The recent trend of supplementing micro-finance initiatives with training programs is founded on the idea that programs that integrate microfinance with social goals stimulate growth. However, there is a lack of fact based analysis of the impact of these integrated microfinance programs. This paper evaluates the effectiveness of integrated micro-finance programs by looking at IMAGE, a microfinance program that provides training on gender and HIV to women in the impoverished Limpopo province of South Africa. Ultimately, no difference is found between the economic well being of participants in micro-finance initiatives with social programs and participants in programs without.
In recent years, the concept of what is development has expanded from a narrow focus on individuals’ income levels to an array of measurements including health, education, and political freedom. Organizations that have a social objective, including several finance institutions, have also increased the scope of their work to include financial and social programs that concern the health and education of their clients. By analyzing the impacts of a micro-finance initiative (MFI), a program that provides both financial services and social programs to lower-income customers (hereafter integrated micro-finance (IMF)), this paper aims to shed more light on the economic outcomes that can be gained from these programs. The expansion towards social programs is based on the assumption that programs integrating micro-finance and social goals stimulate growth, but so far there has been no fact-based analysis of the impacts of these programs. Rather, the expectation that such joint ventures will instigate development is based on anecdotal evidence.

This paper hypothesizes that the Intervention with Micro-finance for AIDS and Gender Equity (IMAGE) program, which is a project that provides financial services as well as training on gender and HIV issues in rural South Africa, does not stimulate more income generation than a micro-finance program that only consists of financial services (hereafter, minimal micro-finance, MMF). All else equal, there should not be any difference between the economic outcomes of the IMF and the MMF programs participants. The hypothesis is based on the assumption that access to micro-finance stimulates successful business initiatives, increasing entrepreneurs’ income. The IMF will lead to higher economic outcomes only if it has a relative advantage at stimulating new enterprises by tackling challenges that have impeded their growth in developing countries. The study’s findings support this hypothesis and show that there is no statistically significant difference between the economic well-being of participants of the IMF and MMF programs.

This study significantly adds to the scarce research on the impact of integrated micro-finance programs. The findings can contribute to organizations’ decisions on how to allocate funds to best encourage development. Due to costly integrated programs and MFIs reliance on their clients’ performance, low economic gains among beneficiaries risk IMF sustainability. As IMFs and other community development programs become more common, funds might be wasted on unsuccessful initiatives.

**Case Study: The Intervention with Micro-finance for AIDS and Gender Equity (IMAGE)**

IMAGE is an IMF program in South Africa that has provided cash loans and training programs on gender equity, covering topics such as violence and HIV/AIDS, to women in the impoverished region of Limpopo, South Africa. IMAGE was created with the goal of reducing poverty, intimate-partner violence and the transmission of HIV by providing micro-finance and an intensive group-based participatory training on gender relations and HIV. A 12-month participatory learning curriculum, “Sisters-for-Life” (SFL), was delivered to women at bi-weekly loan repayment meetings and was comprised of two phases. Phase One consisted of ten one-hour training sessions and covered topics including gender roles, cultural beliefs, relationships, communication, domestic violence, and HIV. Participatory methods aimed to increase the confidence, communication skills, and critical thinking of IMAGE’s clients. Phase Two was led by IMAGE participants and entailed outreach to the wider community to engage both youth and men in fighting the problems of intimate-partner violence and HIV.

In addition to the training programs, IMAGE participants received micro-finance services from the Small Enterprise Foundation (SEF). SEF, established in 1992, is a South African NGO that provides money to over 56,000 women. SEF is based on the Grameen Bank model that was created to overcome the high risk associated with lending to low-income customers. The Grameen model relies on group members to serve as guarantors for loans from fellow group members. In this model, groups are composed of five women who can take out a loan collectively as long as they repaid their previous loan. In the IMAGE IMF project, loan centers served approximately 40 participants who met bi-weekly to repay loans, apply for additional credit, and discuss business plans. This study compares...
IMAGE participants with SEF clients, i.e. people who received the same micro-finance services but did not receive the additional IMAGE training program. As such, the study controls for variances in MFI programs. Though participants self-select to join IMAGE or an MMF program, because the programs require the same amount of dedication from participants, it is unlikely selection bias affected the study.

