future wages from the job, which may be directly deducted from the borrower's pay check.

Finally, another important set of conditions on the terms of debt involves the use of *interlinked transactions*. In an interlinked transaction, the borrower must consider not only the terms of the debt, but also the terms of the linked transaction in the other market. For example, in an interlinked tenancy and credit transaction, the desirability of the transaction from the borrower's perspective depends on both the terms of the debt and the terms of the tenancy arrangement. Another example would be a microentrepreneur who receives a loan from an input supplier. In this case, the price and other characteristics of the received inputs affect the borrower's advantage from the loan.

Interlinked transactions can be important for urban informal sector operators such as subcontractors or home-based workers (usually women) who work on a piece-rate basis for merchants or traders. The literature on home-based workers provides many examples of these relationships. For example, the borrower might be obligated to sell his or her product through the creditor-merchant at a predetermined price, which is usually lower than the price offered on the open market. On the input side, some borrowers maintain their loans with a creditor-supplier because they lack alternative sources for purchasing supplies.

D. Summary

In the previous sections, we have generalized about the characteristics of debt, including the purposes, sources, and terms of debt. Distinctions were drawn between consumption and production borrowing and between formal and informal sources of debt. Formal sources of debt were characterized as being primarily for production purposes, secured by collateral, having high transaction costs, and with interest rates that are lower than many informal sources (other than loans from relatives and neighbors). In addition, borrowing from the formal sector often involves larger loan sizes and longer repayment periods. In the informal sector, borrowing from relatives and neighbors was distinguished in some ways from other informal sources of debt. In particular, borrowing from relatives, neighbors, and friends was characterized by low interest rates, indefinite repayment periods, high levels of social pressures for loan repayment, and potentially high hidden costs. Other sources for informal borrowing vary considerably in the terms of debt. However, the highest interest rates, lowest transaction costs, and the interlinking of transactions can often be found among this mixed group of informal lenders.

IV. HOUSEHOLDS, MICROENTERPRISES, AND DEBT

The purpose of this section is to extend and refine our understanding of the role of debt in household economic security and in enterprise stability and growth. First, we examine a number of recent empirical studies to determine whether the findings confirm or contradict the generalizations made in the previous section. These studies were selected because their empirical findings are reported at a useful level of detail and because they contribute to our understanding of the characteristics of debt in specific locations. Following the review of empirical studies, we combine the general and empirical information on the characteristics of debt with the conceptual model of the household economic portfolio in order to better understand the role of debt in households and microenterprises.

A. Selected Empirical Studies

1. Africa

In an analysis of the determinants of credit rationing by informal lenders in Madagascar, Zeller (1994) provides considerable information on the characteristics of debt among Madagascar=s rural households. The data include information on 1,620 loans received by 189 households. Of these loans, 245 came from the formal sector and 1,355 (84%) came from the informal sector. The majority of all loans (74%) were extended by friends and relatives. Other sources of informal borrowing exhibited some tendency toward interlinked transactions. Group-based lending schemes were an important source of formal sector loans (77%).

The Madagascar data support the generalization that formal borrowing is largely for production purposes, as 86% of formal loans were used for farm inputs, livestock, farm implements, and off-farm enterprises.[14] On the other hand, only 23% of informal loans were used for production while the majority (63%) went to consumption purposes (food, education, health, and social events). On average, informal loans had a much shorter repayment period and were one-fifth the size of formal loans. Short-term loans, which were most frequently used by poor households and women for consumption smoothing, were not available from formal sources. Stratification of the data according to the wealth of the borrowing household revealed that households in the bottom and middle terciles paid higher interest rates and had a better repayment record than households in the higher tercile. Little difference was found in the repayment rates for production and consumption loans.

In the informal sector in rural Tanzania, Kashuliza (1993) also found that relatives, neighbors, and friends were the most important source of informal borrowing: over 66% of the 157 respondents

[14] Due to the fungibility of credit (discussed earlier), caution should be exercised in interpreting and using figures for the use of credit.

