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Impact Assessment of the Microfinance Programme in Amhara Region of Ethiopia

by Getaneh Gobezie and Carter Garber

This paper was chosen through an open call for research in rural finance, whereby the selected individuals were invited to Rome, Italy, to share their results during the conference and to discuss key issues in shaping the rural finance research agenda as well as ways of strengthening the ties between research, policy and practice.

“Impact Assessment of Microfinance in Amhara Region of Northern Ethiopia”

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ABSTRACT

In spite of rapid expansion of microfinance services by ACSI in the last one decade or so in the Amhara region of Northern Ethiopia, currently reaching more than 550,000 credit clients, there has been little or serious attempt to evaluate the impact of such services. The objective of the study was to see if the institutional vision of bringing about positive impact on the lives of the poor is being attained, and also how to improve on the design of financial products with a view to 'improve' impact. The AIMS (Assessing the Impact of Micro-enterprise Services) conceptual framework (of USAID) used for the study, departs from the conventional approach in that it starts with the household rather than the enterprise. The model recognizes that loan funds to poor households are 'fungible' and can be allocated to any activity in the household economic portfolio, and the micro-enterprise is embedded in the household economy, representing only one of the household's production, consumption, and investment activities. Both 'quantitative' and 'qualitative' methods were used to collect data from over 1600 clients and non-clients and triangulate results to get full picture. Important conclusions are that: 1) The micro-finance service is indeed having clear impact: improving the food security situation, the health status, educating the children, creating additional assets (improved housing, etc), as well as impacting on the 'empowerment' situation of the marginalized; 2) finance for 'micro-enterprise' is used for various problems in the household, including most importantly, for consumption smoothing, and programmes need to consider this; 3) Micro-credit cannot be the only intervention on poverty, and other interventions should also accompany it, more importantly: Business Development Service, health education, etc.

Key Words: Northern Ethiopia, Poverty, Microfinance, Impact

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ACCRONYMS

ACSI: Amhara Credit and Saving Institution

ADLI: Agricultural-Development Led Industrialization

AIMS: Assessing Impact of Microenterprise Services

BDS: Business Development Services

GGLM: Group Guarantee Lending Model

HHEP: Household Economic Portfolio Model

IDEAS: Institute for Development, Assistance and Evaluation

MFI: Microfinance Institutions

MGD: Millennium Development Goals

NBE: National Bank of Ethiopia

NGOs: Non Governmental Organizations

PAR: Portfolio At Risk

PASDEP: 'Plan for Accelerated and Sustainable Development to End Poverty'

REMSEDA: Regional Micro and Small Enterprises Development

SDPRP: Sustainable Development and Poverty Reduction Programme

SACCOs: Saving and Credit Cooperatives

WDR: World Development Report

Background

By most indicators, level of poverty and ill-being in Ethiopia is very high. The Amhara region in particular, has been prone to much suffering in the past, and was one of the hardest hit areas in the 1973, 1984 and more recent famines of Ethiopia¹. Currently, more than 30.1% of the regional population earns an income below the (locally driven) poverty line income level.

The EPRDF-led Government of Ethiopia, which has taken power after the fall of the Dergue regime in 1991, has undertaken series of economic reform programmes aimed at re-orienting the economy from command to market economy, rationalizing the role of the state and creating legal, institutional and policy environment to enhance private sector investment. The Government's "*Sustainable Development and Poverty Reduction Programme (2002)* (Ethiopia's version of PRSP), has more clearly articulated the objectives in revitalizing development in the country. Given that poverty reduction will continue to be the core of the agenda of the country's development, the strategy is built on four pillars (building blocks): Agricultural Development Led Industrialization (ADLI), Justice system and civil service reform, decentralization and empowerment, and capacity building in public and private sectors. Such a four-pronged approach is believed to be effective in a fight against poverty and ensure sustainable development.

¹ For a more extensive description of this, particularly relating to the area in the Northern part of Ethiopia where ACSI is operating, see Devereux and Sharp (2003).

Of all the four “pillars”, the ADLI strategy emphasizes rural finance. The Ethiopia’s existing realities reveal that there is an acute shortage of capital. In contrast, the country is endowed with a large number of working age population and a potentially cultivable land although land is still relatively scarce in some part of the country, particularly the northern and central highlands. It is believed that faster growth and hence economic development could be realized if the country adopts a strategy that helps raise the employability of labour resources and enhance productivity of land resources aimed at capital accumulation.

In turn, for agriculture to continue serving as an engine of growth in the coming years, through the domestic economy and international trade, there has to be progress in terms of commercialization, with more intensive farming, increasing proportion of marketable output and correspondingly decreasing ratios of production for own consumption. Aside from deepening technological progress, it will mean greater market interaction on the part of the farmer, more research and extension, application of inputs, irrigation, production of tools and equipment, etc. Extension of credit to the small farmer has to gain importance with commercialization of agriculture and give impetus to the establishment of rural banks (SDPRP Paper, 2002).

The more recent "*Plan for Accelerated and Sustainable Development to End Poverty*" (PASDEP) (2005-2010), Ethiopia’s Guiding Strategic framework document also provides an even more strengthened emphasis to micro-enterprise and self-employment supportive intervention based on key principles such as: (a) enabling people, communities, businesses – not crowding out personal responsibilities, (b) achieving the objectives

through decentralization, private sector promotion and liberalizing market controls while recognizing market failure and (c) targeting services to vulnerable groups.

Given such focus, the first step in the Government's development strategies is to encourage the further spread of modern financial services in the country. Thus, formal microfinance in Ethiopia started in 1994/5. In particular, the Licensing and Supervision of Microfinance Institution Proclamation No. 40/1996 encouraged the spread of Microfinance Institutions as it authorized them to, among other things, legally accept deposits from the general public (hence diversify sources of funds), draw and accept drafts, and manage funds for the micro financing business.

