# THE PENNSYLVANIA STATE UNIVERSITY SCHREYER HONORS COLLEGE

#### DEPARTMENT OF ECONOMICS

# MICROFINANCE AS A SUSTAINABLE SOLUTION FOR ALLEVIATING POVERTY: WHY SOMETIMES IT DOES NOT WORK AND IMPLICATIONS FOR SUB-SAHARAN AFRICA

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A thesis
submitted in partial fulfillment
of the requirements
for baccalaureate degrees
in Economics, French, and International Studies
With honors in Economics

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#### **Abstract**

This paper presents the hot topic of microfinance, comparing the success of microfinance institutions across two geographic regions: Africa and Asia (specifically sub-Saharan Africa [SSA] and south Asia). The success of a microfinance institution is defined by its outreach and sustainabilty, which indicate social and economic performance as well as impact. Looking more closely at poverty issues, poverty in sub-Saharan Africa has essentially doubled to 380 million (more than the U.S. population) over the last 20 years despite many political and economic attempts to restore economic growth. Comparing reforms taken by China and Vietnam that resulted in large and sustainable reductions in poverty, this paper argues that sub-Saharan Africa has much larger issues outside of access to credit by the poor that hinder economic development. While microfinance shows to have played a role in smoothing consumption<sup>1</sup>, it has not shown increased entrepreneurship or self-sufficiency and has not affected aggregate poverty levels at all.

This paper is organized as follows: the first section is an introduction to the theory of microcredit and microfinance; the second section presents a clearer defintion of microfinance goals and measures; the third section presents a brief history of microfinance (where it originated in Bangladesh); the fourth section discusses developmental policy and the role of finance in alleviating poverty (with a case study of China); and the fifth section analyzes the effectiveness of microfinance in alleviating povery in sub-Saharan Africa and combines my findings in a positive synthesis of the information offered.

## Keywords

Microfinance, sub-Saharan Africa, impact, sustainability, poverty reduction.

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<sup>&</sup>lt;sup>1</sup> Most MFIs require information regarding end-uses of the microloans. They can be used as tools to smooth consumption (such as the example of using microloans to mitigate inclement weather or to combat seasonal fluctuations in the economic activity of the informal sector) or to invest in capital (such as investments in livestock or raw products in order to generate business activity). The implications of the end-use are highly associated with productive operation changes and poverty reduction.

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# Terminology:

ASCA: Accumulating Savings and Credit Assocation; each member contributes a fixed monthly payment during the cycle which can be loaned out; the club does not give all of the savings away each month, as in a RoSCA, but charges interest on the loans from the club's savings

CGAP: Consultive Group to Assist the Poor; a branch of The World Bank dedicated to promoting microcredit

DFI: Developmental Finance Institution

ESCAP: Economic and Social Commission for Asia and the Pacific

Grameen: Bengali word for "rural" or "of the village"

Microcredit: Original invention of Yunus in giving small loans without collateral to the poor in order to invest in capital goods

MFI: Microfinance Institution

Microfinance: Financial services offered to the poor—including savings programs, credit programs, insurance, and other investment services

Microloan: Very small, short-term loan given to the poor

Poverty: The UN's Millenium Development Goals benchmarks of \$1 a day and \$2 a day were set using the value of the dollar in 1993; values have been adjusted to their 2005 equivalent values to account for inflation and for purchasing power by Collins et al. (2009); the 2005 international poverty lines are \$1.08 a day and \$2.15 a day

RoSCA: Rotating Savings and Credit Association; each member contributes a fixed monthly payment which are combined and loaned in full on a rotating basis to a chosen member; each member receives one payout during the cycle (lengths of cycles vary by each individual club)

Savings-Up Clubs: Members of the club contribute monthly payments of a fixed amount which are then paid out at the end of the final month, each member receiving only what he/she has contributed

SME: small-medium enterprise

SOE: State-owned enterprise

TVE (TVRE): Township-village enterprise (township and village-run enterprises)

#### I. Introduction

Financial aspects of international development and economic policy are becoming increasingly important as globalization integrates economies at a level never before experienced. In the wake of this financial and economic integration, creative endeavors to improve conditions in developing nations are being designed on an international scale. The Millennium Development Goals set to be achieved in 2015—one of which is to halve poverty and hunger—are far from being achieved even in 2010 (World Bank, 2009b). While charity and aid are still viable and popular methods of aiding developing countries with issues such as poverty and hunger, the age-old proverb "Give a man a fish and he'll eat for a day; teach a man to fish and he'll eat for a lifetime," is being molded into a base for international financial policy and economic development policy.

Microfinance has been viewed more and more as an attractive option to incorporate millions of the world's poorest people into the global economy by allowing them to have access to financial markets. Financial instruments, such as credit and loans, may then serve to help raise them out of poverty.

Microcredit, the precursor to microfinance, started with an initial assumption that credit would allow the poor to invest in capital goods, start income-generating projects, and slowly raise their economic status (and therefore their consumption as well) as their incomes increase. As it has been found in recent studies, it is not only credit, but access to savings plans that have allowed most of the poor to escape poverty (Moser, 2007). Microfinance encompasses various microsavings and microcredit products, loans, microinsurance, and even remittances in certain cases. However, it is more than just targeting the poor that defines microfinance. Karlan and Goldberg enumerate nine characteristics demonstrated by microfinance institutions:

- 1. small transactions and minimum balances (whether loans, savings, or insurance)
- 2. loans for entrepreneurial activity
- 3. collateral-free loans
- 4. group lending
- 5. target poor clients
- 6. target female clients
- 7. simple application processes
- 8. provision of services in underserved communities
- 9. market-level interest rates (Karlan and Goldberg, 2007, p. 4).

Many academics believe that it is not solely access to credit that helps to raise the poor out of poverty, but that poverty reduction is achieved by becoming part of the economic growth process. Gonzalez-Vega writes, "[there] is an increasing body of evidence confirming that economic growth and reductions in poverty go hand in hand" (Gonzalez-Vega, 1998, p.15) He elaborates on anti-poverty policy and two dimensions of this issue. The first concerns capital accumulation that leads to sustained economic growth and increased productivity. The second conerns the need to lessen the transitional costs of adjustment for the most exposed groups of society by creating social safety nets.

Because microfinance gives poor people the ability to borrow and invest, it is credited with directly reducing poverty. However, data on the cashflow management of a sample of the world's poorest people indicate that the semiformal institution of microfinance is not that important in their financial diaries. This indicates that microfinance may be better classifed in the latter goals of anti-poverty policy, which entail social safety nets.

Furthermore, microfinance is often highly subsidized by governments. Banerjee et al. discuss the dangers of agencies such as the Consultative Group to Assist the Poor (CGAP; a branch of the World Bank advocating microcredit) because the "evidence [...] presented by CGAP is unlikely to satisfy the critics of microfinance who fear that it is displacing more effective anti-poverty measures or even contributing to over-borrowing and therefore even

greater long term poverty" (Banerjee et al., 2009, p. 2). For example, one consideration here would be Helke Waelde's study in 2009 that aggregated paneldata from the World Bank from 1991-1999. It found that "individuals that never participate in a group lending program develop faster in terms of wealth than individuals that have been in group lending programs or are still in such programs." In fact, they "develop nearly four times faster as individuals in group credit schemes" (Waelde, 2009, p. 9). Dani Rodrik, a Harvard professor of International Political Economy, stresses the need for government policies that advocate the motto, "where can [one] get the biggest bang for the reform buck?" (Rodrik, 2007, p. 89).