[15] On a methodological note, it is interesting that Kashuliza originally interviewed 458 farmers, but received useful information on informal borrowing from only 157. There are two possible explanations for this reduction in sample size: 1) the surveyed farmers actually did not have debt from informal sources, and 2) the

considered this to be their main source of informal borrowing.[15] These loans were unsecured, small in size (on average), and charged low interest rates (0-10% interest). There were strong social pressures to repay these loans, which is one of the reasons that over 90% of the survey respondents expressed a preference for formal borrowing. About 20% of the respondents reported their main source of loans to be shop owners and businessmen, a category that includes moneylenders. These loans were the largest in size, and the majority involved interlinked transactions with the borrower also selling his or her crop to the lender. A third important source of informal borrowing was medium- and large-scale farmers. The survey reported the purposes of borrowing under the categories of home consumption and social obligations (40%), production inputs (33%), hiring labor and tractor services (17%), and other uses (10%).

Two additional studies, one in urban Malawi and one in rural Sudan, provide some insights on the characteristics of moneylender loans in the informal sector. Bolnick (1992) cites several studies indicating that Malawian microenterprises lack effective financial services from formal, semi-formal, and informal sources. He provides an interesting case study of an urban Malawian moneylender (*katapila*) and concludes that the high interest rates charged by the moneylender can not be explained in terms of the economic costs of doing business. On the other hand, the alternative (economic) explanation of monopolistic profits is weakened by the fact that there appear to be low barriers to entry and that, as an urban moneylender, the *katapila* does not have access to extensive information about each borrower. In an effort to debunk the conventional wisdom regarding the highly exploitative nature of moneylender (*sheil*) lending in rural Sudan, Kevane (1993) indicates that borrowing in this Moslem area is characterized by extreme informality in the terms of debt. The implication from his study is that caution may be warranted in certain settings so as not to overlook the cultural and political factors that influence the characteristics of debt.

2. <u>Asia</u>

In a survey of studies from urban and rural Asia, Ghate (1992) demonstrates that the share of informal borrowing ranges between one-third and three-quarters of the value of all borrowing in numerous countries.[16] Moreover, the relative number of informal loans is even higher, since the informal loans tend to be smaller and shorter in duration. Ghate's synthesis of these studies tends to confirm our earlier generalizations about the characteristics of debt.

Swaminathan (1991) explains the continued segmentation of rural credit markets in South India by considering differences in the types of collateral and the purposes for borrowing. The study

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surveyed farmers were nonresponsive due to social and political pressures against the informal sector. If we accept the results of prior studies (documented by Kashuliza) that 70% of the rural population actually engages in informal borrowing, the implication is that there was a loss of 36% of the sample (164 respondents) due to reluctance to answer questions about informal borrowing truthfully.

[16] The survey includes studies conducted during the 1980s in rural Bangladesh, rural China, rural and urban India, rural Korea, rural Malaysia, rural Nepal, rural Pakistan, rural and urban Philippines, rural Sri Lanka, and rural Thailand.

provides rich details on the characteristics of debt based on mixed panel and census data in two villages. Formal sector loans were found to be much more likely to be secured by gold or immovable assets. The majority of informal debts, on the other hand, were either unsecured or secured by a promissory note only. Informal lenders provided the only source of consumption loans in the study area.[17] In addition, the data indicate that the most important sources of loans were relatives, neighbors, and friends. Statistical analysis of the data indicated that higher interest rates were paid by borrowers from lower socioeconomic levels.

In a study of urban households, Noponen (1991) found that borrowing was the most frequent strategy employed by these households in dealing with economic stresses such as illness, death, flood damage, or ritual expenses. Noponen used an event history approach to derive panel data from 300 working women in India (Madras). Borrowing was the dominant coping strategy for 80% of households. During the 1980 to 1984 study period, 79% of the households had borrowed from a moneylender at least once, and 44% had diverted funds from a subsidized business loan.[18] The author concludes that the diversion of the business loan to meet family emergencies might have Aa long-run stabilizing benefit on family well-being that allowed their own earnings to stabilize at a higher level, perhaps because working capital was not eroded by family needs@ (Noponen 1991, 252-253). Access to microenterprise credit did not eliminate the use of moneylender debt among the women sampled. In fact, the women who did the most borrowing from both sources had higher earnings than those who did not.

