SUSTAINABLE BANKING
with the POOR

Outreach and
Sustainability: A
Comparative
Analysis of
Savings-First vs.
Credit-First
Financial
Institutions

Julia Paxton
Cécile Fruman
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The study aims at improving the ability of donors, governments and practitioners to design and implement policies and programs to build sustainable financial institutions that effectively reach the poor. The SBP task managers are Lynn Bennett and Jacob Yaron; the technical manager is Carlos Cuevas, and the associate manager is Cécile Fruman. The administrative assistant is Laura Gomez.

*Note: In the back cover box, Swiss Development Corporation, should read Swiss Agency for Development and Cooperation (SDC).

This report was prepared by Julia Paxton (SBP Consultant) and Cecile Fruman (SBP). Valuable comments were contributed by Carlos Cuevas (SBP) using information from 8 SBP case studies.
**List of Acronyms**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
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<tr>
<td>BNDA:</td>
<td>Banque nationale de développement agricole - National Agriculture Development Bank (Mali)</td>
</tr>
<tr>
<td>CPEC:</td>
<td>Caisses populaires d'épargne et de crédit - People's Savings and Loan Banks (Niger)</td>
</tr>
<tr>
<td>CVECA:</td>
<td>Caisses villageoises d' épargne et de crédit autogérées - Self-managed Village Savings and Loan Banks (Mali)</td>
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<tr>
<td>DOI:</td>
<td>Depth of Outreach Index</td>
</tr>
<tr>
<td>FECECAM:</td>
<td>Fédération des caisses d'épargne et de crédit agricole mutuel - Federation of Agricultural Savings and Loan Cooperatives (Benin)</td>
</tr>
<tr>
<td>GAF:</td>
<td>Get Ahead Foundation (South Africa)</td>
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<tr>
<td>GAFS:</td>
<td>Get Ahead Financial Services (South Africa)</td>
</tr>
<tr>
<td>GNP:</td>
<td>Gross National Product</td>
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<tr>
<td>GTZ:</td>
<td>Deutsche Gesellschaft für Technische Zusammenarbeit</td>
</tr>
<tr>
<td>K-Rep:</td>
<td>Kenya Rural Enterprise Program</td>
</tr>
<tr>
<td>NGO:</td>
<td>Non-Governmental Organizations</td>
</tr>
<tr>
<td>PPPCR:</td>
<td>Projet de promotion du petit crédit rural - Rural Credit Promotion Program (Burkina Faso)</td>
</tr>
<tr>
<td>SDI:</td>
<td>Subsidy Dependence Index</td>
</tr>
</tbody>
</table>
OUTREACH AND SUSTAINABILITY OF SAVINGS-FIRST VS. CREDIT-FIRST
FINANCIAL INSTITUTIONS:
A Comparative Analysis of Eight Microfinance Institutions in Africa

INTRODUCTION

While informal financial arrangements have prospered in Africa for generations, the history of formalized microfinance in Africa is a more recent phenomenon. The 1950's and 1960's led to a proliferation of rural lending programs sponsored by government development banks which focused solely on the provision of subsidized credit. In the 1950s, the first credit unions and savings and loan cooperatives were established in rural areas. In contrast to the development banks, the emphasis of these institutions was on savings mobilization. Those who promoted the credit unions - most often socially oriented missionary and other groups that were working with a low-income membership base - thought it necessary to "teach" the rural population to save and had little faith in the ability of the members to pay back loans. In the 1980's, when Grameen Bank replications began to be tested in Africa using primarily donor funds to provide credit to a wide number of solidarity group members, a heated debate was generated over the strengths and weaknesses of the "savings-first approach" and the "credit-first approach".1 Guy Bédard from the International Alliance of Cooperatives introduced the terminology of "warm money" to qualify the savings generated by the communities themselves, over which they had greater responsibility than over "cold money", the funds provided by outside donors.2 Many believed that programs relying on cold money could not become sustainable and encouraged delinquency. Promoters of credit-first programs, on the other hand, believed that savings-first approaches were too conservative and were not reaching the bulk of the underserved population of microentrepreneurs.

After years of debate, it has become apparent that both methodologies have contributed valuable lessons and innovations for reaching a more diversified clientele. For instance, women who traditionally represented only a small fraction of the members in the cooperatives represent the main clientele of credit-first programs. In addition, savings-led programs have had success in reaching a largely rural clientele.

Practitioners from both "sides" have learned from one another and over the past few years many institutions have started blending together the two approaches. Numerous credit unions now provide loans to groups of clients, mostly women, without requiring

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1 Savings-first institutions mobilize local deposits and then more gradually provide some of their members with loans. In contrast, the credit-first programs reach a wide group of clients initially by providing credit to each of their clients, often relying on donor funds. Typically, mandatory savings is a prerequisite for obtaining a loan, however voluntary savings is not an important component of the program.
savings. One such case is FECECAM in Benin. Credit-first programs, on the other hand, are now actively seeking the means to mobilize savings in order to be less dependent on donor funding. The division between savings-first and credit-first institutions is becoming increasingly blurred. However, for the purposes of this analysis, the delineation between savings-first and credit-first institutions will be preserved.