The role of microfinance in the financial lives of the poor and the opportunity cost of governments subsidizing microfinance institutions (MFIs) are major concerns for policymakers. For these reasons, microfinance as a sustainable tool for poverty reduction needs to be assessed.

This paper will attempt to clearly define the goals of microfinance, to elaborate on other successful poverty reduction strategies, to explain the role of microfinance in the lives of the poor, and to determine why its presence does not always appear to contribute to poverty reduction, especially in sub-Saharan Africa.

#### II. Goals and Measurement of Microfinance

Although the *raison d'être* of microfinance is to alleviate poverty, many questions surrounding the operations of MFIs arise. When analyzing MFIs should policymakers and analysts condone institutions that do not significantly reduce poverty but that smooth the consumption of the poor? If the poor are better off, even marginally, does this adequately justify the operations of an MFI? What really are the goals?

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 $<sup>^{2}\,</sup>$  Microfinance, as will be discussed in the next section, is built around a model of group lending.

To examine such a matter, one must know the *purpose* and be able to study the *impact*. The lack of clearly defined impact is what makes a successful analysis of microfinance and MFIs very difficult. Furthermore, lack of regulatory agencies and of data makes the analysis of the effects of MFIs very tedious and time-consuming.

This paper will analyze microfinance's ability to alleviate poverty. Poverty, as benchmarked by UN's Millenium Development Goals, has two international lines: \$1.08 a day and \$2.15 a day (as adjusted by Collins et al., 2009, p.9-11). Poverty incidence and poverty headcount rates show the number of individuals living below each of these lines and will be referenced in this paper.

The people who compose the billions living on less than \$2.15 a day understand the important of cash flow management. Although the poverty line benchmarks imply a very low income on a daily basis, many of the poorest people experience irregular incomes and employment. Some months, they may earn \$10 a day and other months, they may earn nothing. These benchmarks only indicate averages over time. Because of this fact, a study by Collins et al. will serve as a primary source for microfinance impact in this paper (the study was done during the year 2000 and their findings were published in the book *Portfolios of the Poor* in 2009). In their study, Collins et al. spent time with the poor and constructed 250 financial diaries for poor households in South Africa (152), Bangladesh (42), and India (48). Twice a month for a full year Collins et al. recorded how poor households manage their money and what financial instruments they utilized. Because each diary is not just a snapshot of an income statement, but is comprised of balance sheets and detailed cashflow records over time, I consider it to be the most accurate source for discussing the financial actions of the poor.

MFIs can also be analyzed as individual firms. Profit margins, returns on assets, outreach (to savers and borrowers) and other indicators listed in Appendix V can be used to assess the sustainability and impact of MFIs by region. The data associated with the variables in Appendix V are taken from the Microfinance Information eXchange (MIX), which is an online database of self-reported MFI statistics by region. Benchmark reports by MIX are also referenced in this paper. Finally, issues associated with a self-selected sample will be discussed later as the data is presented.

#### III. Grameen in Bangladesh: The First MFI

Because it is important to understand the structure and model upon which most MFIs are built, this section offers a brief history and explanation of Yunus' MFI model. This will be followed by a discussion on poverty impact versus welfare impact.

In 1976 Muhammad Yunus created the concept (and future institution of) microfinance while serving as a first-hand witness to the effects of rampant poverty in his home country of Bangladesh. Today, while claiming to have raised over tens of millions of families out of poverty, Yunus explains that his original program of microcredit targeted landless poor in the bottom 20 percent of the population (Yunus, 1999, p. 41). Giving small, unsecured loans to these people, Yunus extended basic Western financial services to those who were deemed "unqualified" and thus, to those who had presumably never before had access to finance.

Grameen (Village) Bank, the first microfinance institution ever created, began with Yunus' loan of \$27 to 43 people, symbolizing a commencement of small, collateral-free loans being given to poor people. About twenty years later, in 1997, Grameen's portfolio of \$263 million and 2.3 million members had a repayment rate of over 98% (Schreiner, 2003, p. 3).

While lenders traditionally manage risk with collateral to ensure high repayment rates, Grameen relies on joint liability (in other words, group lending) and the desire of poor clients to attain future loans as incentives to repay current microloans (Schreiner, 2003). Good credit ratings also allow clients to systematically increase the value of loans over time.

The structure of Grameen Bank and its microcredit program are essential to its history of success.<sup>3</sup> Targeting poor women, Grameen's model requires a group of five people to sign against each member's risk of default, creating a dependent link among the group—also known as a joint liability among the five women. Awal and Schreiner both elaborate on the benefits of group lending, though Awal bluntly enumerates Grameen's particular attributes:

The peer monitoring and joint-liability structure of this credit delivery mechanism overcomes the screening and enforcement problems that traditional banking systems suffer from. Strong leadership, functional autonomy, freedom from political pressure, rational and economic interest rates, diversified portfolios, regular savings, well-trained staff, performance-based incentives and mandatory loan insurance are all key elements in the success [...] in Bangladesh (Awal, 2006, p.3).

Another important aspect of Grameen is that it aligns ownership with the customer base and this has motivated its borrowers to remain loyal to their commitments. Yunus explains that a "Grameen borrower is also an owner of the bank…[and] where the poor own their own bank, the interest is in effect paid to the company they own, and therefore to themselves" (Yunus, 1999, p. 110). The notion of a bank that is owned by all of its consumers is not new and the structure has proven to be effective in ensuring both economically sound and socially responsible decisions (for example, the Mondragon Cooperatives in Spain; Forcadell, 2005).

In addition, 94 percent of Grameen's customers are women (Bakhtiari, 2006). Yunus and many others believe that women are more likely than men to share the gains of economic activity

Discussions regarding the trade-offs between outreach capabilities and sustainability have arisen from this issue as well.

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<sup>&</sup>lt;sup>3</sup> However, it is worth mentioning, due to the concerns mentioned in the introduction, that Grameen Bank became classified an independent financial institution in 1983 (as opposed to being fully owned by the government in 1976) even though 60% was still funded by the Bengali government. Today the government still owns roughly 10% of its shares (Yunus, 1999, pp. 119-123). Heavy subsidization by donors and governments are increasingly being attacked by policymakers seeking sustainable and alternative methods of economic development.

with children and family. Extending these services into other surrounding countries, such as India, microfinance has impacted many communities in which poor women had been excluded from financial markets. SHARE, a microfinance institution in India, has given microloans (with a 100 percent repayment rate) to over 61,000 poor women and 85% of these clients are in the lowest income quintile (Bakhitiari, 2006, p. 5). Furthermore, by targeting women, Yunus believes that MFIs can make the largest socioeconomic impact:

The more money we lent to poor women, the more I realized that credit given to a woman brings about change faster than when given to a man...Not only do women constitute the majority of the poor, the underemployed, and the economically and socially disadvantaged, but they more readily and successfully improve the welfare of both children and men. Studies comparing how male borrowers use their loans versus female borrowers consistently show this to be the case (Yunus, 1999, pp. 72-3).

Kamani argues that "a major selling point of microfinance is its alleged ability to empower women," though primarily in non-economic ways (such as increases in perceived welfare, self-esteem, and self-worth) (Kamani, 2007, p. 3). Going beyond anecdotal evidence, a study by Latifee (2000) shows that SHARE's operations had positive externalities on its borrowers by improving nutrition, increasing expenditure on non-food basic needs, shifting from wage employment to self-employment, increasing access to agricultural land, increasing savings, improving housing, and supporting women's empowerment (Latifee, 2000, p. 12).