The findings of Yadav et al. (1992) suggest that there is limited substitutability between formal and informal sources of debt. Based on a purposive sample of 190 farm households in western and central Nepal, the authors found that formal sector borrowing accounted for half of the transactions. These loans were secured by collateral, had higher transaction costs, and went overwhelmingly (91%) toward production purposes. Borrowers in the formal sector had larger land holdings and more education. On the other end of the spectrum, borrowing from relatives and friends accounted for one-quarter of transactions, were unsecured, and went primarily (75%) to consumption. Loans from moneylenders were mixed, going mostly to consumption (57%) but also to production (33%). Informal sector borrowers tended to be the less wealthy households. Interestingly, the analysis indicated a strong statistical relationship between the level of informal borrowing and the number of members in the household.

An evaluation of the impacts of microenterprise credit programs in rural Bangladesh provides information on the relationships between loans from microenterprise credit programs and loans from other sources (Montgomery et al. 1995). In a stratified random sample of 156 BRAC members and 160 TRDEP members, only 2% of the respondents had ever borrowed from other

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[17] The author goes on to say that rich borrowers are able to secure consumption loans from formal sources by offering suitable collateral and claiming that the loan would be used for some productive purpose, an observation that reinforces the importance of fungibility. It is also interesting to note that borrowing for house construction is included as a sub-category under consumption purposes.

[18] The women in the study were members of Working Women=s Forum, which provided subsidized loans to self-employed members.

formal sources. Most of the respondents had borrowed from informal sources, although their reliance on informal sources did decline over time, as the length of their participation in the programs increased. However, the purpose of borrowing from the microenterprise programs was to support the microenterprise, while the purpose of informal borrowing was primarily for consumption. Differences were also found between newer and older borrowers in their use of microenterprise loans. In comparison to first-time borrowers, third-time borrowers used more of the loan for fixed capital and less of the loan for working capital. This implies that successive microenterprise borrowing leads to greater investment activity and accumulation of assets. In addition, third-time borrowers were less likely to use the loan for multiple purposes, indicating less diversification and more risk-taking. Finally, about 10% of the respondents reported allocating some of the microenterprise loan to consumption purposes.[19]

Another Bangladesh study focuses on the issue of interlinked transactions (Crow and Murshid 1994). The study is based on data from 200 farmers and 100 traders in two rural areas. The authors provide the following definition: ATransactions are interlinked when the contract conditions for one exchange (e.g., for labor or output) are established as conditions for access to another exchange (e.g., for land or finance)@ (Crow and Murshid 1994, 1012). They identify three distinct types of interlinked transactions involving loans.[20] These interlinked transactions result in unfavorable prices for the borrower and the transfer of risk from the lender to the borrower. The authors attribute the economic returns generated by the interlinked transactions to the lender=s greater social power.

3. Latin America

A series of studies sponsored by the World Council of Credit Unions examined household borrowing behavior and the role of credit unions in several towns and rural areas of Guatemala (Barham and Boucher 1994; Boucher et al. 1993; Richardson and Lennon 1994). Results from the studies indicate that the borrowing behavior of households follows patterns related to stages in the household=s life cycle. In addition, for households with lower levels of wealth and income, credit unions were an important source for borrowing in support of microenterprises, and there was very little evidence of borrowing from formal banks. Informal lenders, especially input suppliers, were also a significant source of short-term credit for microenterprises. A related study (Barham et al. 1995) analyzed household credit constraints and found that credit unions played a crucial role in improving the access to formal borrowing by lower wealth households, but that households with the lowest levels of wealth still lacked access to formal borrowing.