Particular economic and social conditions in the area of Limpopo province may inhibit entrepreneurial activity. Limpopo is the poorest province in South Africa where the majority of inhabitants live in rural areas and only 27 percent of the population live in urban areas. Almost half of the non-urban population and 24 percent of the urban population live below the poverty line. Unemployment rates are high, standing at around 60 percent. Because unemployment is high and employment opportunities are scarce, self-employment in the informal market is a large source of residents’ income. Two major factors may inhibit entrepreneurship activity among micro-finance clients in Limpopo: difficulty in enforcing agreements and financial illiteracy. Similar to other low-income regions, Limpopo’s economy is characterized by a large informal sector in which enforcement of financial agreements is limited. Although entrepreneurs can utilize law and police forces to enforce contracts in the formal economy, access to these public services in the informal economy is limited and at times, nonexistent. The lack of contracts in the informal economy hinders productivity of micro and small businesses in the Limpopo province because contract enforcement is pertinent for business development.

Furthermore, financial illiteracy may also inhibit entrepreneurs from pursuing new business opportunities in Limpopo. Although no specific information on financial literacy in the province exists, financial literacy is low due to the province’s low economic and education levels. A study by Hajaj on the effects of financial illiteracy in Australia found that the lack of familiarity with financial services leads to an exclusion from the financial markets. People unfamiliar with types of financial services will not attempt to make use of these services, contributing to the challenges faced by entrepreneurs.

In addition to these two aforementioned factors, traditional social norms may prevent women from obtaining a quality education. Some social norms in Limpopo dictate that women should be responsible for childcare starting from a young age. This stereotype results in many women dropping out of school at an early stage. Due to long held patriarchal norms,
women’s roles in society as housewives influences the community’s perception on what women can achieve in the workplace. As a result, many women are discouraged from pursuing an education and therefore are financially illiterate. Women are simply unable to make informed and effective decisions about the use and management of money. Thus, economic and social conditions in the Limpopo province may restrict women’s entrepreneurial endeavors, and as such, limit the success of micro-finance interventions.

**Existing Research**

The study focuses on two main factors that inhibit entrepreneurial initiatives in Limpopo province: the difficulty to enforce informal financial agreements and low levels of financial literacy. IMAGE did not ease these major impediments on micro and small enterprises, thus, this investigation expects IMAGE participants to enjoy the same economic outcomes as participants of the MMF intervention. Existing studies demonstrate that gender and HIV training programs are unlikely to increase profits in the short and medium run and that the promotion of financial literacy and social capital increases the profits of micro-finance clients.

IMAGE could strengthen earnings through three plausible mechanisms: increases in women’s autonomy in household decisions, challenges to social norms, and reductions in HIV prevalence. However, previous studies that examined the correlation between each of these factors and income generation did not indicate significantly positive results. The theory that increases in women’s household autonomy result in higher profits rests on the assumption that women and men have different spending decisions, and that women’s spending decisions are better for the household’s income generation. However, studies vary both on whether spending behavior differs between genders, and if a woman’s spending behavior benefits income generation.

A study by Ashraf, Karlan, and Yin examined whether women’s access to an individually held commitment savings program in the Philippines changed their contribution to household decisions and subsequently changed household spending. The study shows that women experienced an increase in decision-making autonomy, which corresponded with households’ consumption shifting towards female-oriented durable goods. Yet, these findings do not indicate that this transition in household decisions necessarily increases the economic wellbeing of the household. Similarly, in a study on the impact of micro-finance on decision-making in south India, Nathalie Holvoet found that women’s participation in IMF programs generated the greatest increases in women’s decision-making in the household. Even with these findings, Holvoet’s research cannot support the presumption that IMAGE increases income generation among participants because she does not discuss how the transition in household decision autonomy affects profits.

An additional study by Duflo examined the impact the South African pension beneficiaries’ gender had on expenditure patterns of the household. Duflo found that female beneficiaries of the state grant increased spending on granddaughters’ nutrition, but this impact was not observed in the data on grandfathers. Although a change in expenditures was evident, the change did not necessarily benefit immediate income generation activities. To conclude, previous studies found that micro-finance and state grants increased women’s autonomy over household decisions, yet the link between the latter and the immediate greater economic gains remains unclear.

IMAGE could potentially increase profits through a second mechanism, challenging social norms. The theory of traditional social norms’ negative impact on the economy states that in some societies, women’s mobility is highly restricted and controlled by males or older family members. In turn, women cannot fully participate in the workforce because they can neither leave the house nor go freely to the market to buy or sell products. This cycle of particular social norms may lead to the exclusion of women from the workforce. It is unclear whether additional training will prevent social norms from hindering women’s productivity and increase profits. One study by Kevane and Wydick compared two similar ethnic groups in Burkina Faso. This study shows how the allocation of labor for women was influenced by an increase in husbands’ farm capital. Researchers found that women’s labor response to the level of their husbands’ farm capital was smaller in the group with patriarchal social norms. This shows that particular social norms may reduce women’s participation in the workforce, decreasing households’ income.