Moreover, with a view to further stimulate economic activities and provide opportunities for the poor to escape poverty through availing more and appropriate financial services to the majority, the Government has been refining the *regulatory framework* for the microfinance operations. The regulation that put a ceiling on the interest rate that micro-financial institutions could charge from their credit clients no longer exists and a new liberal system is in operation (Directive No. MFI/92/98) whereby MFIs could decide the level of interest rate they charge as long as they can remain in the competitive market, thus opening up a new opportunity in the effort to ensure both operational and financial sustainability for MFIs. MFIs can also mobilize public saving. More over, the National Bank directives with regard to lending methodologies, terms and conditions are relaxed (pursuant to the Federal Rural Development Strategy) in a way encouraging MFIs to diversify their client base. Currently, there are 27 MFIs operating in Ethiopia, of which the Amhara Credit & Saving Institution (ACSI) is the largest.

The operation of the ACSI is traced back to 1995 when it was initially initiated by the Organization for the Rehabilitation and Development in Amhara (ORDA), an indigenous NGO engaged in development activities in the Amhara region. ACSI had undertaken its pilot activities in 1996, and was licensed as a microfinance share company in April 1997. ACSI *envisions* to see a society in which people are free from the grips of abject poverty, with all the power determining their future in their own hands. Given the level of poverty in the region, ACSI's primary *mission* is to improve the economic situation of low income, productive poor people in the Amhara region primarily through increased access to lending and saving services. It maintain cost effectiveness in service delivery, and integrates its activities with government and NGOs working towards achieving food security and poverty alleviation in the region.

Given the level of poverty in the region, essentially therefore service delivery by MFIs like ACSI has been on a *priority* basis, focus being on the poorest, particularly women, as this is believed to have the highest impact on poverty /food insecurity through bringing about improvements upon both the *rate* as well as *depth* of poverty/food insecurity. Targeting is therefore at area as well as household level and gender focused. ACSI seeks to reduce poverty by targeting financial services to the poor both *directly* (through means-testing) and *indirectly* (through product and service designed to attract the poor).

Presently, ACSI is operating in all *Woredas* (districts) of the region, and has covered 3200 *Kebeles* (about 75%) of the total. In terms of *outreach*², currently there are over 530,000 poor clients, with an active credit balance, and another 210,000 voluntary savers, with an average saving balance of Br. 256 per individual. (See Tables 1,2). But, given the number of economically active people outside of the reach of the conventional financial service, this is only 15-20% of potential demand taking only the number of the very poor. There are many economically active poor people still un-reached. Indeed, in spite of the rapid expansion of the financial services in the region for the last one decade or so, the *Arata* (the Individual Money Lender) lending interest rate is affected only very marginally, if at all. Given the very poor infrastructure in the region, attending all such clients would demand enhanced capacity and improved methodology.

Repayment rate stands at over 98% for most of the years in ACSI's history. *Portfolio At Risk* (PAR), which compares the remaining outstanding balance with at least one installment overdue to the total loan portfolio, currently stands at about 3%. ACSI has also been rated as one of the most efficient MFIs (rated by the MicroRate Africa, 2005) having achieved an operational efficiency of about 6%, which is one of the lowest globally. Moreover, Income statement indicates operating profits since some years ago. ACSI has now achieved *operational sustainability* indicating the ability of the institution to cover costs of operation with internally generated income and also *Financial Sustainability* taking into consideration such subsidies as: inflation, cost of fund, in kind

² Outreach here refers only to *Breadth*. But it can also include wider aspects like: *Worth of outreach to clients* (value to clients that commands their willingness to pay); *Cost of Outreach to clients*: price costs and transaction costs; *Depth of Outreach*: level of relative poverty of clients; *Length of Outreach*: sustainability of the service; and *Scope of Outreach*: diversity of services provided.

donation, indicating that the MFI can continue operating without looking for any kind of subsidy. This ensures that clients would have a guaranteed access to continued financial services that would help them eventually come out of poverty.

Yet, there has been no serious attempt to measure impact of the programme on the lives of the many households that it has been serving.

Conceptual Framework to Impact Assessment

Impact assessment techniques of microenterprise services has been developing substantially in last few decades, with the emergence of new conceptual understanding of the household. Drawing on key concepts from anthropological, economic and feminist literature on the household, Chen and Dunn (1996) developed a dynamic conceptual model of the Household Economic Portfolio. In the conceptual model of the Household Economic Portfolio, the household is defined in terms of three components: a) the human, physical, and financial *resources* of the household b) the consumption, production, and investment *activities* of the household; and the circular *flows* between resources and activities. (See The HHEP Model, Figure 1).

Assessing the Impact of Microenterprise Services's (AIMS) conceptual framework is based on the HHEP. Specifically, the conceptual framework departs from the conventional approach in that it starts with the household rather than the enterprise. Traditionally, evaluations of small-enterprise credit programs typically focused on enterprise returns and employment creation or hired labor. This is because historically the

target clientele was of a higher socioeconomic status and was typically engaged on a full-time basis in a *single enterprise* activity that used *hired labor*. Microfinance programs with a poverty alleviation focus aim to serve relatively poorer clientele. The vast majority of their client households do not have a single source of livelihood support, but rather pursue a mix of activities depending on seasons and market opportunities, among other factors. The clientele of poverty-lending microfinance, mostly engaged in *income generating activities*, is also less likely to make a distinction between household and enterprise funds. The AIMS conceptual framework recognizes that decisions about microenterprises can be understood more clearly when considered in relation to the overall household economic strategies. It clarifies how microenterprise interventions can contribute to household security, enterprise stability and growth, individual well-being and the economic development of communities (MkNelly and McCord, 2002).