A study examining credit rationing in Ecuador (Baydas et al. 1994) considered supply and demand factors affecting access to microenterprise credit programs. Because the Ecuadoran

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[19] The authors note that this figure may underestimate the true incidence of diversion due to the respondents= reluctance to admit to using the loan for a purpose other than the production purpose stated on the application.

[20] These are referred to as trade-tying loans, price-fixing loans, and paddy loans.

study followed a different analytical approach than the Guatemalan study, the results are not comparable. However, the analysis reveals that microenterprises that borrow larger amounts from microenterprise credit programs also borrow larger amounts from informal sources. In addition, the results indicate that microenterprises with higher profits and greater assets have a greater demand for debt.

Miller and Ladman (1983) also examined the use of debt and factors affecting the demand for debt. Their analysis was based on data collected in the 1970s from 699 small-farm households in southwest Bolivia. The critical finding from the Bolivian study was the importance of transaction costs as a factor affecting the respondents= demand for formal sector debt. The most important variables affecting transaction costs were language difficulties,[21] distance from the lender, and lower levels of education.

B. Debt and Household Economic Security

Low-income households frequently engage in consumption borrowing, either to deal with unexpected crises or to cover seasonal variations in cash flow.[22] The empirical evidence indicates that borrowing is an important strategy for assuring continuity in critical levels of consumption. Because debt is such an important consumption smoothing strategy, the ability of the household to borrow for consumption purposes should be recognized as a key mechanism for protecting the economic security of the household.

The empirical evidence confirms that consumption borrowing by lower income households comes almost exclusively from informal sources. Depending on the cultural context, households with strong social networks will turn to relatives, neighbors, and friends to incur debts that are relatively small in size. Households may also turn to alternative informal sources for consumption borrowing, for reasons that include the weakness or unavailability of social networks, the need for larger loans, or the need for faster access to funds. In addition, a household may wish to avoid the social pressure and hidden costs that accompany indebtedness to relatives and friends. In any case, many studies show that the alternative sources for consumption borrowing tend to charge significantly higher interest rates than do the lenders accessed through the social network.

From the conceptual model of the household economic portfolio, we have seen that households use debt to augment the set of resources they have available to them for supporting their activities. These activities include consumption, production, and investment. Indeed, many of the empirical studies classify the purposes of borrowing into the two categories of consumption and production borrowing, where the production category includes borrowing to support both production and investment activities.

As mentioned earlier, consumption and production borrowing can be distinguished not only by the

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[21] Many of the respondents spoke Quechua as their first language and knew little Spanish.

[22] Households with higher incomes also borrow for consumption purposes, although they have greater options than do poorer households.

use to which the funds are put, but also by the anticipated impacts exerted on income and other resources that are generated by the household's activities and flow back into the household's stock, or set, of resources.[23] Consumption borrowing is not expected to contribute directly to increasing the size of that flow. Hence, there is a concern that consumption borrowing does not generate its own repayment capacity. On the other hand, consumption borrowing may be a component of a strategy designed to protect the household's productive resources and allow the household to continue with its existing portfolio of production activities.

When shocks to income occur, the household may combine borrowing, the use of accumulated savings, and the liquidation of self-insurance assets as part of a strategy for protecting its set of productive resources.[24] Thus, when integrated into a strategy for the financial management of risk, consumption borrowing can assist the household in retaining its given stock of fixed and working capital. In this way it helps to preserve the repayment capacity of the household. Thus, the provision of lower cost, short-term consumption loans can enhance a household's economic security. On the other hand, when a series of income shocks destroy the repayment capacity of the household, consumption borrowing can be part of a deteriorating pattern of high interest payments, low productivity, and asset liquidation.

Among the observers of microenterprise finance, there is some concern about the possibility that households will attempt to meet consumption needs by allocating at least part of the microenterprise loan away from production purposes. Indeed, there is evidence that this practice does occur in microenterprise programs. The primary source of the concern is that the allocation of microenterprise credit away from production activities will result in lower performance from the production activity and may negatively impact repayment rates. When considered from the perspective of the household economic portfolio, however, the microenterprise loan represents just another source of resources for supporting the consumption, production, and investment activities of the household. If pressing consumption needs arise, existing household resources are inadequate, and consumption borrowing is unavailable or available only on less favorable terms, then households will find it to their advantage to allocate some of their microenterprise loan to consumption purposes.