The structure is also impacted by the strong Islamic culture persisting in the Indian Ocean basin, which presents one of the largest hindrances for the model of microfinance. Though Yunus has remained optimistic, he attests that "in many ways, we have had to struggle against our culture. In fact, we had to create a counterculture that values women's economic contribution, rewards hard work, and punishes corrupt practices" (Yunus, 1999, p. 111).

Yunus and Schreiner both discuss the *purdah* norms that prevent women from advancing in society in terms of investing in higher education and having equal civil rights. The *purdah* refers not only to an Islamic institution, but is also associated with the status and seclusion of

women. Sultana, Jawan, and Hasim clarify that "[the] use of 'purdah' has directly been related to women's socio-economic status" and they elaborate that Hindu women also practice it (Sultana et al., 2009, p. 2). In Bangladesh, the use of the "purdah" promotes female seclusion that is typically demonstrated by a segregation of spaces for men and women (Sultana et al., 2009, p. 2). Overcoming cultural and gender issues has been one of the distinguishing characteristics of microfinance in southern Asia. Grameen's model employs women as the bank's officers and regularly sends its employees to rural regions so that clients do not have to travel alone to a bank site nor interact with men (though some officers are men, women typically accompany them to the villages).

To summarize, the universal MFI model is built around giving small unsecured group loans to the poorest of women by employing women as a majority of the staff. Loans are given on the premise that most of the money is spent on business inputs, such as straw to weave baskets, which will eventually generate income. Actual effects on poverty, versus effects on welfare, will be discussed next.

The poverty headcount rate in Bangladesh has not considerably fallen over the last 20 years, let alone since the birth of Grameen. In 1985, Bangladesh had a national poverty headcount rate<sup>4</sup> of .47 (.50 in urban communities and .37 in rural communities) that has actually increased to .50 in 2006 (Gold, 2009, p. 4) despite an increase in MFI clientele of roughly 6.7 million individuals (Nicholson, 2009, p. 2). In this sense, microfinance has not significantly impacted the incidence of poverty.

Poverty maps generated by the World Bank and the Bangaldesh Bureau of Statistics show lower poverty headcount rates near the region of Dhaka with the national average at about .5, and rates up to .60 just south of Chittagong (the region in which microfinance was

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<sup>&</sup>lt;sup>4</sup> The proportion of the national population whose incomes are below the thresholds set by the national government.

created, intially spreading throughout this local region) (Hoque, 2009). However, the headcount rate within Chittagong is low, below .2 (Hoque, 2009). South Chittagong is especially prone to weather shocks. Although Yunus' claims of significantly affecting the welfare of the poor are well-founded, one can not conclude that actual poverty has indeed been reduced at all over the regions touched by microfinance (which is now the entire nation).

In any case, microfinance—while not having macroeconomic impacts on poverty—may yield non-economic benefits and help to smooth consumption, thus increasing welfare without increasing income (Kamani, 2007, p. 2). In a study by Morduch, the ability of microfinance to smooth income allowed households to smooth consumption, which had an effect on vulnerability without impacting poverty *per se* (Morduch, 1998, p. 5). There are dangers associated with consumption smoothing via income smoothing because by borrowing and lending rather than increasing employment, there is a lack of sustainability. Moreover, because consumption and income smoothing can serve as substitutes, so it is not always easy to identify which effect is at work (Morduch, 1995, pp. 104).

Two studies (Buckley's and Morduch's) confirm that microfinance loans are primarily used to smooth income rather than to invest in income-generating projects and are therefore not sustainable methods for affecting poverty. Buckley's study empirically confirms that by smoothing consumption via borrowing and not restricing end-use of funds, microfinance institutions themselves are not sustainable. Cyclical dependence upon small loans without the creation of income-generation work or projects does not allow the poor to become self-reliant (Buckley, 1997, pp. 1087-8). Morduch's study goes a step father and confirms that microfinance does not increase consumption (it only smooths it) (Morduch, 1998, p. 29-30).

## IV. Development Policy and Successful National Poverty Reduction Strategies

Where poverty has seen drastic change in the last 30 years (such as in China, Taiwan, South Korea, Thailand, India, Malaysia, and Vietnam) states relied on government intervention and policy change (Bateman and Chang, 2009). Microfinance "played no role whatsoever" (Bateman and Chang, 2009, p.5). Since 1978, China is responsible for almost all of the reduction in global poverty (accounting for a reduction of 400 million, with gains and losses elsewhere canceling each other out) (Rodrik, 2007, p. 85) and by further investigating their development policies, one can gain insight into successful alternatives for *sustainable* poverty reduction mechanisms. Because China's success remains unprecedented, it will be the focus of this section (excluding the other south Asian countries mentioned). A review of the reforms in China will be discussed followed by an analysis of their effects on poverty.

In a series of development papers commissioned by the United Nations (and the Poverty and Development Division of the Economic and Social Commission for Asia and the Pacific [ESCAP]), China and Vietnam<sup>5</sup> are considered to be the leaders of developing nations in terms of sustaining high rates of economic growth and reducing poverty invidence (Thanh et al., 2005, p. 47). The fellow researchers of the UN determine that three sets of reforms led to this massive and widespread reduction of poverty: "liberalization and stabilization, institutional changes that support market exchange and shape ownership, and the establishment of social [programs] to ease the pain of transition" (Thanh et al., 2005, p. 47). Microfinance therefore can be designated to the third reform, easing the transition of the poor into a structured economy and slowly integrating them into financial systems—but there must first be a system and society into which

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<sup>&</sup>lt;sup>5</sup> Authors, in the title, write Vietnam as Viet Nam (Thanh et al., 2005).

they can assimilate before considering the transition. Therefore, real changes to the domains of polity and society must simultaneously occur for true economic development to occur.

Before the reforms, China's heavy industry-oriented development was not balanced with improvements in living standards and this created imbalances in the markets for credit, foreign exchange, and raw materials and agriculture was suffering at the hands of industrial growth (Thanh et al., 2005, pp. 48-54). Total factor productivity was very low intially (at 0.5 percent from 1952-1981) and reflected inefficent resource allocation. To address these issues, macroeconomic reforms were imperative.

The first period of reform in China (1978-1984) reallocated the farming system to be privately run by the households, rather than collectively by the community (changing the nature of property rights). Productivity increased by 42.2 percent and policies permitting the free sale of agricultural surpluses (beyond the governmental quotas in place) allowed prices to equalize across rural and urban regions (Thanh et al., 2005, p. 50). Privatization in China also spurred increases in productivity in TVREs (township and village-run enterprises), allowed rural industries to flourish (not including agriculture), and caused movements of labor across industries (agricultural employment decreased from 62 percent in 1978 to 53 percent in 1985) (Thanh et al., 2005, pp. 50-1). A study by Sonobe and Otsuka confirms that privatization is positively correlated with improved resource allocation and production efficiency. Effects of greater magnitude were observed in more efficient free markets (referring to internal markets across Chinese provinces) (Sonobe and Otsuka, 2003, p. 21).

A second period of reforms occurred from 1985-1992 and spurred growth because of improved resource allocation. This was done by subjecting state-owned enterprises (SOEs) to market forces and decreasing moral hazard issues among managers of SOEs (by clarifying

authority and redefining the responsibilities of managers). Furthermore, price liberalization and deregulation of retail trade was taking place, allowing an even greater shift towards a non-farm economy in rural regions (Thanh et al., 2005, p. 50).

One point of contention during this reform era is derived from the unequal government spending and tax treatment of coastal regions—incentivizing foreign trade and investment in geographically easy-to-access zones. In any case, aggregate numbers (such as GDP per capita) exploded upwards at rates around 8.1 percent per annum and the inflow of foreign direction investment (FDI) fostered greater and greater improvements in resource allocation as well as productivity (Thanh et al., 2005, p. 51).