Furthermore, IMAGE could increase beneficiaries’ incomes by reducing HIV transmission...
rates. If the IMF program successfully trains women on HIV prevention, IMAGE could decrease the spread of the disease. The disease lowers HIV-carriers productivity after the virus changes into acquired immunodeficiency syndrome (AIDS). AIDS-carriers then suffer from many opportunistic diseases and, as a result, work less. The study will not capture possible economic growth due to HIV transmission reduction, because the transition from HIV to AIDS can take up to seven years from the moment of infection. This study does not investigate whether IMAGE decreases HIV transmission to mitigate the potential lengthy transmission from HIV and AIDS. If the findings show no correlation between IMAGE and lower HIV risk-behavior then it is unlikely that IMAGE led to a decrease in HIV transmission. This finding reduces the risk of missing long-term economic impacts of IMAGE.

To conclude, studies do not indicate that transitions in social norms and increases in women's ability to make household decisions are likely to lead to greater profits. While a reduction in HIV rates might increase average economic performance in the long run, this correlation is beyond the scope of this paper. The lack of substantial evidence on the ways IMAGE's gender equity training program improves income suggests that the IMF program's training component will not increase profits in the short-run.

Alternatively, different IMF programs that respond to factors limiting innovative activity have been shown to contribute to their participants’ earnings. Financial literacy is an important factor that constrains innovation among the poor in low-income countries, and studies on training programs, which teach participants basic financial skills, show that these newly acquired skills increase participants’ profits. For example, a study by Karlan and Valdivia finds that business training improved business knowledge, practices, and revenues. Clients who received business training accumulated higher business profits than those who did not engage in training. In ‘normal’ months, clients who received training had on average 10 percent greater profits than the control group, and had 27 percent larger gains during ‘bad’ months. IMAGE is likely to increase earnings by increasing the financial literacy of participants through training programs.

Similarly, some evidence suggests that training programs facilitate social capital among group members and raise revenue. As markets are weak and formal agreements are too expensive to enforce, Limpopo's innovators would likely access credit and insurance mechanisms through informal agreements. However, these loans will most likely occur between two people who trust each other and within societies with high social capital. Training programs that develop social capital among members may increase innovative output. A study by Benjamin Feigenberg, Erica Field, and Rohini Pande examined whether repeated interaction, a common measure of social capital, facilitates greater gains from trade and protection from financial shocks. The research found that the group that met weekly was 79 percent more likely than the monthly group to enter a mutually beneficial risk-sharing arrangement. Additionally, in the long run, repeated interactions were correlated with an 8 percent decrease in loan default. Social capital, by definition, is created through repeated financial interactions. Although IMAGE increased the length of loan-payment meetings, IMAGE did not increase the number of such meetings, and thus, did not facilitate social capital. If the program was to create social capital among group members, then the program could have increased profits.

**Methods**

This study relies on the research by Kim et al which collected data from three randomly selected and matched clusters in the Limpopo province during October 2004, two years following the introduction of the IMAGE intervention. The selection of villages began with the collection of eight villages paired according to size and accessibility; one village from each pair was randomly selected to receive IMAGE intervention at the start or end of the study. A comparable group of villages that would receive micro-finance alone, MMF group, was selected using a stratified random sample generated from control villages and villages with similar socio-economic status and cultural aspects as IMAGE. It also had micro-finance programs without the training component. Four villages with characteristics matching those of IMAGE and control groups were then randomly selected from the pool of villages. Women within each village were selected to participate in an intervention using participatory wealth ranking (PWR) criteria that identified women 18 and over from the poorest households. Women from control villages were matched by age and poverty status and were then recruited.

The referenced study compared three clusters of
villages, each composed of four villages. The first cluster was the IMF group, which was composed of villages with two-year exposure to the IMAGE project. The second cluster was the MMF group, which was exposed to a two-year micro-finance-only intervention. In this study, only data on the IMF and MMF clusters was used. In total, the IMF and MMF clusters had 979 participants of which 90 percent were interviewed for the Kim et al. study. This study examined performance of the IMF and the MMF on nine indicators of household economic wellbeing, including greater food security, estimated household asset value greater than 2000 Rand (with a 2006 exchange rate of $1/6 per South African Rand, approximately $216), increased ability to pay back debt, and membership in savings group (see Table 1 on following page).