C. Debt and Enterprise Growth and Stability

Both formal and informal sources of debt can be used to support a microenterprise. In fact, borrowing may provide critically needed resources for initiating a new microenterprise. It is well known, however, that small loans to low-income households for use as microenterprise start-up capital are not generally available through traditional formal channels. Under these circumstances,

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[23] This flow from activities to resources is denoted by B in the illustration of the household economic portfolio (Figure 1).

[24] Self-insurance assets are stores of value that the household accumulates as an alternative to liquid savings. By contrast, productive assets are used in the generation of income through productive activities. These two types of assets are discussed, along with more detailed descriptions of household strategies for dealing with risk, in a separate AIMS desk study on risk (Dunn, Kalaitzandonakes and Valdivia 1996).

the only sources for start-up capital are savings, informal sector borrowing, and borrowing from microenterprise credit programs.

The ability to borrow on favorable terms is only one of many factors that affect the survival or failure of a microenterprise. Borrowing can contribute to the ability of the enterprise to maintain a steady flow of better quality, lower cost production inputs or to have access to more favorable product markets. Both of these contribute to the profitability of the enterprise. To the extent that microenterprise credit programs extend working capital loans on terms that are more favorable than other sources, these programs enhance enterprise stability. In addition, microenterprise programs can provide a critical alternative to interlinked transactions. A reduction in the reliance of the enterprise on interlinked borrowing can lead not only to more favorable terms of debt, but also to lower input prices and higher output prices. In general, the entry of microenterprise credit programs into an area may reduce the overall costs of microenterprise debt as well as improve the terms in markets other than the credit market.

As an enterprise grows, borrowing behavior also begins to change. Larger enterprises have access to more sources of debt and tend to engage in more borrowing. As noted earlier, enterprises with higher levels of profits and assets often choose to borrow simultaneously from a number of both formal and informal sources. In addition, the purpose of borrowing may also shift as the microenterprise grows (Leidholm 1992). Early borrowing needs are for the purchase of fixed capital to initiate the business. After that, borrowed funds are more frequently used for the purchase of working capital. As the microenterprise grows, its borrowing needs become relatively less oriented toward securing working capital and more oriented toward securing additional fixed capital. However, in the later stages of growth, the entrepreneur may pursue more of a leveraging strategy rather than to continue indefinitely to accumulate equity within the enterprise.

V. IMPLICATIONS FOR THE AIMS PROJECT

A. Recommendations for the Field Focused Research

There are two recommendations for the field focused research. First, the field focused research should be used to discover the types of debt available in the study area and to document the characteristics and terms associated with each type. Information on the characteristics and terms of debt will be useful in verifying that the client and control groups face similar borrowing opportunities (see recommendations on control groups below). Guidance for describing the characteristics of different types of debt are provided in section III of this study. Particular attention should be paid to the relative incidence of interlinked transactions, to see whether these types of transactions might affect the impacts of microenterprise services on enterprises and whether it would be useful to test a related hypothesis in the core impact assessments.

Second, the field focused research should be used to discover any sensitivities that might exist relative to the discussion of debt. In that way, the team could anticipate possible problems with nonresponsiveness and address these in the design of the core impact assessments. Possible data collection problems are discussed below. Both of these recommendations for the field focused research could be accomplished through key informant interviews.

B. Recommendations for the Core Impact Assessments

The purpose of this section is to apply the conceptual and empirical information from the previous sections in order to improve the design of the core impact assessments. First, we state some of the obvious and not-so-obvious assumptions that can be made based on the conceptual model and review of empirical studies. Next, we discuss some of the measurement and data collection issues that are associated with debt. Third, we briefly consider the debt-related implications for the selection of control groups. Finally, we consider several possible hypotheses related to debt, not all of which are necessarily recommended for inclusion in the study.