The final reform period (1992-1998) was congested with technological innovation and progress as results of the previous period's liberalization policies. FDI inflows continued to increase (6 percent of GDP by 1994) as multinationals imported more than two and half times what domestic Chinese firms had been importing—instigating technology and managerial spillovers (Thanh et al., 2005, p. 52). Additionally, rural economies and the agricultural sector experienced rejuvenated growth as higher global grain prices improved terms of trade, which accelerated rural poverty reduction (Thanh et al., 2005, p. 51-2).

Post-1998 developments include China joining the WTO in 2001 and increasing its role in the global economy. Internally, urban and coastal regions continued to grow and agriculture as a share of GDP and employment decreased, reflecting more intense structural reforms. In essence, China's economy was modernized. GDP and GNI/capita have both increased by a factor of 1.8 during the period of 1993-2002 (Thanh et al., 2005, p. 53). A growing middle class has given China a new reputation as an importer in addition to their notorious reputation for exporting cheap products.

Because these reforms caused dramatic structural changes to the economy, effects on poverty over these reform periods are evident. Using data from the World Bank, Thanh et al. determine that urban residents' per capita income rose 20 fold (from 343 yuan in 1978 to 6,860 yuan in 2001) and that rural residents' per capita income rose 18 fold (from 134 yuan in 1978 to 2,366 yuan in 2001) (Thanh et al., 2005, p. 63). Using the \$1 a day international poverty line, the number of people living in poverty fell by 166 million between 1981 and 1999 (from 200 million to 34 million) (Thanh et al., 2005, p. 63). They do point out, though, that most changes in poverty are associated with the first two reform periods and they avow that "this pattern of poverty reduction in China implies that there is a correlation between agricultural growth and poverty reduction, and that the agricultural sector has played a dominant role in poverty alleviation in China" (Thanh et al., 2005, p. 64).

Furthermore, socioeconomic indicators have shown improvements. The Gini coefficient has increased (rather fast) from .288 in 1981 to .458 in 2000—growing at a rate of 2.35 percent per annum (Thanh et al., 2005, p. 64). In spite of this, current issues, such as inequality, are now beginning to manifest themselves in Chinese middle-class culture. The income distribution, educational attainment, and the Human Development Index (HDI) have all improved but remain unequally distributed (Thanh et al., 2005, p. 64-7).

Formal poverty reduction programs have gained momentum since the mid 1980s as evidence of success from dynamic and extreme policy changes in China (and other select countries) demonstrate the power of reform. According to Thanh et al., mandatory components of poverty reduction programs include institutional arrangements, social safety net systems, the adoption of free-market practice, trade liberalization, structural reforms, private sector

development, rural and agricultural development, expansionary monetary and fiscal policies, and political reform (Thanh et al., 2005, p. 43-107).

Microfinance, while briefly acknowledged in their report and at that, only microcredit, has only been implemented in China to substitute for the subsidized-loan program that was already giving 40 percent of its loans to the industrial sector and and 60 percent to county enterprises (Thanh et al., 2005, p. 79). 70 percent of its loans were given to the poor and 30 percent to the agricultural sector (Thanh et al., 2005, p. 79).

The subsidized loan program's similarities to microfinance operations raise an interesting and debatable question: Should MFIs be sustainable, subsidized by governments, or by other donors? Even Grameen Bank relied on heavy subsidization from government (and even today 10% is owned by the national government), which effectively represents the government subsidizing the incomes of the Bengali poor. China is just performing this social service under a different name. While the role of microfinance may be a necessary and ethical component of social safety nets, the question still remains: Can governments sustainably subsidize their people, expecially if its effects on poverty incidence are ambiguous?

"Only about a hundred of the thousands of microfinance institutions around the world are financially self-sufficient" and many view the subsidization of MFIs with government money as frivolous as it has been demonstrated that alternative reforms with the same money may be more cost-effective, thus reducing poverty more effectively (Zeller and Meyer, 2002, p. 4). Turning MFIs over to private sector competition has been one strategy to weed out inefficient lending institutions, but almost all MFIs still receive a large portion of funds from external donors (Paxton and Cuevas, 2002, pp. 143-8).

# V. Sub-Saharan Africa: Why Microfinance is Not Affecting Poverty

Despite years of attempts to progress in development and poverty reduction, sub-Saharan Africa experiences one of the highest rates of poverty in the world. Since 1981, the number of those living in poverty has nearly doubled from 200 million (in 1981) to about 380 million (in 2005) (World Bank, 2009). Throughout the 1990s microfinance expanded enormously throughout sub-Saharan Africa yet has had little impact on poverty rates. The small reduction in poverty incidence, from roughly 55% to 51% for those living under the \$1.25 a day line and from 76% to 73% for those living under \$2 a day line, is not correlated with MFI operations (World Bank, 2009b).

This section will address the effects of microfinance on poverty in sub-Saharan Africa. By examining the financial diaries collected by Collins et al. (2009), it will become clear that poverty is a multidimensional issue, that there are multiple financial instruments that the poor already employ, and therefore that microfinance does not play as significant role in the lives of the poor as advocates claim. It will then elaborate on the these financial tools and argue that microfinance is no more sustainable than what is already in place.

#### Povery as a Multi-dimensional Issue

By assuming that microfinance will reduce poverty by the nature of its model, one ignores the question as to *why poverty persists* in the first place. When regarding development policy and strategy, one must correctly diagnose the cause of poverty before attempting to remedy it. Rodrik stresses the importance of correctly determining the causes of growth stagnation in his book *One Economics, Many Recipes* (Appendix I, Fig.2.1, p. 66). "The

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<sup>&</sup>lt;sup>6</sup> The World Bank and IMF use \$1.25 a day and \$2 a day benchmark lines within their data, effectively representing the same two groups as Collins et al., who use the values established in the Millenium Development Goals.

overarching lesson...is that it is this constraint, once identified, that deserves the most attention from policymakers" (Rodrik, 2007, p. 66).

Microfinance addresses inefficiencies in the credit market by mitigating the issue of high costs of finance, specifically bad local finance (because of low domestic savings or poor intermediation). However, because many other alternative financial instruments are utilized by households in SSA, one can infer that economic progress in SSA endures different limitations. Many hypothesize that the constraint on economic growth and poverty reduction in sub-Saharan Africa is attributed to a low return to economic activity(for various reasons explained below), and not bad credit markets (Bursari et al, 2009; Moster, 2007; Cook, 2007; Cohen and Young, 2007; Latigo and Ironmonger, 2009; Banerjee et al., 2009; Malaquias, 2009; Tevera, 2009). Low economic returns can be caused by low social returns and/or low appropriability (see Appendix D.

Low private returns are a sign of low social returns or low private appropriability. Low social returns may be caused by poor human capital, bad infrastructure, and bad geography. Appropriability refers to policy or market environments—such as problems with governance, high taxes, property rights, high inflation, labor/capital conflicts, the inability to absorb economic/technological spillovers, and the lack of "self-discovery" (or the number of new products being exported, a measure of innovation [Rodrik, 2007, p.106]).

In SSA there are many systems of finance that have been in place for years—indicating that there are already financial structures in place that can serve as substitutes for MFIs. MFIs are classified as semiformal institutions. Other sources of finance include formal institutions

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<sup>&</sup>lt;sup>7</sup> Self-discovery refers to the number of new products being exported, which is a measure of innovation and economic growth, according to Rodrik and numerous other theorists (whom he lists).