The former study had two limitations: the small number of villages and the uncertainty of the causes. The scarce number of villages in the study limits the reliability of the data. A small sample size increases the chance of sampling error and therefore might lead to invalid conclusions. If more villages were studied, the data collected would be more reliable as there would be smaller variations in the information gathered. Furthermore, as the study collected data after the program was implemented and the pre-intervention economic and behavioral levels were self-reported by participants, possible biases influence the data gathered. For example, program participants may not provide accurate information on their pre-intervention status due to a mistake or fabrications intended to aggrandize the impact of the program. However, as these biases influence data from both IMF and MMF participants, this study is less likely to suffer from biases when comparing the effectiveness of both programs. Thus, while these data limitations restrict the accuracy of the results, the available information can still indicate whether IMAGE had a relative advantage over the MMF program.

**Results**

The study’s findings cannot reject the hypothesis that IMF and MMF generate the same economic impacts. The study used the ANOVA test, which is a commonly used test that compares means of

Micro-finance customers in South Africa

Sourced from CP-Africa
more than two samples. The test measured the impact of the intervention across villages while controlling for baseline imbalances among intervention groups using weights derived from a logistic regression model. Each of the coefficients of the nine indicators of economic wellbeing each represent the ratio between the means of data from IMF and the MMF program. When a coefficient equals one, on average, there is no statistically significant difference between the impact of IMF and MMF on the economic wellbeing indicator of the sampled villages. However, the test used in the study, however, estimated coefficients that range from .63 to 1.53, indicating that there is no common trend in the effects of IMF and MMF. In six of the nine economic wellbeing indicators, villages that received the MMF intervention on average had a larger impact on profits than IMF; in the remaining three indicators, the ratio was reversed. However, as the 95 percent confidence interval of each coefficient was large and included 1, the option that either the IMF or the MMF had a comparatively larger impact on economic wellbeing can be rejected.

**DISCUSSION**

The study’s results support the expectation that there is no statistically significant difference between the economic impact of IMF and MMF. However, though the expectation was met because the confidence intervals of all the economic wellbeing indicators included 1, the coefficients’ estimated means ranged from .63 to 1.53. One possible explanation for why the coefficients were not centered at the expected value of 1 is the low number of villages observed. Even though nearly 1,000 women were surveyed, the power of the test is based on the number of villages studied—eight in this study. Notwithstanding the power of the test, it is unlikely that the difference in the economic impact of IMF or MMF on participants’ households is large for

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**Table 1**

<table>
<thead>
<tr>
<th>Economic Well-Being</th>
<th>Minimal Micro-Finance</th>
<th>IMAGE</th>
<th>IMAGE VS. MF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n/N (%)</td>
<td>n/N (%)</td>
<td>RR (%)</td>
</tr>
<tr>
<td>Greater food security</td>
<td>350/480 (73%)</td>
<td>177/371 (48%)</td>
<td>0.59 (0.19-1.85)</td>
</tr>
<tr>
<td>Estimated household asset value &gt; 2000 South African Rand**</td>
<td>313/480 (65%)</td>
<td>207/370 (56%)</td>
<td>0.84 (0.57-1.25)</td>
</tr>
<tr>
<td>Greater expenditure on home improvement</td>
<td>147/474 (31%)</td>
<td>129/370 (35%)</td>
<td>1.14 (0.64-2.03)</td>
</tr>
<tr>
<td>Better able to pay back debt</td>
<td>340/480 (71%)</td>
<td>194/371 (52%)</td>
<td>0.72 (0.37-1.40)</td>
</tr>
<tr>
<td>Membership in stokvel (savings group)</td>
<td>98/480 (20%)</td>
<td>140/387 (36%)</td>
<td>1.64 (0.74-3.66)</td>
</tr>
<tr>
<td>Able to meet basic needs in past year</td>
<td>167/434 (38%)</td>
<td>94/350 (27%)</td>
<td>0.58 (0.11-3.10)</td>
</tr>
<tr>
<td>Possesses bank account</td>
<td>210/474 (44%)</td>
<td>147/371 (40%)</td>
<td>0.87 (0.56-1.36)</td>
</tr>
<tr>
<td>Better perception of household economic well-being</td>
<td>347/474 (73%)</td>
<td>277/371 (75%)</td>
<td>1.03 (0.78-1.36)</td>
</tr>
<tr>
<td>Has not had to beg in past month</td>
<td>346/480 (72%)</td>
<td>201/387 (52%)</td>
<td>0.67 (0.25-1.80)</td>
</tr>
</tbody>
</table>

*aRRs adjusted for village triplet, age group, marital status, education, parity and gender of household debt

**In 2006 exchange rate of $1/6 per South African Rand, about $216**
any economic indicators. If a difference between the impacts of both interventions on economic indicators exists, it may be very small. Hence, a study with a larger number of observed villages might find different results.