The following study examines the extent to which savings-first and credit-first programs throughout Africa have been able to strive towards sustainability while reaching clients that traditionally have been excluded from formal finance, including women, rural inhabitants, the illiterate, and the poor. The analysis focuses on measures of sustainability and outreach as well as their inter-relatedness for eight microfinance programs in seven African countries. Three of these programs are savings-led and five are credit-led.

BACKGROUND

THE COUNTRY CONTEXT

Creating strong and viable financial institutions in Africa is particularly challenging given the macroeconomic context. As Table 1 illustrates, sub-Saharan Africa has the lowest GNP per capita of any region of the developing world. Not only is poverty widespread, but the average income fell by 1.2 percent annually during the period 1985 - 1994. During the same time period, the rest of the developing regions had positive growth of GNP per capita. Another obstacle faced by microfinance institutions in Africa is the high illiteracy rate of 43 percent. In addition, the population density in Africa is much lower than in Asia. Since 69 percent of the sub-Saharan population lives in rural areas, microfinance institutions are challenged to serve the widely dispersed, rural clientele in a cost-effective way.

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3 Some of the programs looked at still deserve to be called "programs" because they rely on donor funding and are not regulated financial institutions. Only one of the programs have transformed into a financial institution with little reliance on donor assistance (K-Rep), while others are in the process of becoming regulated institutions (FECECAM, CVECA Pays Dogon). However, in this paper we have used the words "programs" and "institutions" interchangeably.
Table 1. REGIONAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>1994 GNP/capita</th>
<th>SUB-SAHARAN AFRICA</th>
<th>EAST ASIA &amp; PACIFIC</th>
<th>SOUTH ASIA</th>
<th>LATIN AMERICA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average GNP/capita growth 1985-1994</td>
<td>-1.2</td>
<td>6.9</td>
<td>2.7</td>
<td>0.6</td>
</tr>
<tr>
<td>Adult illiteracy 1995 (%)</td>
<td>43</td>
<td>17</td>
<td>50</td>
<td>13</td>
</tr>
<tr>
<td>Population density</td>
<td>23.6</td>
<td>106.0</td>
<td>237.7</td>
<td>22.9</td>
</tr>
<tr>
<td>% rural population</td>
<td>69</td>
<td>68</td>
<td>74</td>
<td>26</td>
</tr>
</tbody>
</table>


This study examines microfinance institutions located in seven sub-Saharan African countries, namely Niger, Benin, Mali, Burkina Faso, Zimbabwe, Kenya, and South Africa. Within such a grouping of countries, a certain degree of macroeconomic heterogeneity is to be expected. Table 2 compares and contrasts some basic economic indicators for the countries under examination.

South Africa stands out as an anomaly in Table 2, given that its GNP per capita is nearly ten times that of the other six countries in the study. However, it should be emphasized that South Africa has the most skewed income distribution as is evidenced by the high Gini index.4 Years of apartheid have resulted in two separate economies: one resembling a developed country and the other reminiscent of an impoverished country. Although GNP per capita is not as high in Zimbabwe and Kenya as it is in South Africa, income inequality is just as severe. It is important to point out that the four microfinance programs operating in these countries and analyzed in this study target poor clients whose economic conditions are similar to those found in the other countries studied.

Six of the seven countries studied mirrored the negative growth of GNP per capita from 1985 to 1994 of the Africa region, with the exception of Mali which had a 1.0 percent annual growth rate. The West African economies using a common currency pegged to the French franc experienced low inflation in the 1984-1994 decade while Kenya, Zimbabwe, and South Africa had inflation rates averaging between 12 and 20 percent annually. The West African countries also stand apart with regards to adult illiteracy. The vast majority of the population is illiterate in West Africa compared to around one fifth of the population in Kenya, Zimbabwe, and South Africa.

4 The Gini coefficient is an index of inequality used to measure income distribution.
Table 2. COUNTRY CHARACTERISTICS

<table>
<thead>
<tr>
<th></th>
<th>NIGER</th>
<th>BENIN</th>
<th>MALI</th>
<th>BURKINA FASO</th>
<th>KENYA</th>
<th>ZIMBABWE</th>
<th>SOUTH AFRICA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994 GNP/capita USS</td>
<td>230</td>
<td>370</td>
<td>250</td>
<td>300</td>
<td>250</td>
<td>500</td>
<td>3040</td>
</tr>
<tr>
<td>Gini Index</td>
<td>36.1</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>57.5</td>
<td>56.8</td>
<td>58.4</td>
</tr>
<tr>
<td>Average GNP/capita</td>
<td>-2.1</td>
<td>-0.8</td>
<td>1.0</td>
<td>-0.1</td>
<td>0</td>
<td>-0.5</td>
<td>-1.3</td>
</tr>
<tr>
<td>Average annual growth</td>
<td>0.2</td>
<td>2.9</td>
<td>3.4</td>
<td>1.6</td>
<td>11.7</td>
<td>19.7</td>
<td>14.3</td>
</tr>
<tr>
<td>Average annual inflation 1984-1994</td>
<td>0.2</td>
<td>2.9</td>
<td>3.4</td>
<td>1.6</td>
<td>11.7</td>
<td>19.7</td>
<td>14.3</td>
</tr>
<tr>
<td>Adult illiteracy 1995 (%)</td>
<td>~86</td>
<td>63</td>
<td>69</td>
<td>81</td>
<td>22</td>
<td>15</td>
<td>18</td>
</tr>
<tr>
<td>Pop. density (inhabitants/km2)</td>
<td>7</td>
<td>47</td>
<td>8</td>
<td>37</td>
<td>45</td>
<td>28</td>
<td>33</td>
</tr>
<tr>
<td>% rural population</td>
<td>87</td>
<td>68</td>
<td>81</td>
<td>91</td>
<td>84</td>
<td>78</td>
<td>52</td>
</tr>
</tbody>
</table>