(commercial banks, credit unions, government and non-government organizations, and multilateral institutions), moneylenders, merchants and traders, family and friends, and informal institutions (such as Savings-Up Clubs, Rotating Savings and Credit Associations [RoSCAs], and Accumulated Savings and Credit Associations [ASCAs]).

Rodrik comments that "there is no unique correspondance between the *functions* that good institutions perform and the *form* that such institutions take" (Rodrik, 2007, p. 15). If the goal of microfinance is to provide microentrepreneurs with start-up funds for investments in capital and is not to complement income, then looking at sources of entreprise start-up funds will serve as a good indication as to which sources are currently most important.

#### Enterprise Start-Up Funds/Lump Sums

Buckley gives an account of three countries (Kenya, Malawi, and Ghana) and each country had "personal savings" as the most common source of start-up funds: 59% in Kenya, 36% in Malawi, and 37% in Ghana. "Loans or gifts from family or relatives" was the second most commonly used source with 11% in Kenya, 21% in Malawi, and 22% in Ghana (Buckley, 1997, pp. 1082-3). Interestingly, Ghana and Kenya have the largest amount of MFIs out of all nations in SSA (MIX Market, 2008). Reasons for these choices—to rely on family and self—can be attributed to cultural views on the role of kinship and stigmas associated with being in debt to a formal institution.

Not only do personal savings, and not MFI loans, compose a majority of start-up funds for microentrepreneurs, but most of the poor in India and sub-Saharan Africa remained unserved by any formal or semiformal institution, utilizing soley informal financial tools (Collins et al., 2009). Interactions between family and friends as well as Savings-Up Clubs, RoSCAs, and

ASCAs comprised a majority of the formation of lump sums in the finance diaries for SSA (Collins et al., 2009, p. 24).<sup>8</sup>

The following table breaks down the type of institution in which the households accumulated large (or lump) sums of money. What may be surprising is that in South Africa, no households used microfinance loans as a method for acquiring lump sums of money for investment. Neither did the households save in MFIs to accrue a large savings nor did the households borrow lump sums from MFIs. Many used a variety of other informal clubs.

Table 5.1 Where Large Sums Were Formed								
	Bangladesh		India		South Africa			
	Number	% of total	Number	% of total	Number	% of total		
Formal	8	9%	29	21%	27	42%		
Semiformal	37	39%	10	7%	0	0%		
Informal	49	52%	100	72%	38	58%		
Total	94	100%	139	100%	65	100%		

Source: Collins et al. (2009), pg. 112 and data from Appendix 2

Focusing on the South African sample, there is a relatively similar proportion using formal institutions to raise funds, but 58% use informal mechanisms. Savings-Up Clubs, RoSCAs, and ASCAs are these mechanisms and will be defined below.

A Savings-Up Club refers to a club in which members put in a fixed amount of money each month of the cycle and at the end of the last month, he/she is paid out the savings. While it seems irrational to forego interest, many of the poor households view the opportunity cost of traveling to formal institutions as too high and liked the discipline of regular payments to savings clubs. Collins et al. state that the "meetings consume too much precious time, there is no privacy, individual needs go unrecognized, and more and more members skip the meeting if they can, preferring just to show up and pay their dues as quickly as possible" (Collins et al., 2009, p. 172).

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 $<sup>^{8}</sup>$  The club types are explained in detail in the next few pages.

Therefore, staying local and among peers in flexible informal clubs seems to be the preference. RoSCAs are informal clubs in which all members contribute a payment (sometimes fixed), which is recorded. One member takes the entire fund each month and the club rotates through each member, who receives the lump sum as long as the cycle continues. When the cycle is up, the members can choose to dissolve the club or continue to a new cycle. ASCAs are very similar to RoSCAs except that they do not "zero-out" all of the funds saved, and when the savings are loaned out, interest is charged. Therefore, members can still rotate through receiving funds, but the amount is not determined by the total contributions. The member will take what they need from the savings and pay it back with interest. Savings-Up Clubs are viewed as the least risky, RoSCAs next, and ASCAs as the most risky. Most clubs include family, friends, and neighbors as members.

Futhermore, of the lump sums formed in South Africa, different instruments within the different clubs were used. Of the 65 lump sums raised in South Africa, 75% came from savings, 15% from loans, and 9% from insurance (Collins et al., 2009, p. 102). These sums were generally used for a (business) opportunity, an emergency, or for a life-cycle event. Differences arise between South Asia and South Africa once again when looking into the use of the lump sums.

The inputs into small business inventory was the most prevalent use of funds (under the subcategory of opportunities) in South Asia, whereas in South Africa the most prevalent use of funds was for land and the consumption of durable goods (Collins et al., 2009, p. 108). Even in South Asia, microcredit providers, whose "self-declared" job is to provide loans for business investent, play a lesser role to informal institutions. In Bangladesh, informal clubs had three

<sup>&</sup>lt;sup>9</sup> Weddings, funerals, retirement and other major life events. In South Asia, weddings are the most important part of the life cycle whereas in South Africa, funerals are.

times as many lump sum funds than from MFIs and in India, 58% of lump sum funds were created by informal clubs (Collins et al., 2009, p. 109). In South Africa, only 5% of the lump sums went to the subcategory of business/farming. Of the 37 lump sums formed in South Africa for opportunity, 19% went to consumption of durable goods, 14% went to debt repayment, and 16% went to savings.

In review, Buckley finds that most start-up funds in SSA are from family and friends. Moreover, when looking at the samples from Collins et al., Buckley's study is supported by the fact that the most popular method of acquiring lump sums is membership in an informal club (which consists mainly of family and friends). In South Asia, borrowing was the main source of start-up funds for new business. From these observations, microfinance in SSA cannot be viewed as a main source of investment funds for new businesses. <sup>10</sup>

If microfinance is not being used for microentrepreneurship as intended by the Grameen model, then it is important to address what microfinance does accomplish and the implications for poverty.

#### Smoothing Income through Microfinance

Living on \$1 or \$2 a day creates an impression that there is a regular inflow of money. Many poor people experience irregular and unreliable incomes because of irregular and unreliable employment. Microfinance can help to address the exernalities these might cause with cash-flow management. Furthermore, microinsurance can help them to mitigate risk during periods of uncertainty.

<sup>&</sup>lt;sup>10</sup> The author elaborates later on the need for more internal comparative studies for SSA. Cross continent comparisons are helpful, but multi-country cash-flow analyses for SSA would be ideal (though none were found by the author).

This section will look at the financial diaries once again to see the sort of day-to-day financial tools that are used to deal with low and irregular incomes as well as risk. It will be shown that consumption is smoothed by smoothing income. Finally, because of this mechanism, implications for poverty rates and for reduction strategies will be discussed.

Just because the poor have low incomes does not mean that they do not engage in financial activity. Cash-flow management on a daily basis is a focus for many households. The following table is taken from the data of Collins et al. and shows the year-end value of all assets of a median household (a measure of the yearly income and wealth) as well as the annual financial turnover. What one can observe from this table is that there is a surprisingly large amoung of cash flow and financial interaction despite low incomes. The most extensive use of financial tools can be observed in the rural Indian group as well as the rural South African group, turning the value of assets over roughly 20 and 15 times, respectively.

Table 5.2 Year-End Financial Asset Values and Annual Cash-Flows through Financial Instruments for Median Households India South Africa Bangladesh Year-End Asset Annual Financial Year-End Asset Annual Financial Year-End Asset Annual Financial Value Turnover Value Turnover Value Turnover 57 590 Rural 568 18 220 3,447 Urban 74 547 169 810 792 6,264

Source: Collins et al. (2009), pg. 33 and data from Appendix 2

Regarding this data, as well as the extensive participation of poor households in informal clubs (as shown in the previous section), one can deduce that poor households effectively manage money to create a multiplier effect of their wealth with which they can augment cash flows and engage in increased economic activity over time.