The conceptual framework is particularly useful in addressing the issue of *attribution* and *fungibility* (AIMS Team, 2001). The problem of *fungibility* can be addressed by widening the unit of analysis for the impact assessment from single enterprise to the entire economic portfolio within which the fungible capital might be used. Credit is fungible within the household economic portfolio in the sense that it is interchangeable with other monetary units and difficult to trace. The model recognizes that loan funds, like any of the household resources, can be allocated to any activity in the household economic portfolio. The microenterprise is embedded in the household economy and represents only one of the household's production, consumption, and investment activities. By treating the microenterprise as part of the larger household economy, the model deals with the problems of fungibility.

The model also helps to build the case for *attribution* (a basic challenge in impact evaluation in social sciences) by providing an internally consistent conceptual framework that can be used to link the micenterprise intervention to the impact in a plausible cause-and-effect relationships. Another way to strengthen the case for attribution is to use qualitative research (e.g case studies) to identify chain of events that lead from the program service to impact.

Moreover, in order to see the change in the life condition of people brought about by any intervention, one needs to identify a comparison groups. In cross sectional analysis, one can use “Clients only”, “Clients and non-clients” or “Mature clients and incoming clients” as comparison groups. The first, though popular, depends only on clients’ self-reports; and the lack of a comparison group makes it impossible to know whether the changes clients describe exist because of the program or if they simply represent general trends in the area. The “Clients and non-clients” option is perhaps the most common cross-sectional design used in evaluation research. The responses of clients are compared to those of non-clients through a “with/without” framework. Yet, it cannot solve the problem of what has come to be known as “*self-selection bias*”.

“Mature clients and incoming clients”, is the most promising and valid of the cross-sectional approaches. The comparison group is composed of the program’s incoming clients. They represent the best comparison group since they have not been in the program long enough to exhibit impact; yet they should be similar “types” of people, and selected from the same or very similar programme areas as those in the client sample. In

addition, it is easier to select a comparison group from existing lists of incoming clients than it is to select non-clients at random from the local population.

Research Methodology for the Study: Design and Sampling

The AIMS approach has been fully adopted for the study, involving both quantitative as well as qualitative studies. The *quantitative* assessment was done by interviewing two types of clients: mature clients (>60 months of participation) and new clients (<12 months of participation). The differences between these two groups would point to the impact of the services of ACSI. To avoid the bias of *self-selection*, the new clients formed the comparison group. To provide a more complete picture of evaluation the study also included *qualitative* data that comes from individual and group interviewing. The resulting information is then triangulated with the data from the quantitative surveys and monitoring information to either confirm emerging trends or raise further questions.

ACSI has 10 branches and 179 sub branches in Amhara region. From the 179 sub branches, 15 were selected based on criteria including the percentage of women clients, accessibility of the communities, food security and rural and peri-urban areas. In Ethiopia, accessibility of the communities is a major issue, so it was important to look at the specific impact of the program in inaccessible areas. The second factor to consider was the food security, since some areas are food secure and some are food insecure. Therefore, the study tried to assess any differences in impact because of the level of food security. Broadly, Amhara is quite rural and the only two places that could be called urban are Bahir Dar and Gondar. All other branches and sub branches are in mostly rural

areas. Under each sub branch a minimum of two areas were selected to understand the differences in impact between peri-urban and rural areas. Care was taken to represent all these different situations in the sample.

For the *quantitative Study* of the Impact Survey, a total of about 690 clients (both incoming and mature clients) were selected from 15 sub branches of ACSI. For the *qualitative study* a purposive sample of six sub branches of ACSI were selected. The criteria used for this sampling were food security, accessibility, total number of women clients, rural and peri-urban, and ethnicity (Amharic, Agew and Oromic). The team wanted to assess the differences in impact because of these criteria. What other reasons would contribute to the impact? Does having more women clients in a program lead to more empowerment? What happens to clients in the least accessible areas? How do they grow and sustain their enterprises? From each of the selected 6 sub branches clients who were located in the peri-urban area (where the sub branch office is located) and those located in a rural area were selected for interviews.

Preliminary Findings

A four step analysis have been carried out: First is to see if there are real differences in profit making, second if there are changes on the welfare, thirdly changes at empowerment, and finally an attempt has been made to measure the “determinants of profitability” for poor people.

Profit Making

A more simplified approach has been adopted for the comparison. This procedure looks at differences at a given point in time between borrowers and members of control group, where each pair have similar starting values for the impact variable (like income or sales revenue) and other characteristics, like age, gender or sector of activity. Simplifying this approach identifies impact as:

$$\text{Impact} = \frac{1}{n} \sum (Y_{mc} - Y_{ic}) p$$

Where Y_{mc} and Y_{ic} are an impact variables (net profit over one 'product cycle') for matured and new clients respectively, p refers to matched pairs of the two groups, where there are n pairs. Thus the impact can be rationalized as the average difference between matched pairs of programme participants and control group.

In terms of profit making, it is very clear that mature clients are capable of making higher 'net' profit (average Br. 1930) in one 'product cycle' (which on average is about 8 months) compared to new clients who can register on average only Br 1560. This implies that average monthly net profit for mature client is about Br. 241, compared to the minimum wage (set by Trade Unions) of Br.250/month. A simple *t-test* also confirm that this is a significant difference at 99% confidence interval (Table 3). Yet, the absolute profitability figure has to be seen against the potentially biased and subjective response from client when revealing such sensitive information.