The population density of each of the countries studied is dramatically below that of the average for South Asia and East Asia and the Pacific. Within the group of seven countries studied, Niger and Mali have an exceedingly sparse population averaging 7 and 8 people per square kilometer respectively. Most of the population in each of the countries is located in rural areas.

**Contrasting Approaches: Savings-first vs. Credit-first**

Experience proves that neither the credit-first approach or the savings-first approach is a fail-safe method of providing sustainable financial services to the poor. Indeed, programs of each type have collapsed in Africa while others have enjoyed considerable success.

Savings-first and credit-first financial institutions in West Africa have been examined by many authors. Among these, Graham concludes that either approach can lead to the eventual provision of sustainable financial services. He outlines several advantages of both approaches. These advantages are summarized in Box 1. 5

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### Box 1. ADVANTAGES OF CREDIT-FIRST VS SAVINGS FIRST APPROACHES

<table>
<thead>
<tr>
<th>SAVINGS-FIRST</th>
<th>CREDIT-FIRST</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>information advantages lead to effective screening/monitoring</em></td>
<td><em>rapid set-up possible through use of donor funds and technical assistance</em></td>
</tr>
<tr>
<td><em>internal source of funds creates repayment incentive</em></td>
<td><em>large initial outreach</em></td>
</tr>
<tr>
<td><em>no loan targeting</em></td>
<td><em>rapid expansion</em></td>
</tr>
<tr>
<td><em>voluntary savings</em></td>
<td><em>avoid high transaction costs associated with savings</em></td>
</tr>
<tr>
<td><em>bank/client relationship developed first as depositor</em></td>
<td><em>may use groups to overcome information asymmetries</em></td>
</tr>
</tbody>
</table>

Several clear advantages of savings-first institutions can be identified. Often, savings-first programs operate in close-knit communities thus facilitating screening and monitoring of clients. Rather than granting loans ad hoc to everyone in a village, the savings-first programs are selective in deciding who is credit-worthy. The creditworthiness of potential borrowers is established through information advantages present in the community and also through the depositor relationship with the bank. Because funds are internally generated, a strong incentive exists to repay loans since ones' friends and neighbors will be upset if they lose their savings.

Perhaps the most important advantage of savings-first microfinance institutions is that they encourage voluntary savings. The use of internally generated funds results in a cautious approach to lending and attention to sustainability. These institutions are compelled to increase profitability through sound banking practices, reduction of operating costs, and appropriate loan screening and monitoring.\(^6\) Most importantly, by offering voluntary savings, these institutions are providing a much desired financial service to the poor who rarely have the possibility to earn a positive return on their savings in a safe and liquid account.

A common criticism of savings-first programs is that they only target middle-income entrepreneurs and do not reach very poor people. Also, much more time is generally required to establish a savings-first program since it is necessary to first establish trust, educate participants, and allow for adequate time to build savings. Some problems associated with the internal management of funds can arise such as liquidity management, voting inequities, physical security of funds, corruption, and issues relating to MIS. Another criticism of the savings-first approach is that voluntary savings are costly to collect, especially when the transactions are small and frequent. The questions that arise from these criticisms are therefore: 1) is outreach of savings-first programs limited to middle-income clients? and 2) given the slow process of mobilizing savings

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and the costs involved, can savings-first programs reach economies of scale and financial self-sufficiency?

One of the principal advantages of the credit-first approach is its ability to reach a large number of clients in a relatively short period, due to its reliance on external funding and technical assistance. Rather than waiting for the internal mobilization of funds, credit-first programs are able to have a large initial outreach and rapid expansion through the use of external funding. Often, but not always, voluntary savings is not collected in the credit-first programs thereby reducing the transaction costs of mobilizing internal funds. Another common feature of credit-first programs is that they organize clients into solidarity groups. These groups can be instrumental in overcoming information asymmetries, thus leading to effective internal screening and monitoring of clients in well functioning solidarity groups.

Critiques of credit-first institutions emphasize the fact that their reliance on donor funding makes them inefficient and unstable, and they are not required to develop into formal financial intermediaries. Their governance structure is generally weak because leadership answers to donors rather than directly to clients, depositors and borrowers.

However, it is widely recognized that depth of outreach tends to be high in these institutions because loans can be targeted to very poor people and disbursed quickly. In comparing these institutions to savings-first institutions or programs, two questions can be set forth: 1) does the perceived ability of these institutions to reach the poorest translate into a higher depth of outreach than in savings-first institutions? and 2) does the charitable/donor-driven character of these institutions prevent them or delay them from becoming financially sustainable institutions?