Similarly, the study’s observed two-year timeframe may have influenced the results. Possible long-term profits from the HIV training segment of the IMF program may go undetected in a two-year timeframe. Several studies argue that HIV training programs decrease HIV infection rates. Thus, in the long run, IMF could potentially decrease the rate of new people living with AIDS in the village. The improved health status would subsequently lead to improved wellbeing due to lower unemployment and higher quality of work, two common production losses related to AIDS. However, extending the timeframe covered by the study will decrease the success of controlling for other factors that may have influenced participants’ income, such as participation in additional social development projects.

Despite these criticisms, the study’s results show that agencies that provide social development programs can benefit society. Aside from the data indicating that the IMF program did not lead to economic improvements, IMAGE had a significantly greater impact on reducing intimate partner violence than MMF. Although this research only focuses on one development indicator, i.e., economic development, there are many other important factors that contribute to development, such as health, education and wellbeing. This paper does not intend to give the impression that social development programs should be disregarded, as there is substantial evidence pointing to their success in improving some aspects of development. However, this research illuminates the fact that promoting gender equity in the IMAGE program did not lead to higher income levels of participants.

These results assumed significant financial difficulties for illiquid micro-finance providers interested in providing social development programs. In the first two years, the MFI is unlikely to stimulate increases in customers’ profits, a portion of which goes to the lender.

Although there is no expected profit from providing an IMF, a provider will have to incur increasing costs on activities such as monitoring program results, preparing material, and tutoring time. As these increased costs are unlikely to be complemented with increased revenues, the IMF investment will be unsustainable for at least the first two years of operation. Thus, providers should re-estimate the costs and benefits of social development programs. If the benefits outweigh the costs, then alternative-financing mechanisms should be put in place to ensure the sustainability of the program. A follow-up study that measures long-term impacts on the economic well-being of IMF and MMF participants would also assist MFIs in deciding whether or not the investment is worth the costs.

**Conclusion**

In recent years, MFIs have started supplementing their micro-finance services with training programs in order to address both supply and demand factors that hinder entrepreneurial undertakings. To supplement the sparse research on this new trend, this paper sought to evaluate the economic impact of these new joint socio-financial programs using data from a study on IMAGE, a micro-finance program that provides training on gender and HIV to poor women in the impoverished Limpopo province of South Africa. This study expected no significant difference between the influence of IMF and MFI on economic wellbeing of their participants because the IMF was not expected to ease limitations on entrepreneurial activity in Limpopo. Indeed, the data showed that IMF and MMF programs did not have a significantly different impact on any of the economic wellbeing indicators. However, the small number of villages sampled yielded data with errors. To increase the power of the study’s statistical inferences, a more extensive sampling of the data is recommended. Furthermore, the study’s two-year time period could have overlooked IMF programs’ long-term economic impacts. A follow-up study on the economic situation of IMF and MMF participants could help reveal the added value of the IMF program in the long run. If focusing on economic development, MFIs considering financing social development training programs should invest in those that alleviate the immediate limitations on entrepreneurial activity, such as financial literacy. Furthermore, such training programs are not likely to result in higher profits for MFIs and, as such, credit-constrained MFIs should seek alternative financing mechanisms.
ENDNOTES


2 (Lestrade-Jeffers, Gyekye et al, 99 and Rose et al sources not included in References)


5 Khalidou Haji, “Illiteracy, financial services and social exclusion” (paper presented at the Financial Services Consumer Policy Center, Victoria University, Melbourne, Australia, 2002).


7 Nava Ashraf, Dean Karlan, and Wesley Yin, “Female empowerment: Impact of a Commitment Savings Product in the Philippines” (paper presented at Economic Growth Center at Yale University, December 2006), 3.


15 Karlan et al, 2008 is not in the References


19 Kim et al, “Assessing the Incremental Effects.”