1. Assumptions

There are several assumptions that can help to move the design of the AIMS core impact assessments forward. First, we can assume that both consumption and production borrowing from informal sources will continue for many client and control households in the study. Households facing income shocks and crises will seek consumption loans from a variety of informal sources. In addition, the review of empirical studies indicates that microentrepreneurs will continue to borrow from a variety of sources. Thus, we can assume that access to microenterprise program credit will not eliminate reliance on the informal sector, although it may reduce it somewhat.

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[25] It should be noted that microenterprise credit programs are heterogeneous and that some programs

Along with this, we can assume that some microenterprise program credit may be allocated to consumption and some may be allocated to nontargeted microenterprises.[25] This is important to realize since it may affect the empirical approach for measuring impacts at the microenterprise level. In other words, not all of the microenterprise program credit can be assumed to be used on the specified microenterprise. Thus, if one of our variables is Amicroenterprise credit used in a targeted microenterprise,@ then we should consider measuring levels of diversion as a means of refining our measurement of this variable. This leads to the next set of recommendations, which relate to measurement issues.

2. Measurement issues

In designing the core impact assessments, we need to be aware of and anticipate possible problems with nonresponsiveness on the part of the respondents. Debts and the use of borrowed funds can be sensitive issues in many settings. We need to recognize possible sensitivities and difficulties that might arise in eliciting accurate data. For example, if we want to measure the incidence of diversion of microenterprise program credit away from the targeted microenterprise and the program has a policy prohibiting diversion, then the respondents may have a logical incentive to provide misleading answers. A similar problem could arise in measuring the amount of the loan allocated to fixed capital if the lender stipulates that the loans are to be used for working capital. Another type of problem with nonresponsiveness occurs when there are social, political, or cultural taboos against having or discussing certain types of debts, such as in calculating interest rates in Moslem countries.

There are a number of ways to reduce the problem of nonresponsiveness. As with all sensitive types of information, it is best to place the questions late in the interview. In this way, a certain level of rapport can be established between the interviewer and the respondent. If the microenterprise credit program has a policy restricting the use of borrowed funds, then questions about the use of debt are likely to be sensitive. Under these circumstances, it will be nearly impossible to collect reliable data if personnel associated with the lending program are present. In fact, the more independent that the interviewers appear to be from the lending program, the more candid the respondents are likely to be in their answers. Another approach for eliciting information about borrowing is to begin by asking the respondent to provide information about his or her own lending activities. This might ease the respondent into talking about debt issues, so that he or she becomes more comfortable discussing debt.

There are a number of other sound data collection practices that are important to follow in eliciting information about debt. First, it is important to interview the person who is knowledgeable about the debt. For example, if the funds from a certain loan are borrowed, allocated, and repaid by the wife, it would not make sense to interview the husband with these questions. In addition, it should be noted that information is not always freely shared among all individuals within a household. If a member of the household is secretly allocating a portion of

target a specific microenterprise while other programs provide nontargeted loans.

each loan to a contingency savings fund, then he or she would not be likely to provide information about this savings practice during an interview held in the presence of other (uninformed) members of the household. Despite the use of any of these approaches to reduce respondent sensitivity, it may still not be possible to elicit reliable information about debts and indebtedness.

There are a number of specific measurement issues that are also relevant to the core impact assessments. First, if household income is to be included as an impact variable, then the measurement of income should include a possible category for interest income received by the household. A second measurement issue relates to the possible hypotheses listed below. That is, the measurement of total interest payments or total level of indebtedness may be too costly to undertake given the resource constraints of the study. On the other hand, less precise and more qualitative approaches could yield data that can be used for hypothesis testing. The team should consider the use of an event history methodology to collect data on borrowing from different sources. This might provide a feasible option for testing whether borrowing patterns change with participation in microenterprise credit programs.