In order to examine issues related to the outreach and sustainability of microfinance programs in Africa, eight programs were analyzed. Obviously, a sample of eight institutions cannot answer each of these questions definitively. Nevertheless, interesting trends from the data shed light on issues of outreach and sustainability for both credit-first and savings-first institutions.

**SAVINGS-FIRST VS. CREDIT-FIRST PROGRAMS IN AFRICA: 8 CASE STUDIES**

In an attempt to analyze savings-first and credit-first microfinance institutions, data from eight case studies performed by the World Bank *Sustainable Banking with the Poor* study were utilized. The case studies contain data ranging from 1995 to 1997 and encompass a wide range of methodologies, contexts, and performances.

Three savings-first institutions were included: two credit union networks in Niger (CPEC) and Benin (FECECAM) and a network of self-managed savings and loan village banks in Mali (CVECA Pays Dogon). All three institutions have many points in common. They are all member-based, and boards of directors and credit committees are elected.
among the membership. They are all highly decentralized with local credit unions or banks in small towns or villages. All three institutions mobilize savings from their members and use these savings to extend loans to their membership. However, the requirements for savings are quite different in the credit unions and in the CVECAs. In the credit unions, members can apply for a loan only if they have been saving for a required amount of time, and the amount of their loan is proportional to the amount they have saved. Members may not draw upon their savings while they borrow from the institution. On the other hand, in the CVECAs, loans can be provided to all members, regardless of their current or previous savings, as long as the village bank has sufficient resources.

In all of the savings-led institutions, lack of savings seems to be a constraining factor for growth. Demand for credit is higher than the supply of savings. CVECA Pays Dogon has solved this problem by developing ties with the BNDA (National Agricultural Development Bank). BNDA lends to the village banks a proportionate amount of the savings they have mobilized, to the extent that they meet the criteria set by the network of village banks. For the past eight years, BNDA has been lending from a donor line of credit. It is hoped that in the near future, it will be willing to lend to the village banks at its own risk, now that the banks have established an excellent track record. This experience demonstrates that there are beneficial ways of mixing "warm money" and "cold money" and that the introduction of "cold money," if done well, does not discourage savings mobilization systematically.

Among the credit-led programs, some of the institutions use solidarity groups (PPPCR in Burkina Faso and the Get Ahead Foundation in South Africa), while some offer both individual and group loans (K-REP in Kenya and Zambuko Trust in Zimbabwe), while CARE Kenya uses a village banking methodology. These institutions rely primarily on donor funds or commercial funds to onlend to their clients. However, most of these programs do require compulsory savings, either as a form of collateral or as a means of "educating" clients on the virtues of saving and of linking them with formal financial institutions.

PPPCR was established as a loose replication of Grameen Bank. Like the Grameen Bank, the PPPCR has a compulsory non-interest bearing savings program generated through its group fund. At the granting of each loan, the clients contribute to a common fund which can take the form of a group or village fund. However, there exists confusion between the role of a savings fund versus an insurance fund. Sometimes the entire village fund has been used to cover the arrears of a few groups and has not been returned at the end of the loan. At one point, PPPCR decided to collect voluntary savings but the savings were returned to the clients when new personnel implemented program changes. This violation of trust and instability will make future savings mobilization more difficult, although this remains one of the PPPCR's future goals.

Care Kenya, The Get Ahead Foundation, and Zambuko Trust do not offer voluntary savings products but do require mandatory savings. In the case of Care Kenya, borrowers
are required to save 20 percent of their loan amounts, a sum which is held by the program until the loan has been repaid in full. GAF and Zambuko Trust require that their borrowers deposit 10 percent of their loan principal into an insurance fund prior to receiving their loan. At GAF, borrowers are also encouraged to save in their account (opened at a local bank) each month so that if they apply for a repeat loan, larger than the first, they will already have 10 percent of their new loan amount in their account. Zambuko is considering changing its legal status in order to be able to mobilize savings. K-Rep, in its Juhudi (group) loan program, also encourages members of the group to contribute toward a group savings fund which serves as collateral for loans and broadens the members' business capital base. Once every year, Juhudi borrowers can withdraw up to 10 percent of their savings plus interest earned. K-Rep considers savings mobilization a process of empowering poor entrepreneurs by facilitating a gradual but steady accumulation of cash assets. In the long run, K-Rep, with the consent and collaboration of clients, hopes to use these deposits as capital by converting the fund into equity or loan capital fund capital.

Not only do the requirements for savings products vary substantially between the savings-first and credit-first institutions, but the deposit sizes also vary. As shown in Table 3, deposit sizes are much larger among savings-first institutions, averaging $93 in comparison to $22 for credit-first institutions. This is not a surprising result given that the savings-led institutions offer voluntary savings instruments while the average deposit size of the credit-led institutions is a reflection of the mandatory savings requirement. Other basic institutional features of these institutions are also quite different and are given in Table 3.