Because of the fact that MFI funds can be diverted to short-term consumption needs, which is especially the case in South Africa, they can complement income by substituting for unearned wages (probably due to lack of reliable employment). Cuevas concedes that the unrestricted end-use of funds attained in RoSCAs and alike institutions "makes informal borrowing an important way of stabilizing consumption, reducing a primary risk for low-income households" (Cuevas, 1998, p. 133).

Unfortunately MFI strategies and analyses of MFIs generally ignore cash flow needs (associated with daily financial hindrances) and operate on year cycles with inflexible payment schedules. <sup>11</sup> Furthermore, this strict chronologic approach prevents many households from being able to utilize MFIs after an emergency, which is supported by the lack of MFI activity in the diaries during times of financial strain. In South Africa, burial schemes and funeral insurance stood out as sources of funds for an emergency, but across the entire sample of 250 diaries, one the most evident shortcomings of MFIs was the inability to provide a reliable financial response to risk (Collins et al., 2009, p. 90).

Risk is certainly an important factor to consider in the financial lives of the poor. During the research year of Collins et al. 167 financial emergencies occurred (2009, p. 67). As mentioned earlier, the life-cycle event in South Africa that was the most important is death (funerals), which is associated with risk. Health issues became financial problems, and when considering the combined health risks from high rates of HIV/AIDS, poor sanitation, poor healthcare, it becomes evident that microfinance cannot address any of these issues on an aggregate (or macro) scale. However, for some households (back at the micro level) the diaries provide insight into how certain financial instruments can be useful for the day-to-day

<sup>&</sup>lt;sup>11</sup> Most of the MFIs referenced in Collins et al. allowed members to enter into year-long contracts with inflexible schedules of payments. The Grameen Model did not seem to be the model observed in reality. Options of paying more per month to repay quicker were not even available, a fact which surprised many of the researchers.

uncertainty assciated with low incomes, unpredictable employment, and other risks (like health risks).

By breaking down the causes of financial emergencies by country, Collins et al. provide an understanding of commonalities by culture/geography.

**Table 5.3** Most Frequent Events Causing a Financial Emergency, by Country, with the Percentage of Country Sample Affected at Least Once during the Study Year

Percentage of C	Percentage of Country Sample Affected at Least Once during the Study Year								
Bangladesh		India		South Africa					
42 Households		48 Households		152 Households					
Event	%	Event %		Event	%				
Serious injury or illness	50	Serious injury or illness	42	Funeral of family outside the household	81				
Did not receive expected income	24	Loss of crop or livestock	38	Serious injury or illness	10				
Fire/loss of home or property	19	Loss of regular job	10	Funeral of member of the household	7				
Loss of crop or livestock	7	Theft	4	Theft	7				
Business failure	7	Abandonment or divorce	4	Violent Crime	4				
Cheated/cash loss	7	Serious harassment by officials	4	Fire/loss of home or property	3				

Source: Collins et al., 2009, p. 68 and Appendix 2

In South Africa, one can infer that risks associated with death present households with emergencies 89% of the time they occur—whether it be of an immediate family member or of one in the community. In South Afria, cultural inferences can be made by observing that entire communities come together for a several day long celebration surrounding the funeral and share the cost, which can be up to seven times the monthly income of a household making an income between \$155-\$300 (Collins et al., 2009, p. 76). In South Asia, loss of crop/livestock was a

more significant risk as weather patterns and extreme weather present issues for farmers. Less access to regular social services also helps to explain why South Asia has a higher risk from injury/illness (Collins et al., 2009, p. 68-9).

Looking to financial instruments used to address each of these problems in the South African sample, one finds that microfinance does not play a significant role. Funeral plans, burial schemes, and insurance are popular financial tools that proide most of the funds for the burial and ceremonies surrounding the funeral. Many donations are made (for example, many relatives donate money and one woman had 10 goats donated from a relative for the funeral and 3 for the *Umkhululo*<sup>12</sup>) (Collins et al., 2009, p. 83). Informal clubs are used if the household needs a small loan to cover the rest of the costs. One woman, who is a widow caring for AIDS Orphans and who arguably incurs quite a bit of risk associated with illness, has no activity with MFIs in her diary—rather she belongs to burial societies and multiple informal clubs (Collins et al., 2009., Appendix 2, p. 232).

The data suggests that many of the households in South Africa used MFI loans to supplement income in order to smooth consumption during periods of extremely low income, to pay off debt, and to invest in savings. Although it seems irrational to take a loan in order to invest in savings, the poor households explained that it takes much more discipline to put money aside each month directly into a savings account while it was much easier to motivate oneself to repay loans. This mechanism was used often among the different households and many did it more than once. On the other hand, MFIs have a stronger base in South Asia and one can see noticable differences in the use of their funds.

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<sup>&</sup>lt;sup>12</sup> The South African funeral is extensive and complicated. For 1-2 weeks before the funeral prayer meetings are held and refreshments are given for 20-70 people. Relatives arrive 2-3 days before the funeral and must be fed. After a traveling ceremony that includes 200-600 people, guests are invited to the family of the decreased to eat. The *Umkhululo* is the ceremony that accompanies the shedding of the funeral clothes, at which there is a feast.

Yet even when acknowledging the role of MFIs in South Asia, which is considerably more extensive than in South Africa, it is surprising to see how little financial activity evolved from microfinance. Only 30 of the 42 Bangladeshi households had MFI activity in their diary (21 held loans and savings, 9 held savings only). Despite this, the percentage of financial turnover in the cashflow balance sheets related to MFI dollars was small—15% of all turnover, 13% of all household financial assets, and 21% of all debt (Collins et al., 2009, p. 53). Even in South Asia, microfinance may just be another tool to add to the array of services already utilized by the poor.

Reducing poverty incidence is nearly impossible for microfinance when most of its services go to substituting for unearned wages (smoothing income). Microfinance generally assumes that access to formalized banking services will directly reduce poverty, yet a study by Bhandari concludes that this suggestion is false. His research "suggests that the growth in bank accounts is not significantly associated with the reduction in below poverty line population across states. Providing banking services to maximum number of people is unsuccessful as a poverty reduction strategy" (Bhandari, 2009, 21-2). In fact, many of the respondents in Buckley's study actually had bank accounts, though they were inactive and only maintained as a symbol of status.

Replacing returns of employment with loans does have economic value to the poor (in terms of increased welfare), but it does not give them the ability to rise above the poverty line (Morduch, 1995; Morduch, 1999). Poverty's symptoms are low incomes and unpredictable cash flows, which are inherent issues when jobs are irregular and based around seasonal fluctuations and harvests. This coupled with the lack of financial instruments that address each of these issues means that the poor are constantly at risk.

Aggregate policies to increase informal and formal sector employment, as well as to regulate them, could be strategies that South Africa and other countries in SSA need to adopt in order to address these concerns. In fact, in their study, Collins et al. found that formal sector employment did little to affect poverty. Though formal sector jobs imply a regular source of income, many households when unpaid during low economic activity periods (off season) and the lack of regulatory enforcement allowed these problems to persist. Moreover, some households with access to lump sums declined investment in capital due to the lack of property rights and fear of their assets being stolen. 13 Addressing larger issues can enhance the role of microfinance and perhaps allow real effects on poverty levels to occur.