Moreover, from the qualitative survey it came out that about 70% of mature male and 66% of mature female clients have acquired the skill of calculating loss and profit since joining ACSI. About 61% of mature male and 47% of mature female clients could estimate income and profit from business correctly or with some difficulty when interviewed in the Impact Survey. The ability to manage small business, and the business skill that is developing from taking continuous loans among many poor clients is really laying the ground work for the emergence of the future big business men that the region is looking for national sustainable growth.

But this is constrained by absence of strong business development or skill up-grading educational programs. Majority of the clients in the qualitative study revealed that currently they get little or no kind of BDS support, skill training, modern agricultural technology extension, entrepreneurship, etc while running their business from any other sector. At personal level, many are still risk-averse, while others are content with the (subsistence) living standard they have already attained and do not aspire for more or better life-conditions through engaging in serious business. Thus, the absorptive capacity individual enterprises (hence the “loan size” taken by clients) progressed very slowly. Institutional statistics indicates that the average loan size for a typical client who has taken loan for 9-10 years is not more than Br. 1000 (US\$ 110).

Welfare impact

This has been done by taking variables which are included in the Millennium Development Goals (MDG), including: food security, health, education, housing, and empowerment.

a) Food Security

Improved household diet, resulting from higher household income, was measured in food condition, quality and quantity of food, etc. Results from the Impact survey shows that clients are eating more frequently and increasing the quantity of food eaten. Specifically, relatively higher proportion (83%) of mature clients '*do not*' have any problem of food security in the household during the last 12 months, compared to only about 73% of new clients. This, however, is a question subject to interviewer skill and approach. That is, most programme areas being recipient of 'food aid' there might be some biases in response as some would not reveal real situation expecting that this might disrupt the usual flow of food aid. Indeed, qualitative interview reveal that a good deal of mature clients continue to receive food aid, in spite of such improved situation, perhaps revealing that such food aid are much of 'supply driven' (rather than demand driven) activities (See Table 4).

b) Health

It looks that there is clear difference on health situation of mature and new clients. Indeed, a relatively more proportion (53%) of mature clients managed to go to a doctor, than incoming clients of whom only 46% reported same. According to the Impact survey,

about 56% of male and 49% of female mature clients were able to send a household member to a hospital or medical center, and mature male clients had significant difference from incoming male clients in use of the medical center. The qualitative survey confirmed that mature and incoming clients have covered expenses for medical treatment using savings (See Table 4).

c) Schooling

In terms of schooling, it was clear that the microfinance matured clients tend to have more of their school age children in school than new clients. Thus, some 77% of matured clients managed to send their school age children to school, compared to only 68% of incoming clients. Given the circumstances in rural areas, this means that more mature clients can manage to forgo the opportunity of having their children's labour at home for income generating purposes, as well as incurring school expenses. From the qualitative study, it was clear that school expenses include educational materials, school uniforms, living expenses to those attending school away from home and contributions to school expansion and up-grading. Some households use loans from ACSI as well as income from their businesses to cope with the increasing cost of sending children to school (See Table 4).

d) Housing Improvement

Housing Improvements made during the past 24 months was an indicator for impact at the household level, as this is a key target of households with improved income levels. It

comes out that relatively high proportion (47%) of mature clients managed to do housing improvement worth at least Br 100 in the last 2 (two) years than incoming clients of which only 24% can manage to do same. Expanding/adding rooms, sanitation improvements, changing the roof from grass to corrugated iron sheet, and use of electric power were major categories of improvements made by respondents. Housing construction for average rural poor costs about Br 1000 (about US\$110). Clients reported that ACSI helped them improve their housing or maintain it while they were in the program (See Table 4)

e) Income Smoothing

It comes out very clear that "loan taken for 'microenterprise' (at least some part of it) is used for various problems in the household, most importantly for income smoothing. Of the 689 clients (mature and new) about 128 have used money away from microenterprise. And there is no major difference between mature and new clients. But some differences have been observed between men and women clients, with diversion of the latter focusing on food. From the qualitative study, it was very clear that this is another key benefit that clients manage to get from the programme. Some of such expenditure include: purchase of food for the household, purchase of cloth for household members, giving money for spouse or other household members, making reserves for loan repayment or other emergencies, pay loans taken from other sources, purchase or renew houses, cover costs for wedding parties or related expenses, cover school or medical expenses, etc. School expenses include educational materials, school uniforms, living expenses to those attending school away from home.

Empowerment

A major purpose of providing financial services is to empower clients, especially women. Results from the Client empowerment qualitative tool show that clients have increased self esteem since joining the program, with 54 of 60 reporting increased self esteem and 60 of 60 reported feeling better about themselves and their achievements. About 71% of mature male and 66% of mature female clients have gained self confidence due to the successful repayment of a loan during the last 5 years.

Many of them said that their interaction in group meetings helped them make good business decisions. Three decision-making strategies were clearly evident - decisions were made by themselves in the female headed families with dependent children, in consultation with the spouses, or in consultation with their grown children. Although decision making roles among these women are very different, today they are happier with their decisions and have proven to their families that their decisions work. Their families rely on them and support their decisions.

These women have not only decided to improve their lives by engaging in income generation activities but have also decided to invest in the future by making sure their children are educated and employable. The Client Empowerment interview also found that clients gained confidence in deciding to purchase assets (clothes, jewelry, etc) without feeling the need to seek permission. They participated in decisions about children's' education and marriage, house and household assets etc. Today they can

envision a secure future for their children and have decided to attain it. Moreover, many interviewees had either worked as tenants or rented out their lands because they had no resources to cultivate the land. But things have changed as clients have taken loans from ACSI to cultivate their own land.