When contrasting the savings-first and credit-first institutions in Table 3, several interesting patterns emerge. The savings-first programs have an earlier date of foundation on average (1984 compared to 1986 for credit-first programs). The two credit unions in this survey actually are much younger than most credit unions worldwide. The average date of foundation for credit union movements studied in a recent World Bank inventory was 1968 compared to an average foundation of 1983 for credit-first programs. In general, the microfinance institutions in Africa tend to be younger than other regions of the world.

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Table 3. BASIC INSTITUTIONAL CHARACTERISTICS

<table>
<thead>
<tr>
<th></th>
<th>SAVINGS-first</th>
<th>CREDIT-first</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
<td>Niger</td>
<td>Benin</td>
</tr>
<tr>
<td>Number of clients</td>
<td>5,000</td>
<td>166,000</td>
</tr>
<tr>
<td>Av. loan size</td>
<td>151</td>
<td>408</td>
</tr>
<tr>
<td>outstanding (US$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Av. loan/ GNP/cap</td>
<td>0.66</td>
<td>1.1</td>
</tr>
<tr>
<td>Av. loan term</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>(months)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Av. deposit size</td>
<td>36</td>
<td>96</td>
</tr>
<tr>
<td>Av. savings/ GNP/cap</td>
<td>0.16</td>
<td>0.26</td>
</tr>
<tr>
<td>Growth of loan portfolio 1994-1995</td>
<td>478%</td>
<td>50%</td>
</tr>
</tbody>
</table>

One of the most striking differences between the savings-first and credit-first programs is their scale. The credit unions tend to be much larger than some of their NGO counterparts. The average number of clients for these savings-first institutions was 64,000 compared to only 10,000 for the credit-first institutions. This is an interesting finding given that credit-first programs have an initially wide outreach. These savings-led institutions have been able to reach large numbers of clients despite their reliance on internally generated funds.

In addition, the terms and conditions of loans offered vary. Average loans are somewhat larger among savings-first institutions ($222 compared to $159 for credit-first institutions). The average loan terms and the growth rate of the loan portfolios were comparable in both types of institutions. The rapid growth of loan portfolios across the

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8 However, the average growth rate of the savings-first institutions included in this sample is skewed upwards by the exceptionally high growth of the Niger credit unions. This high growth can be explained
board in these African institutions raises some concern as the programs attempt to manage rapid growth with sound financial practices and sustainability.

OUTREACH

Von Pischke\(^9\) describes a frontier between the formal and informal financial sectors. Those outside the frontier do not have regular access to formal financial services. They comprise a heterogeneous population, where the degree of exclusion from financial services may vary and their distance from the poverty line (in either direction) in their respective countries may differ.\(^10\) In measuring institutional outreach, it is important to distinguish between extent (or breadth) and depth of outreach, the former accounting for the absolute number of households or enterprises (or relative market penetration) in the target population reached by the institution, the latter indicating how deep in the pool of the under-served the institution or program has been able to reach.

DEPTH OF OUTREACH INDEX (DOI)\(^11\)

In developing countries, several categories of people consistently have been under-served by financial institutions. These categories, usually bearing some degree of positive correlation across them, include (but are not restricted to):

**The poor**

Formal financial intermediaries experience relatively high transaction costs when dealing with very poor people because of the very small size of each transaction. For instance, the cost of offering savings facilities to clients who make frequent micro-deposits can be quite high. The same applies for very small loans that require similar bureaucracy as larger loans in formal financial institutions, but capture very little rent, resulting in losses.

**Women**

Women have been excluded from formal financial services for a variety of reasons. Perhaps foremost is a cultural bias against women. At the household level, most financial decisions have been made by male heads of household, although this cultural norm is shifting gradually. In addition, women represent some of the poorest people in developing countries. Their micro-enterprises and petty trade do not have sufficient scale to interest formal financial intermediaries. Finally, literacy requirements have barred

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by the fact that the program was very young and only started granting loans in 1992. In general, most savings-first institutions tend to grow at more conservative rates.


\(^11\) This section draws upon Paxton, J. and Cuevas, C. “Outreach and Sustainability of Member-based Rural Financial Intermediaries.” International Agricultural Economics Association Meetings, Sacramento, CA, August 1997.
some illiterate women from obtaining formal financial services. Female clients have been targeted by microfinance institutions not only because of their exclusion from formal finance, but also because women spend a greater percentage of their share of household income on food, children's clothes, education, and health than men do, as demonstrated in several studies.

**Rural inhabitants**

Due to the high transactions costs associated with serving a largely dispersed population and the high risk associated with agriculture, formal financial intermediaries have avoided rural areas. However, this negligence is particularly alarming in Sub-Saharan Africa given that approximately 70 percent of the population lives in rural areas (see Table 2). Government sponsored programs that offer rural credit have resulted in disappointing performance due to their reliance on subsidized interest rates, inappropriate terms and conditions, a lack of repayment enforcement, and corruption.

**The uneducated**

People who cannot read and write face an obvious obstacle to obtaining financial services that require any type of written application or paperwork. This problem especially is pronounced in Sub-Saharan Africa where fully one half of the adult population is illiterate (see Table 2). Microfinance institutions have served the illiterate by adopting innovative techniques including oral training and screening, pictorial training, group guarantees, and use of thumbprint signatures.