Although this section shows and concludes that poverty reduction through the use of microfinance is not the reality observed, it does not mean that microfinance is meaningless or that is has no effects. Many social indiciators (like CERISE<sup>14</sup>) and testimonies of households themselves claim that having access to another set of financial instruments, which decreases risk and smooths consumption patterns, raises the welfare of the poor.

As discussed earlier, this analysis can provide insight for governments and policymakers in their strategies for poverty reduction. What they need to consider are sustainable methods for alleviating poverty in lieu of methods that are highly correlated with substituting employment.

The Issue of Sustainability for MFIs and for Poverty Reduction Strategies

Fearing that the encouragement of self-sustaining operations will cause MFIs to focus more on financial sustainability rather than improving social impact, the debate of whether MFIs

<sup>&</sup>lt;sup>13</sup> For example, one couple, Mumtaz and Subir (a couple in Bangladesh), decided that buying a rickshaw for Subir to drive (and earn an income) was more risky than paying to rent a rickshaw. They had no where safe to park it at night and feared it would be stolen (Collins et al., 2009, p.

<sup>14</sup> CERISE SPI is a standardized social performance indicator developed by microfinance institutions which uses more than 100 determinants to evaluate effects of MFIs on poor households.

should or should not try to attain financial autonomy is rather thorny. Being susceptible to donor and NGO benevolence presents risks of losing money if they should decide to change their mind or become more parsimonious. Murdoch asserts that a component of sustainability can insure an MFI against the capriciousness of any party funding that institution (Murdoch, 1999).

This section will discuss the concerns of sustainability in regards to both the operations of MFIs as well as the use of MFIs for poverty reduction. The implications for governments, policymakers, and future research will then be presented.

Many MFIs rely on the use of funding in order to operate with enough outreach in hopes of becoming a sustainable institution. If MFIs are giving a large amoung of small loans, the outreach must be large enough to offset the small profit (if any) from each of the very tiny accounts. Not surprisingly, there is a strong correlation between the depth of MFI outreach and reliance of subsidies as well as evidence that informal credit unions (such as ASCAs) are more sustainable even though they have higher interest rates (Paxton and Cuevas, 2002, pp. 150-1). These credit unions also serve a more heterogenous demographic, though on average serve a slightly wealthier client base (Paxton and Cuevas, 2002, pp.151). Being at the hands of governmental subsidization has proven to be less efficient in many nations already financing credit for their poor and "rural credit unions offer the most interesting model of financial intermediation in that they reach a larger number of marginalized clients than the village banks, while doing so in a sustainable fashion" (Paxton and Cuevas, 2002, pp.151).

Moreover, there is little evidence that MFIs are sustainable in terms of becoming actual profit-generating financial institutions. Using data obtained from MIX (Microfinance Information eXchange—see Appendix II for participants for each region) from 2003-2008, the following tables have been calculated to demonstrate trends of MFIs by region. MIX offers a

voluntary exchange network for MFIs to post information regarding their loan and asset portfolios as well as impact measurements. <sup>15</sup> Inherent problems with using a self-selected sample (because MFIs decide to participate in this volutary information exchange) can include invalid data, fluctuating sample sizes, and unreliable participation of MFIs (in that they can drop out in a bad year and join again during a good year, which is an issue of adverse selection). MIX's data of Africa's MFIs include those in sub-Saharan Africa and not those in northern Africa (which are combined with the Middle East).

Nicholson points out that "there are still thousands of MFIs that do not report to the MIX and therefore it could prodigiously change the data if all MFIs were included" (Nicholoson, 2009, p. 3). He does conclude though that the sample size is getting large enough so that median values are probably getting close to their actual value—a conclusion he draws upon calculating the differences between the loan balances of all MFIs against only those that realized institutional financial self-sufficiency (IFS). IFS is associated with larger loan balances (\$640 for MFIs achieving IFS and \$150 for other MFIs); a prediction that is in line with benefits of realizing economies of scale (Nicholson, 2009, p. 5).

As shown in Figure 5.1, 2003-2008 data from MIX, profit margin measures show that MFIs, on average, are incurring losses, with the exception of Asia in 2008 (which could be accurate or it could be because of misentered/misreported data or an outliar; MFI Benchmark Data, 2003-8). Also, (in Figure 5.2) return on assets is higher in Asia than in Africa, though both regions experience negative returns. These measures indiciate questionable financial performance (of the institutions themselves, many of which receive subsidies to make up for losses).

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<sup>&</sup>lt;sup>15</sup> See Appendix V for explanation of all outreach indicators and their definitions.

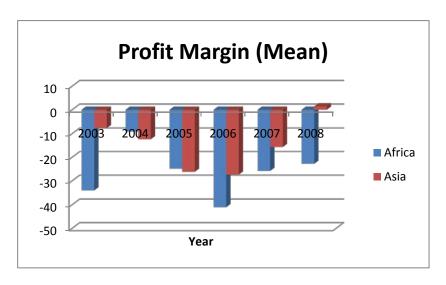


Figure 5.1: Source MIX eXchange Benchmark Data 2003-8

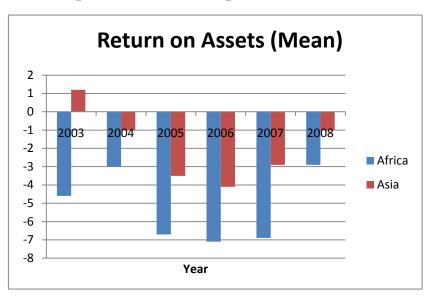


Figure 5.2: Source MIX eXchange Benchmark Data 2003-8

Many MFIs boast of high repayment rates and persuade people into believing that this equates to sustainability. However, most MFIs do not experience a 100% repayment rate (though they are higher, on average, than formal institution repayment rates) and any profits that are made are outweighed by high operation and transaction costs.

One issue that complicates the ability to generate profits in SSA is the issue of increasing costs per borrower (shown in Figure 5.5). South Asia has not only experienced a low cost of borrowing (per borrower), but that region has been able to maintain a constant rate of increasing

costs over the five year span with a net increase of only \$12 (MFI Benchmark Data 2003-8). However, Africa saw a net increase of \$61 from 2003 to 2008 (MFI Benchmark Data 2003-8). This may indicate an internal business structure that allows increasing rates of loan applications to be processed without adding to costs in South Asia, or put more simply, a more efficient MFI system (MIX comments in a 2008 Benchmark Report that SSA has successfully dealt with "higher operational costs" than any other region around the world, [MIX, 2008, p.10]).

Furthermore, in traditional economic theory, not only does more entry into an industry foster competition, it indicates that firms are initially willing to enter because there are positive profits. As shown in Figure 5.3, the growth rate of the number of MFIs can also forecast profitability and growth in the industry. In Asia, this is also reflected in the number of MFIs. In 2003, both regions of Africa and Asia had 57 MFIs, though over the next five years, Asia's MFI prevalence multiplied by 5 (to 283), whereas Africa saw a 3.5 multiple increase (to 195). 16

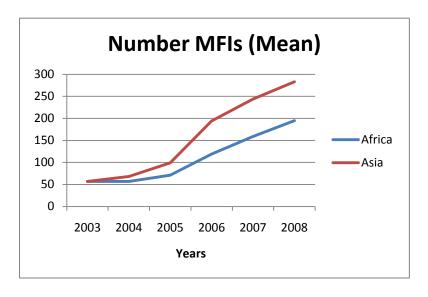


Figure 5.3: Source MIX eXchange Benchmark Data 2003-8

Western Africa is the only region in SSA where MFIs have reached a profitable outcome (though it is also the region that is most heavily privately funded and subsidized by

<sup>&</sup>lt;sup>16</sup> This trend may also be a result of trends in reporting and not actual growth. The author hesitates to rely on MIX's data, even when considering Nicholson's beliefs that the data is nearing accuracy.

governmental resources) (MBB Efficiency, 2007). These MFIs specifically have a higher rate of voluntary savers relative to the number of active borrowers and a larger outreach level (in terms of number of total clients) than other regions of SSA (Rep. MIX, 2008, p. 7-10). These trends can be seen in Figure 5.4.