On the other hand, while empowerment is expected to occur at four levels: at 'individual', 'enterprise', 'household' and 'community' level, the qualitative study pointed out that there might be conflicts among these objectives, particularly in poorer and remote areas. And microfinance may not be the only way to bring this 'empowerment'. Particularly, a focus group discussion conducted with women in some Muslim-dominated areas with a stronger religious leaders influence revealed an interesting issue. The women clients confirmed that they are really benefiting from the microfinance services in-terms of being able to ensure food security to their children, to themselves and to the family, among other things. These women are also better in terms of their relation-ship with their husband, now getting better respect than before (whatever the cost for the women, in terms of having to work 'more' time than before, for example).

But in such areas, getting involved in microfinance or banking services is still considered '*Haram*' (forbidden activity), and the local religious leaders advise that those who are going to such services should be isolated from the rest of 'true believers', as they are 'violating rules'. Meaning that these women cannot join the traditional social ceremonies in the local areas, and no one comes to their home to participate in their ceremonies ('*Sedeka*'), including burial ceremonies. So, the empowerment at 'household' or 'enterprise' and 'individual' levels cannot easily translate into empowerment at 'community' level. Indeed their 'Social Capital' seems to be now lower than it was before the microfinance programme.

Whereas one of the propositions in microfinance (particularly 'group lending') is that it would result in enhancing both 'financial capital' as well as 'Social Capital' through bringing poor people, especially women, into group discussion, enabling them to voice-out issues that affect them as group (including, for example cultural problems of: genital mutilation, alcoholism, etc, etc...). However, the groups, particularly

women groups, are at a very infant stage, and for the group meetings to be able to bring about such positive results, it would take some time, particularly if no one is using them effectively for such additional 'Education' purposes. No serious effort is made to incorporate such education programme on any topic at group meetings.

Determinants of Profitability

An attempt is made to measure the determinants of 'profitability' by regressing registered profits on a number of explanatory variables. Max effort is made to identify those that are potential explanatory variables. These variables are: age, sex, literacy level, loan size, health status, civil status, number of children >18 years and variables to control for placement bias -- a potentially serious problem in impact assessment. Specifically, *placement bias* arises where loans go to locations or activities that are in some way favoured, such as villages with better infrastructure or sectors with strong demand growth. Comparing income change for households in a superior location (or sector) who have a loan, with income change for similar households in another location (or sector) who have a loan, and attributing of all this to the loan will create an upward bias. Thus, the *locational dimension* has been taken up, using "Woreta" area (the nearest area to the capital city of the region, Bahir-Dar, with the best access to all kinds of infrastructure) as a *control variable*.

The following OLS Regression model has been specified for estimation:

$Profit1 = f(age0, sex, literacy, hhsiz, loan2, health1, civilsta, hhchild1, hhemplo1, dumaberg, dumgash, dummera, dumtdeng, dumkuy, dumsayi, dummete, dumtili, dumbalch, dummehal, dumbati, dumjama, dummid, dumkutab, e)$

The Hypotheses

The list of variables described in previous section will have different impact on household's likelihood of profit making. Their level of impact vary from locality to locality, and, most importantly their direction of influence may also differ.

- profit1: profit from business (one 'product cycle')
- age0: age of the client. Age represents work experience, and is expected to help the household make more money in business
- sex: dummy for sex of the household head; 1 if the head is male, 0 otherwise. Male-headed households are expected to have a better chance to making more profit
- literacy ability of household head to read and write, 1 if the household can read and write, 0 otherwise. Household heads who can read and write are expected to be able to make more profit out of business
- hhsiz: size of the house hold. Households with more members (hence more labour power) are expected to have better chance of making profit
- loan2: loan size taken by client. Larger loan size is expected to provide better chance of making profit in business
- health1: Ability to use modern health service. 1 yes, 0 otherwise. Health problem is

expected to negatively affect business and profit making, as this would reduce the labour power available for business, either directly (seek persons cannot engage in business) or indirectly (some people would need to attend the seek person)

- civilsta: marital status of the client. 1 married, 0 otherwise. Married couples are expected to be in a better position to making better profit than single ones.
- hhchild1 number of children aged 18 and above. More adults in the household is expected to enhance profit making
- dumaberg: dummy for living in *Abergele* area. Living outside of the capital city and in rural areas is expected to reduce the chance of making profits.
- dumgash dummy for living in *Gashena* area. Living outside of the capital city and in rural areas is expected to reduce the chance of making profits.
- dummera dummy for living in *Merawi* area. Living outside of the capital city and in rural areas is expected to reduce the chance of making profits.
- dumtdeng dummy for living in *Tikil-Dingay* area. Living outside of the capital city and in rural areas is expected to reduce the chance of making profits.
- dumkuy dummy for living in *Kuy* area. Living outside of the capital city and in rural areas is expected to reduce the chance of making profits.
- dumsayi dummy for living in *Sayint* area. Living outside of the capital city and in rural areas is expected to reduce the chance of making profits.
- dummete dummy for living in *Metema* area. Living outside of the capital city and in rural areas is expected to reduce the chance of making profits.
- dumtili dummy for living in *Tilili* area. Living outside of the capital city and in rural areas is expected to reduce the chance of making profits.

dumbalch	dummy for living in <i>Balchi</i> area. Living outside of the capital city and in rural areas is expected to reduce the chance of making profits.
dummehal	dummy for living in <i>Mehalmeda</i> area. Living outside of the capital city and in rural areas is expected to reduce the chance of making profits.
dumbati	dummy for living in <i>Bati</i> area. Living outside of the capital city and in rural areas is expected to reduce the chance of making profits.
dumjama	dummy for living in <i>Jama</i> area. Living outside of the capital city and in rural areas is expected to reduce the chance of making profits.
dummida	dummy for living in <i>Mida</i> area. Living outside of the capital city and in rural areas is expected to reduce the chance of making profits.
dumkutab	dummy for living in <i>Kutaber</i> area. Living outside of the capital city and in rural areas is expected to reduce the chance of making profits.