These categories are used here to define and measure a depth of outreach indicator (DOI) for the institutions under analysis. The categories were chosen not only for their association with the degree of exclusion from financial services, but also for their relative ease of measurement in simple, rapid-appraisal type surveys of the programs' clienteles. Other variables (such as ethnicity or national origin) could be used in different scenarios, depending upon the factors perceived as determining exclusion.

**DEPTH OF OUTREACH IN THE EIGHT CASE STUDIES**

The DOI is used to analyze the degree to which credit-first and savings-first financial institutions serve the rural, female, poor and illiterate clients. Depth of outreach diamonds were constructed to examine these four outreach indicators of credit-first and savings-first institutions in comparison to the overall country averages (Figure 1).

The diamonds present a simple graphic representation of the four outreach indicators. Three of the variables (urban, male, and literate) are percentages calculated on a 0 to 1 scale. Rather than using GDP per capita as a measure of country level income, the alternative measure of GDP divided by the economically active population (EAP) was used. This measure was normalized to one for the country average. The income of the clients was put on the same scale by dividing the average income of the clients by the

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country level income. Using this approach, smaller diamonds reflect a greater depth of outreach.

Figure 1 illustrates an average of the savings-led institutions in the first diamond and the credit-led institutions in the second diamond. The country averages give a general benchmark for comparison for the savings-first and credit-first averages. Upon first glance, one notices that the credit-first diamond generally is smaller than the country average diamond, representing a deep outreach, while the savings-first diamond has a roughly similar area to the country average diamond. This finding parallels a similar study performed on Latin American microfinance institutions.

Upon further examination, more specific details of outreach are revealed. Among the savings-first institutions, the average clients tend to be more literate and male than the country average. Many credit unions have a predominantly male membership, although more female members have joined African credit unions in recent years. In addition, credit unions have been active in literacy training in Africa. On average, savings-first membership is slightly poorer and much more rural than the country averages.

In contrast, the outreach diamond for credit-first institutions shows an entirely different clientele. On average, the credit-first programs target a more urban, female, illiterate clientele than the country average. Urban market women represent a large percentage of credit-first clients. The incomes of these clients is nearly one half the average income per economically active worker in the country. In this respect, it is clear that the credit-first programs have a significant outreach to underserved portions of the community.

While the outreach diamonds for savings-first and credit-first institutions in Figure 1 show institutional averages, the disaggregated diamonds for each individual institution show additional detail and variation (see Appendix). Among the savings-first institutions, CVECA in Mali stands out as having a deep outreach in terms of reaching the very poor, women, and rural inhabitants. The PPPCR and CARE Kenya have a notable depth of outreach among the credit-first programs. Due to the income inequalities present in South Africa, the Get Ahead Foundation serves a much poorer population than the country average, although this contrast is not as pronounced when examining only the black population of South Africa.

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Figure 1. OUTREACH OF SAVINGS-FIRST AND CREDIT-FIRST INSTITUTIONS
SUSTAINABILITY

While it is useful to examine to what degree these microfinance institutions reach beyond the traditional financial frontier, their ability to reach large numbers of clients with financial services in the long run is a function of their financial viability. A program that reaches the very poor, but relies solely on donor funds is wasteful in several ways. From the donor perspective, it uses scarce resources inefficiently. From the institutional perspective, it creates an external dependence for the financial institution. From the client perspective, the perception of impermanence and the use of external funds rather than internally-generated funds creates incentives to default. Not only does the outreach of the credit-first and savings-first institutions differ, but the sustainability varies dramatically from one institution to another. Table 4 provides various measures of sustainability and efficiency for each of the eight institutions.

One of the most revealing indicators of institutional sustainability is the Subsidy Dependence Index (SDI). The SDI measures by what percentage interest rates charged to clients would have to be increased hypothetically in order to cover program costs and eliminate subsidies. To correctly calculate the SDI, all expenses should be accounted for, including those that do not appear on the financial statements. These expenses include goods and services that a microfinance institution does not pay for, but which are important to the conduct of its business - e.g. a rent-free building, consultant fees, a donor-paid technical advisor. Other costs that go unreported are subsidies provided by governments or donors such as tax deductions or subsidized lines of credit. In calculating the SDI, it is important to estimate the shadow price of these subsidies - what the institution would have to pay if it paid taxes like a formal financial institution and if it raised funds on the local commercial markets.

For most of the institutions in this sample, it was difficult to estimate all of the hidden costs in order to calculate the SDI precisely. Many programs had no idea of what the costs of technical assistance being supported by the donors were - other programs refused to share this information, fearing to appear badly in the comparison. As a result, the SDI measures presented here are not fully reliable, mostly in the case of the credit-first institutions where several appear to be underestimated. The fact that microfinance institutions have not been concerned in the recent past with tracking down all their costs is in itself an interesting result. It proves that they have considered donor and government assistance as a given. Only in the recent years have some institutions come to understand that, in order to be less vulnerable to changes in policies and fund allocation, they must start paying the full cost for all the goods and services they receive.