3. Selection of control groups

An important issue in the research design of the core impact assessments relates to the criteria for selecting control groups. The recommendations for the field focused research included the suggestion that the terms and conditions of debt among the clients and potential control groups be examined. This information can be used in selecting the control group as a way to verify that the characteristics of the different forms of debt available to the control group are the same as that for the client group. The principal exception, of course, would be the availability of the microenterprise program credit. Similarity in borrowing opportunities is particularly important for the testing of any hypotheses specifically related to debt and the financial management of risk.

There may be a problem in locating suitable control groups in study areas where successful microfinance programs have attracted the entry of additional programs. If large areas are saturated with microenterprise program lending, then the local population may all have access to program lending, and the self-selection issues may become acute. On the other hand, if the control group is selected at a considerable distance from the program area, then there may not be a good match between the debt environments of the client and control groups.

4. Possible hypotheses related to debt

This final section of the paper presents several possible hypotheses for analyzing debt-related issues. All of the hypotheses relate to the impacts of microenterprise services. Not all of these hypotheses are recommended for testing in the core impact assessments. In fact, testing any hypotheses about debt may not be a high enough priority as to warrant the use of project resources.

Level of indebtedness: Participation in microenterprise credit programs reduces the household's overall level of indebtedness.

There are practical, logical, and empirical reasons against trying to test this hypothesis in the core impact assessments. The practical reason relates to the cost of measuring overall indebtedness and possible problems with nonresponse. In addition, there is a direct relationship between borrowing from microenterprise credit programs and increasing the household=s overall level of indebtedness, thus providing a logical argument against the hypothesis.

Moreover, the hypothesis is unwarranted based on previous empirical evidence. The evidence indicates that as income and wealth increase from low levels, households have greater access to credit and their debt activity tends to rise. This leads to increased use of debt of all kinds. Thus, we are more likely to see indebtedness increase or show no significant relationship to the level of use of microenterprise program credit.

<u>Interest paid</u>: Participation in microenterprise credit programs reduces the total amount of interest paid on a given level of indebtedness.

We have seen that low-income households frequently lack access to formal sources of borrowing and that some types of informal borrowing are associated with high interest rates. The total amount of interest that a household pays on a given level of indebtedness could be expected to decline if the household reduces the amount of debt it incurs with high interest rates and replaces that with borrowing from microenterprise credit programs at more favorable interest rates. This would be a positive impact of microenterprise services on the household.

However, there are formidable empirical problems with operationalizing the key variables in the hypothesis, namely Atotal amount of interest paid@ and Alevel of indebtedness.@ As mentioned above, it can be costly to derive an accurate quantitative measure of the household=s level of indebtedness, since this would require extensive questioning of the respondent. There are serious problems with measuring total interest paid due to the heterogeneity in the way that Ainterest@ accrues to different sources of debt: 1) problems converting different repayment periods to an equivalent basis; 2) problems converting in-kind principal and interest to cash equivalents; 3) problems placing a monetary value on non-material Ainterest@ in the form of social and labor obligations; and 4) problems incorporating the costs associated with interlinked transactions. For these reasons, it is not recommended that the above hypothesis be tested in the core impact assessments.

An alternative formulation of a hypothesis related to interest rates would be the following:

> Loans from microenterprise programs that lend at interest rates which enable them to cover all costs are provided at significantly lower interest rates than are loans available to microenterprises from informal commercial lenders.

This hypothesis can be used to test whether sustainable microfinance programs can provide microentrepreneurs with lower interest rates than informal lenders (excluding the category of relatives, neighbors, and friends). If true, the implication is that these programs have a positive impact by reducing the cost of capital to microenterprises. Again, there are some measurement issues related to the calculation of interest rates, but the problems would be more limited than those described in the previous paragraph.

A possible liability of this hypothesis would be the difficulty of finding fully self-sustainable microfinance programs to include in the core impact assessments. A wider choice of study sites would be available if the conditions were relaxed to include microfinance programs that have attained operational self-sufficiency. In such programs, nonfinancial costs are covered by the program fees and interest charges, but the cost of funds is still subsidized. The impact implications of the hypothesis are much stronger, however, if the program credit is not subsidized.