However, the above variable list may not be exhaustive; and misleading parameter estimates are still possible due to the “missing variable” problem. Thus in a preliminary regression (not reported here) some additional variables were tried to control for missing variables. They could not be used here either because they have little explanatory power or because they apply “invariably” to all households, while in some cases not all variables apply to every area.

Results from the econometric specification indicated some useful conclusions. Age of the household and the fact that the head is male has a positive and significant (1%) impact on profit making. Literacy level (the mere ability to read and write) has no positive contribution. Household size is positively correlated to profit making, though not

significantly, probably because the mere size, not substantiated with skill achievements in business management has little impact. Like wise, those who can use modern health services stand better chance of managing more profit. It is interesting to note that single households stand better chance of making profits (significant at 1%). The location variables have different implications on households' ability to make profits, some positive and others negative and at different significant levels. Indeed for some cases, the further away from the capital city of the Region (Bahir-Dar), the better the chance of being profitable in business.

Conclusion and Recommendation

Some encouraging results have been observed from the above analysis: positive impact on profit making ability, welfare (food security, health, schooling, housing, income smoothing), empowerment, etc. Determinants of profit making has also shown us that experience, male-headedness, health, are important variables, while education (the conventional one!) has no major role. Profitability also is not necessarily dependent on living near a capital city, particularly if other essential infrastructure, particularly the road network, etc, are convenient in other parts of the region.

Such level of impact has taken at least five years to materialize. It is important to note that the impact of the microfinance has to be seen in the light of the poverty situation in the area. Some rightly argue how microfinance can be successfully run in regions like ours, serving very poor people, with little education, limited marketable skill, engaged

largely in agriculture which is little served by modern technology and for the most part dependant on unreliable climate, facing very poor infrastructure (particularly the road network), small and fragile market, with people earning very precarious income inflows, etc.

But, can more impact be registered, and quickly? The following are some of the steps that need to be taken at various levels:

- √ The first step to materialize the objectives held in the millennium development goals, once again, is to reach even more people with microfinance. It is estimated that only about 10-15% of the economically active poor is having access for microfinance services. Outreach expansion, with a focus for the poor, and women in particular, has to be given more emphasis. For this to happen, the microfinance providers need to *diversifying the lending methodology* away from the current "group methodology" into others like village banking and possibly to individual lending may help, for the group lending on the one hand tends to ignore the very poor, and on the other hand, have no room for those who can borrow on individual bases.

- √ It has been very clear that loan that have been taken for 'micro-enterprise' purposes have been used for consumption activities. Others have self-ensured through their saving put at the MFI. Yet, more efforts are clearly required to provide flexible saving services to help the poor guard against vulnerability.

Insurance products, with due emphasis for the technicalities, would also serve many poor and disadvantaged people. *Emergency loan* is not necessarily a bad proposal. In particularly serious and hard conditions, such arrangements may rescue the poor from eating less or cheaper food with lower nutritional value, cancel or postpone profitable investments or sell valuable assets, at a substantial and permanent loss.

√ Credit must, above all, be accompanied by some kind of marketable skill development, which the poor seriously lack. Credit alone can only increase the "scale" of existing activities rather than enabling the poor to move into new or higher value activities. Purely academic-type of education may not be so useful for very poor people's ability to making business. Some kind of *cultural transformation* may also be called for at this particular juncture in order to change the attitudes of some otherwise poor people who are reluctant, for cultural reasons (including religion), to engage themselves in non-traditional activities which are much more rewarding indeed. A related and more problematic issue is also the *low income perspective* that prevail among most dwellers in many rural areas, who after getting the additional ox (for farming) or the "subsistence" level of income that has been set as a target, most would stop asking for more loan or only take a small amount. Is the theory of "*Backward-bending Labour Supply Curve*" at work? If this is the case for the majority of the rural people, which constitutes 85% of the Ethiopian population, the "entrepreneurship" problem would indeed be a real challenge for the success of the microfinance-microenterprise sector, as well as for the whole national development programme.

- √ The delivery of credit and saving services alone cannot be sure way out of poverty for the majority poor. Whereas one of the propositions in microfinance (particularly 'group lending') is that it would result in enhancing both 'financial capital' as well as 'Social Capital' through bringing poor people, especially women, into group discussion, enabling them to voice-out issues that affect them as group (including, for example cultural problems of: genital mutilation, alcoholism, etc, etc...), this is not happening. It appears that for the group meetings to be able to bring about such positive results, it would take some time, particularly if no one is using them effectively for such additional 'Education' purposes. Either the microfinance programmes should also enter into such 'non-financial' (educational) activities, or they should be 'linked' with other government or NGO programme that are working on such issues (if ever such programs are around, particularly in remote rural areas!).

- √ Rural infrastructure, particularly the road net-work needs special attention by government and others for a healthy microfinance operations. Given that the poor are largely involved in few enterprises, the risk is indeed high if similar products cater only for the small market nearby, which easily saturates, diminishing potential profitability. Relevant *market information* and networks are also vital.