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Table 4. SUSTAINABILITY

<table>
<thead>
<tr>
<th></th>
<th>SAVINGS-FIRST</th>
<th>CREDIT-FIRST</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDI</td>
<td>3675%</td>
<td>70%</td>
</tr>
<tr>
<td>Operational self-sufficiency</td>
<td>204%</td>
<td>106%</td>
</tr>
<tr>
<td>Financial self-sufficiency</td>
<td>na</td>
<td>74%</td>
</tr>
<tr>
<td>Arrears rate</td>
<td>28%</td>
<td>2%</td>
</tr>
<tr>
<td>Portfolio at risk</td>
<td>na</td>
<td>2%</td>
</tr>
<tr>
<td>Real effective interest rates</td>
<td>48%</td>
<td>13%</td>
</tr>
<tr>
<td>Loan officer salary/GNP/capita</td>
<td>na</td>
<td>3.0</td>
</tr>
<tr>
<td>Volume savings/vol. loans outstanding</td>
<td>206%</td>
<td>148%</td>
</tr>
</tbody>
</table>

In the case of the savings-first institutions, both CVECA Pays Dogon and FECECAM appear to be on the road to sustainability. CVECA Pays Dogon has plans to become financially self-sufficient in the next year or two, now that foreign technical assistance is no longer required and that only the local costs need to be covered. It will have taken this program 12 years to become a sustainable institution. FECECAM may need to wait a few more years given the fact that an ambitious development plan has been elaborated by manangement and the expansion costs will maintain the institution in the red until all of the newly-established credit unions become profitable.

The Niger credit union movement (CREP) has a very high SDI because the institution is very young and has generated little revenue to cover the high start-up costs. In addition, the SDI measure for CREP fully accounts for all additional costs including WOCCU training and development. Although 37 local CREPs had been established by December 1994, since inception, the total loans provided since inception of the program in 1990 did not exceed $158,000. The SDI figures of these three institutions seem to demonstrate that savings-first programs can reach financial self-sufficiency over a period of ten to fifteen years, but that in their first years of existence the SDI figures are very high because of the important start-up costs.

For the credit-first institutions, SDI figures spanned from 126 percent for PPPCR to an alarming 1900 percent for CARE Kenya. Part of the reason for CARE Kenya's high SDI is that its microfinance program has only recently has focused on financial viability.
In the early years of its operation, the microfinance program was viewed somewhat as an experiment and fit into the rest of the subsidized humanitarian effort of CARE Kenya. Only since 1996 has the Women's Economic Development microfinance program split from the rest of CARE Kenya in order to strive for a higher degree of financial sustainability. While the SDI calculations for the PPPCR do not include some foreign technical assistance, its SDI measures have improved steadily during the 1990's.

Since the case study of K-Rep was conducted, the institution was very close to reaching break-even in 1997 and was transformed into a licensed bank, with equity participation from foreign investors such as IFC (International Finance Corporation, part of the World Bank Group), African Development Bank and Shorebank. In contrast to K-REP, CARE Kenya's SDI measure indicates severe obstacles to sustainability. As for GAF, the first financial statements of the financial unit (Get Ahead Financial Services - GAFS) were elaborated in 1996. Because accounting of GAFS had not been differentiated from the other services offered by the NGO until that year, a great deal of confusion existed and it was impossible to calculate the SDI.

Other measures of sustainability generally are more favorable for the savings-first programs than for the credit-first programs. Operational and financial self-sufficiency measures\(^\text{15}\) tend to be much higher for the savings-first programs. The exception is the Get Ahead Foundation which has both operational and financial self-sufficiency measures over 100 percent. Some credit-led programs, such as CARE Kenya and Zambuko Trust, have operational and financial self-sufficiency measures that are equal due to the fact that these programs rely on donations and do not have financial costs.

No clear pattern emerges when examining arrears rates. Five of the eight programs have arrears rates less than 10 percent of the outstanding loan portfolio. The high arrears rate of the Niger credit unions is comprised almost entirely of arrears of less than 60 days. Zambuko Trust has experienced very poor repayment rates in the past couple of years, leading to a portfolio at risk measure of 54 percent in 1995. The portfolio at risk measure of 33 percent for the Get Ahead Foundation also raises serious concerns. Poor recovery of loans not only hurts the measures of self-sufficiency, but endangers the immediate survival of the program.

The more favorable sustainability measures of some savings-first institutions is in part a function of the attention to cost. While real effective interest rates are similar on average between the two methodologies, the savings-first institutions have lower labor costs than do the credit-first institutions. The average starting salary of a loan officer in a savings-first program is 1.7 times the GNP per capita, a stark contrast to the credit-first programs which offer starting salaries averaging 7.8 times the GNP per capita. Most importantly, the savings-first programs rely on member deposits to support their lending activities rather than on donor funds. The volume of savings to volume of loans outstanding ratio for savings-first institutions averages 132 percent compared to only 15

\(^{15}\) Operational self-sufficiency is defined as operating income divided by operating costs. Financial self-sufficiency is defined as operating income divided by the sum of operating and financial costs.
percent for credit-first programs. In order to fund their credit activities, credit-first programs rely principally on donor funds which in turn results in high SDI measures.

OUTREACH VS. SUSTAINABILITY: MUTUALLY EXCLUSIVE GOALS?