Sources of debt: Participation in microenterprise credit programs leads to a change in the household=s sources of debt.

Of course, participation in a microenterprise program is, by definition, one change in the household=s sources of debt. However, it would be interesting to see whether there are other qualitative or quantitative changes in the household=s sources of debt. This might provide a less direct, but less expensive, way to infer whether the household is able to pursue more favorable debt management strategies. For example, the data could be used to document whether participation in microenterprise credit programs increases the incidence of borrowing from formal sources. Although large increases in the use of formal credit by low-income households would not be expected (based on previous empirical studies), a slight increase might be found among households at the upper income levels of the sample population, with the implication that these few households have Agraduated@ to the formal lending sector.

Similarly, changes in the use of moneylender borrowing, which might be more widespread, could be used to infer that households are paying lower interest rates.[26] Changes in the patterns of borrowing from relatives, neighbors, and friends might have implications for the strength of social networks. In addition, there may be a reduction in the hidden costs associated with these sources of funds. Finally, particular interest might be paid to changes in the incidence of interlinked borrowing. Since interlinked borrowing is associated with increased costs (or reduced revenues) in the linked transaction, a reduction in interlinked transactions could have a number of positive implications for both the household and the microenterprise. This leads to the next hypothesis.

Interlinked borrowing: Participation in microenterprise credit programs leads to a reduction in the incidence of borrowing associated with interlinked transactions.

Empirical studies in several countries indicate that there is a relatively high incidence of borrowing in association with interlinked transactions. This interlinked borrowing may be associated both with relatively high interest rates and with unfavorable terms of trade for the microenterprise. To the extent that participation in microenterprise credit programs leads to a reduction in the

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[26] Of course, it would be essential to confirm that moneylender rates were, in fact, higher than microenterprise credit program rates in the study area. This would be possible if the previous recommendations were followed and contextual information on the characteristics of debt in the study area was collected during the field focused research.

incidence of interlinked borrowing, then it may lead to a positive impact on microenterprise stability and growth.

Another approach would be to treat a reduction in interlinked borrowing as an intervening variable connecting microenterprise services and improvements in enterprise stability and growth. For example, if the core impact assessments include direct measurement of the profits of the microenterprise, a change in the incidence of interlinked borrowing becomes one possible explanation for changes in profitability. The first step in deciding whether to test a hypothesis related to interlinked borrowing is to determine whether interlinked borrowing is a significant practice among the key microenterprises in the study area (see above recommendations for field focused research).

Repeated borrowing: Repeated participation in a microenterprise credit program leads to a shift in the use of borrowed funds so that they become more likely to be used for fixed rather than working capital.

If the sample includes both initial and repeat borrowers, it would be possible to test a hypothesis that the repeat borrowers in microenterprise credit programs use their borrowed funds differently than do initial borrowers. The implications of using an increasing amount of the loan on fixed capital are that the targeted microenterprise will experience greater capitalization and growth. This hypothesis could be tested with approximate data, such as approximate percentages provided by the entrepreneur, rather than with precise numeric answers, which may be more difficult to recall.

There are two possible problems with this hypothesis. First, there could be problems with nonresponse if the microenterprise program discourages or disallows the allocation of borrowed funds to purchase fixed capital. Second, there could be problems with defining the categories of working capital and fixed capital in such a way that the variables are consistent across different types of microenterprises and across the three countries in the core impact assessments. If the definition of the variables is excessively complex, then it will be difficult both to elicit accurate information and to train enumerators to do so.

As with the hypothesis on interlinked transactions, the variables in this hypothesis could be treated as intervening variables. For example, if the level of fixed capital were measured directly as an impact variable, then variables measuring repeated borrowing and the allocation of a larger share of the loan to the purchase of fixed capital would help to explain for any observed changes in fixed capital. However, if fixed capital were not measured directly, then the findings on these variables could be used to draw inferences about the impacts of microenterprise services.

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