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Table 1: ACSI -- Type of Financial Products

<i>Loan Type</i>	<i>End Term</i>	<i>Instalment</i>	<i>Food Security</i>	<i>Asset Loan</i>	<i>Business Loan</i>
Methodology	Group	Group	Group/Individual	Individual	Individual
Interest Rate	18%	18%	12.5%	18%	≤2 yrs 10% > yrs 12.5%
Interest Rate Type	Declining Balance	Declining Balance	Declining Balance	Declining Balance	Declining Balance
Other Fees	Nil	Nil	Nil	Nil	Nil
Term	9-24 Months	6-24 Months	24 months (with rescheduling)	1-3 Years	1-5years
Repayment Schedule	Semi-annually or end of term	Monthly	Semi-annually or end of term	Monthly	Monthly/Term
Savings Collateral as % of Loan Value	5% Upfront, 1% monthly	3% Upfront, 1% monthly	Nil	Upfront Building <u>20%</u> Mantnce <u>10%</u>	Nil
First Loan (Max)	\$186 (Br. 1600)	\$186 Rural \$ 232 Urban	\$580 (Br. 5000)	\$1,744 (Br. 15,000)	\$ 58,000 (Br. 500,000)
Minimum Size	\$17 (Br. 150)	\$17 (Br. 150)	\$17 (Br. 150)	\$116 (Br. 1000)	\$580 (Br. 5000)
Maximum Size	\$580	\$580	\$580	\$1,744 (15,000) Building Br. 3000-15000 Maintenance Br.1000-5000	\$ 58,000 (Br. 500,000)
Predominant Loan Uses	Agriculture	Processing; manufacturing; trade & service	Agriculture	Housing construction & equipment	Trade, small enterprises, agro- indu, comm. agric.
Total Outstdng (Dec. 2006) Total=\$71,340,634	\$61,165,600	\$5,104,137	\$2,339,571	\$1,441,116	\$1,290,210
% of Portfolio	80%	13%	3.2%	2%	1.8%
Active Clients (Dec 2006)	437,067	41,430	30,609	6,309	271
Ave. Outstanding Balance	\$139	\$123	\$76	\$228	\$4,760

Table 2: ACSI – Performance

	Dec-01	Dec-02	Dec-03	Dec-04	Dec-05	Dec-06
Office Networks	162	162	171	171	174	179
P.As (Kebeles)	1559	1767	1999	2300	2358	2562 (75%)
Credit Clients	152,565	215,970	288,681	351,163	434,814	530,000
% Women	38%	33%	30%	35%	37%	45%
Gross Loan Port. (US\$)	13,868,700	18,121,800	24,403,200	36,206,400	51,973,326	71,340,639
Avrg outst loan size (US\$)	90.9	83.9	84.5	103.1	108.8	118.7
Savings (US\$)	9,919,600	11,564,100	14,924,500	19,999,700	27,838,439	38,972,990
Case-Load	213	257	324	334	341	371
PAR (30 days)	2.5 %	3.5 %	3.1 %	1.7 %	2.5%	1.9%
Oper Exp Ratio	8.3 %	9.2 %	7.8 %	6.2 %	6.0%	6.0%