A common presumption in the field of microfinance is that a trade-off occurs between outreach and sustainability. For example, it is assumed that those institutions targeting the very poor must rely on subsidies while financial institutions that are completely financially sustainable do not have incentives to serve the poor since the relatively high transaction costs of performing small transactions hurt the institutions' bottom line. Indeed, a strong positive correlation of 0.633 between depth of outreach and subsidy dependence was found in a recent study of rural member-based financial institutions in Latin America. In order to examine whether this relationship held for the African credit-first and savings-first institutions, outreach and sustainability measures were plotted together in Figure 2.

The depth of outreach index (DOI) in Figure 2 was calculated using the outreach diamonds presented in Figure 1. The measure calculates the area of the country average diamond and subtracts the area of the institutional outreach diamond. Thus, a positive number indicates that the institution serves a clientele that is more rural, poor, female, and illiterate than the country average. This index is compared to the SDI measure calculated for each institution. Due to the very high SDI measures for CARE Kenya and CREP in Niger, these institutions are omitted from the figure so as not to distort the scale. Like the trend found in the Latin American institutions, a correlation exists between the depth of outreach and the institutional reliance on subsidies. For the African institutions in this study, a positive correlation of 0.61 exists between the DOI and the SDI.\textsuperscript{16}

\textsuperscript{16} The correlation also includes CARE Kenya which is not displayed in Figure 2 given that its very high SDI measure did not fit the scale of the figure. No SDI measure was available for the Get Ahead Foundation and therefore it was not included in this part of the analysis.
While some parallels exist between dependence on subsidies and depth of outreach, one can not conclude that outreach and sustainability are mutually exclusive goals. Variation exists within the sample of African institutions. Among the savings-first institutions, FECECAM and CVECA have similar SDI levels, yet CVECA has a deeper outreach. Likewise among credit-first programs, K-REP and PPPCR at the time they were analyzed both have similar SDI levels, but PPPCR has a deeper outreach.

In general, it is not correct to assume that institutions that have a deep outreach cannot be sustainable and vice versa. For example, the FECECAM credit union movement is the most sustainable institution in this study. While it also has the second to lowest depth of outreach index, it is important to point out that it serves a large cross-section of clients including those traditionally excluded from formal finance. Of the 166,000 clients that FECECAM served in 1996, if one were to examine the poorest third (still an impressive 55,000 clients) the depth of outreach would rival that of the credit-first institutions that have outreach as a primary goal.

None of the institutions in this study had SDI measures equal to or less than zero, indicating that a dependence on subsidies exists across the board. Most programs that have shown a certain degree of competence in serving the African poor have been heavily subsidized by the donor community. In the case of microfinance programs operating in difficult contexts, sustainability need not be an elusive goal. While some programs remain far from attaining sustainability, others show promise of becoming financially
sustainable. In addition, these programs tend to be quite young and have continued to make strides towards sustainability. When examining time-series data for each of the institutions studied, the SDI measures have steadily improved over time.

**CONCLUSIONS**

Sub-Saharan Africa has proven to be one of the most difficult milieu for creating and maintaining sustainable microfinance institutions. Three savings-first institutions and five credit-first institutions were examined in terms of outreach and sustainability. To date, none of these institutions have been able to cover the costs of subsidies despite inroads towards financial viability. Two savings-first institutions, FECECAM and CVECA, stand out as having achieved the lowest dependence on subsidization, while the credit-first institutions demonstrate a more notable dependence on subsidy.

Through an analysis of client characteristics, it is evident that the credit-led institutions have a deeper outreach. Credit-first programs have a more female, illiterate, and impoverished clientele than the average population of the country. In contrast, the savings-first clients are more rural and only slightly poorer than the country averages. However, their clients tend to have a greater concentration of educated males than the country average.

A positive correlation between dependence on subsidies and sustainability was documented using seven of the case studies. Nevertheless, this finding does not support the notion that institutions with deep outreach cannot be sustainable or that sustainable institutions can not have a deep outreach. First, each of the institutions studied have made progress over time in improving their institutional sustainability. In addition, some financially viable institutions have a large enough scale that the poorest part of their clientele has similar socio-economic characteristics to those institutions that specifically target those outside of formal finance. In sum, the most important lesson is that a wide variety of market niches exists in the field of microfinance. While institutional viability is critical, the exact composition of clients can vary from one methodology to another. An institution that successfully is reaching a wide number of depositors and borrowers in a sustainable fashion is contributing greatly to the development process.
APPENDIX 1. DEPTH OF OUTREACH SAVINGS-FIRST INSTITUTIONS

Income/GNP per EA population % male

% urban

Adult literacy 1995 (%)

Niger
Credit Unions

Income/GNP per EA population % male

% urban

Adult literacy 1995 (%)

Benin
FECECAM

Income/GNP per EA population % male

% urban

Adult literacy 1995 (%)

Mali
CVECA
DEPTH OF OUTREACH CREDIT-FIRST INSTITUTIONS (Cont.)

Adult literacy 1995 (%)

- Kenya
- CARE Kenya

Income/GNP per EA population

% male

Adult literacy 1995 (%)

- Kenya
- KREP

Income/GNP per EA population

% male

Adult literacy 1995 (%)

- Zimbabwe
- Zambuko Trust