Figure 1: The Household Economic Portfolio Model

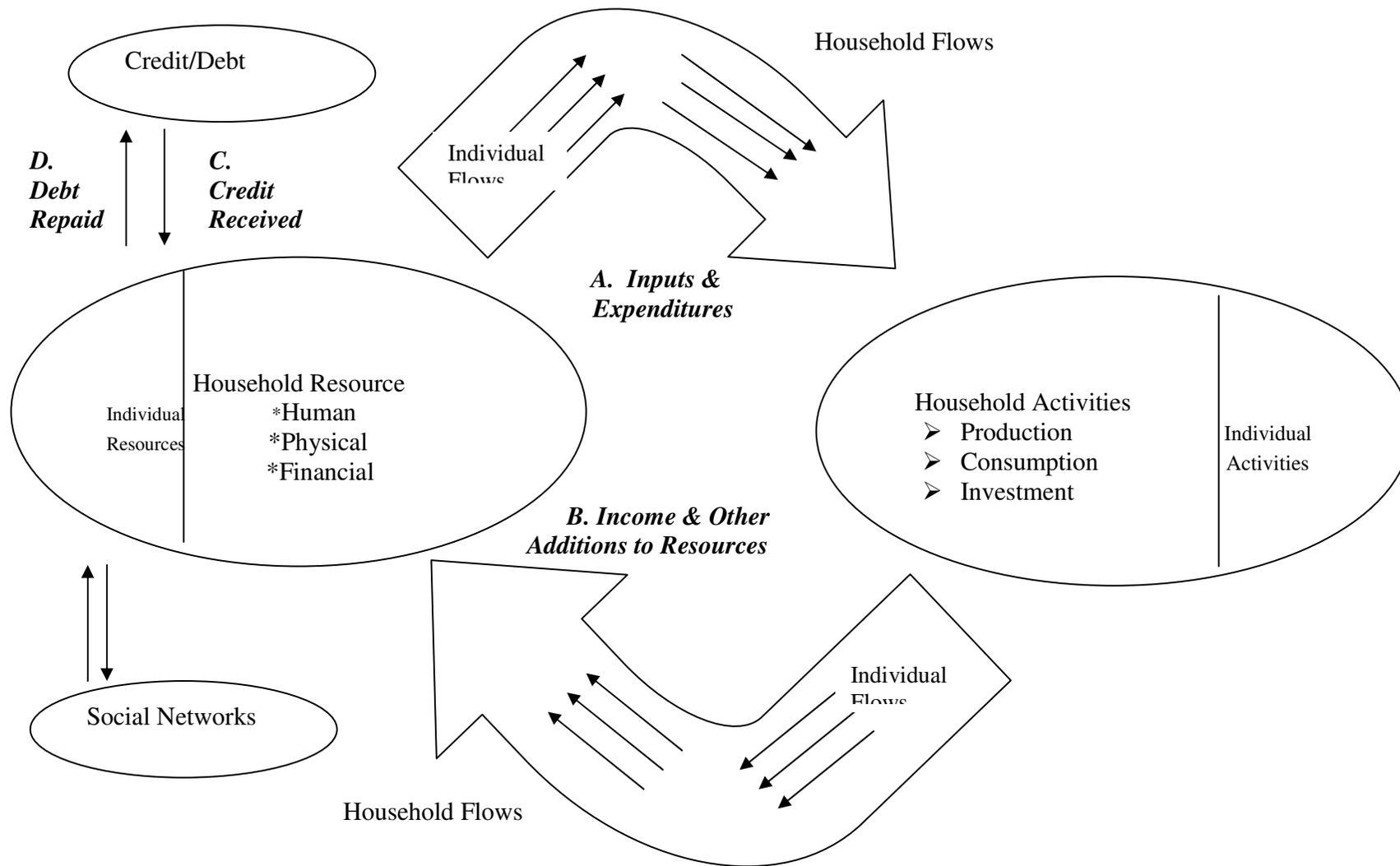


Table: 3 A t-test for differences in profitability of business by Matured and Incoming Clients

Two-sample t test with equal variances						
Variable	Obs	Mean	Std. Err.	Std. Dev.	[99% Conf. Interval]	
profitmt	346	1930.454	106.8926	1988.317	1653.585	2207.322
profitnw	345	1566.11	102.3084	1900.294	1301.111	1831.109
combined	691	1748.546	74.25718	1951.989	1556.741	1940.35
diff		364.3436	147.9727		-17.86734	746.5546

Degrees of freedom: 689

*profitmt= Average Net Profit from business in one 'product cycle' for 'matured' clients

*profitnw= Average Net Profit from business in one 'product cycle' for 'incoming' clients

Ho: mean(profitmt) - mean(profitnw) = diff = 0

Ha: diff < 0	Ha: diff ~= 0	Ha: diff > 0
t = 2.4622	t = 2.4622	t = 2.4622
P < t = 0.9930	P > t = 0.0141	P > t = 0.0070

Table 4: Comparison of Welfare Conditions between Matured and Incoming Clients

Variable	Description	Choices	Clients (Mature Vs. Incoming)	
			>1 year	<=1 year
foodsec1	food shortage over the past 12 months	Have Faced food shortages	49 <i>14.16%</i>	72 <i>20.87%</i>
		Have Not Faced food shortages	297 <i>85.84%</i>	273 <i>79.13%</i>
		Total	346	345
health1	any one in household managed to see a doctor last year?	Yes, managed to see a doctor	183 <i>53.67%</i>	158 <i>46.33%</i>
		Total	339	340
School	Proportion of school age children going to school	Going to School	248 <i>77.1%</i>	174 <i>68.2%</i>
		Not going to school	74 <i>22.8%</i>	82 <i>31.8%</i>
		Total	322	256
Housimpr	housing improvements worth Br.100 last two years	Have made improvements	166 <i>47.98%</i>	86 <i>24.93%</i>
		Have Not Made improvements	180 <i>52.02%</i>	259 <i>75.07%</i>
		Total	346	345

Table 5: Determinants of Profit Making

regress profit1 age0 sex literacy hhszize loan2 health1 civilsta hhchild1 dumaberg dumgash dummera dumtdeng dumkuy dumsayi dummete dumtili dumbalch dummeha dumbati dumjama dummidada dumkutab						
Source	SS	df	MS	Number of obs = 656		
Model	1.0315e+09	22	46885148.6	F(22, 633) = 20.59		
Residual	1.4415e+09	633	2277204.67	Prob > F = 0.0000		
				R-squared = 0.4171		
				Adj R-squared = 0.3968		
Total	2.4729e+09	655	3775486.76	Root MSE = 1509.0		
profit1	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
age0	8.213694	4.773332	1.721	0.086	-1.159787	17.58718
sex	223.8335	127.9791	1.749	0.081	-27.48136	475.1484
literacy	-.0501106	2.857345	-0.018	0.986	-5.661132	5.560911
hhszize	55.66628	38.39175	1.450	0.148	-19.72431	131.0569
loan2	.0475422	.0526636	0.903	0.367	-.0558743	.1509586
health1	100.5823	119.8305	0.839	0.402	-134.731	335.8956
civilsta	-164.2981	77.80073	-2.112	0.035	-317.0768	-11.51932
hhchild1	-103.1298	68.05388	-1.515	0.130	-236.7685	30.50888
dumaberg	23.40643	429.652	0.054	0.957	-820.3093	867.1222
dumgash	-78.5698	75.71448	-1.038	0.300	-227.2517	70.11214
dummera	16.62768	30.93479	0.538	0.591	-44.11955	77.3749
dumtdeng	82.36628	22.74823	3.621	0.000	37.69516	127.0374
dumkuy	-12.51631	41.81625	-0.299	0.765	-94.63166	69.59905
dumsayi	83.45625	24.25922	3.440	0.001	35.81797	131.0945
dummete	180.6369	28.93798	6.242	0.000	123.8109	237.463
dumtili	5.506377	20.74283	0.265	0.791	-35.2267	46.23945
dumbalch	402.3716	145.7872	2.760	0.006	116.0865	688.6567
dummehal	83.51021	37.79351	2.210	0.027	9.294389	157.726
dumbati	131.864	99.55725	13.247	0.000	1123.362	1514.367
dumjama	5.62593	57.654	0.098	0.922	-107.5903	118.8422
dummidada	-15.96254	27.11736	-0.589	0.556	-69.2134	37.28832
dumkutab	561.4686	49.00013	11.459	0.000	465.2461	657.691
_cons	547.5249	335.5115	1.632	0.103	-111.3252	1206.375