The number of MFIs, especially relative to the population, may be misleading. Therefore, MIX takes different measures of outreach and impact, including number of current active borrowers (as one must still consider credit and loan demand for investment by the poor) and the cost per borrower (calculated by taking the adjusted operating expense/adjusted average number of active borrowers). Per MFI, Asia experiences a much higher level of client outreach (in terms of investment) than Africa, though looking at Appendix IV, one can see the dramatic differences in population density. A large number of potential clients and local geographic access are two variables that may favor South Asian MFI success over that of MFIs in Africa, a conclusion supported by Collins et al. (2009, p. 171-3).

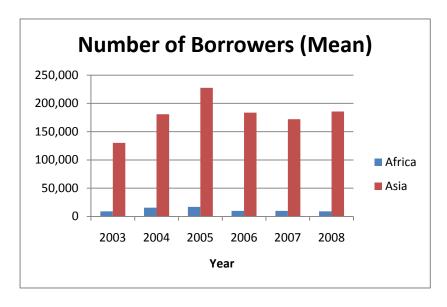


Figure 5.4: Source MIX eXchange Benchmark Data 2003-8

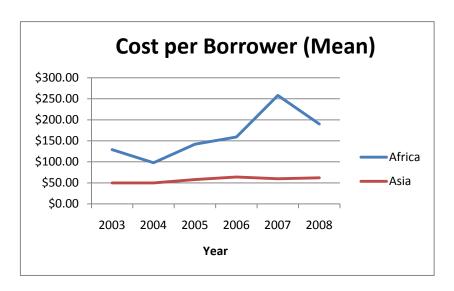


Figure 5.5: Source MIX eXchange Benchmark Data 2003-8

Along with profitability, portfolio composition is especially critical when considering the sustainability of an MFI. If an MFI is to be sustainable, it must operate like a profit-maximizing firm by minimizing costs and maximizing revenues through increasing its allocative and productive efficiency. From 2006-2008, costs in SSA<sup>17</sup> increased by an average of 31.2 percent (measured by cost per borrower/ GNI per capita) (MBB 2008, pp. 42). The Bulletin also revealed that operating costs across the board (all regions) have been increasing due to rising PAR>30 (risk measurement of MFI portfolio indicating likeliness of loan payments defaulting after 30 days; increasing across the board as well) and that productivity has been decreasing due to slower growth rates in attaining borrowers (MBB 2008, pp. 43-4). It urges follow-ups on the efficiency studies for 2010 as it is clear that MFIs have not been increasing sustainability or efficiency over the last four years.

From 2006 until present, more MFIs have *not* achieved financial self-sufficiency than those who have in SSA (using ratios of those who have declared IFS). MFIs in SSA are heavily subsidized as 68 percent of small MFIs, 60 percent of medium MFIs, and 42 percent of large

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<sup>&</sup>lt;sup>17</sup> Selected sample includes Benin, Ethiopia, Ghana, Kenya, Mali, Mozambique, Senegal, Tanzania, and Uganda.

MFIs are not sustainable (MIX and CGAP, 2008). Lapenu discusses the implications of unsustainable operations and avises:

In the long term, commercial banks need to be more involved in supporing microfinance because of their physical infrastructure, well-established informational systems, sound governance, available funds and established capacities for offering financial services...A minimum banking structure could facilitate the development of a rural financial system in which complementarity between institutions increases microfinance outreach and sustainability (Lapenu, 2002, pp. 310).

Acknowledging the normative nature of this debate, this paper can only provide insight on sustainability as a positive issue (supporting the notion that a majority of MFIs are not currently sustainable in SSA and that the current data set has inherent biases associated with a self-selected sample).

Not only do the institutions themselves prove to be unsustainable, but as shown in the previous section, they do not directly reduce poverty. The following table presents information from the World Bank from 2009:

Table 5.4 Poverty Reduction in SSA				
	1990	2005	2015	
Number of people living on less than \$1.25 a day (millions)	297.5	388.4	356.4	
Number of people living on less than \$2 a day (millions)	393.6	556.7	585	
Percentage of population living on less than \$1.25 a day	57.6	50.9	37.1	
Percentage of population living on less than \$2 a day	76.2	73	60.8	

Source: The World Bank, 2009b, p. 47.

Although poverty incidence has declined over the last 20 years, by 7.6% and 3.2% in the respective benchmark groups, little of this reduction has be attributed (empirically) to microfinance. Social grant programmes instituted by multilateral institutions and national

governments have aided many poor households. Redistributive social grant services have explained large shifts from the \$1 a day poor to the \$2 a day group, which can be seen to increase nominally over the 15 year period (Samson et al., 2006, p. 3). Looking at the \$2 a day line, incidence has decreased, but at a substantially lower rate. This means that certain services are reaching the poorest. A 2006 Policy Brief from South Africa to other nations in SSA, as well as other members of the Inter-Regional Inequality Facility, declared that the poorest 40% of the population experienced income increases of R1200 (or about \$200) a year, representing a social program worth 3.4% of GDP and Treasury projects worth \$9 billion (Samson et al., 2006). Social grant programs have also been empirically correlated with a higher success rate of finding employment (Samson et al., 2006). These types of policy can explain many of the shifts across the \$1 a day line, as many of those poor were previously unemployed and are still currently unable to find employment or unable to work (due to age, health, disability, or child-rearing obligations) and now have subsidies to supplement income. The Basic Income Grant is designed to go to the poorest households solely based on income needs and not other special factors.

A paper released by the IMF of 55 different developing/transition economies (which can be applied more broadly to SSA) concludes that nations that pursued macroeconomic and structural policy reform, as well as social policy reform, had the most improvement in the income distribution (Chu et al., 2000). The study was done with data from the 1980s and the 1990s and selected nations from various continents. Transition and developing economies are differentiated. Public healthcare and education are two social programs that have progressive incidence over the time period (Chu et al., 2000).

The issues raised in this last section have enormous implications for governments and policymakers. Deciding if and how much MFIs should be subsidized is still a debate in progress

and that has varying responses across different borders. Furthermore, reliance on donors creates the same issues that Yunus raises in his book *A World Without Poverty* and that Morduch summarizes: Donations vary with economic performances and are not sustainable methods of attaining funding. Acknowledging that most MFIs in SSA are not sustainable, and that there is not a direct link to poverty reduction, microfinance must find its place in development. This paper is not attempting to discredit microfinance from all that is has accomplished, which is great indeed. However, it does point out technical discrepencies that are commonly abused in media and even in scholarly publications.

Future research that focuses on individual development through assisting poor households to manage cash flows and income as well as to maximize income potential is imperative. There is an extreme lack of focus and therefore a lack of data on individual financial diaries. The study by Collins et al. provides much needed insight into the daily operations of financial activities in poor households, but more efforts to mimick this approach are necessary if one hopes to address poverty through the lens of finance.

Also, more comparative research targeting the role of microfinance across sub-Saharan countries would be more useful than studies of South Africa. Because the study of Collins et al. is extremely insightful into the daily grind that the poor endure, it gives an inspiration for upcoming studies that will probably focus on cash-flow analysis.

## Conclusion

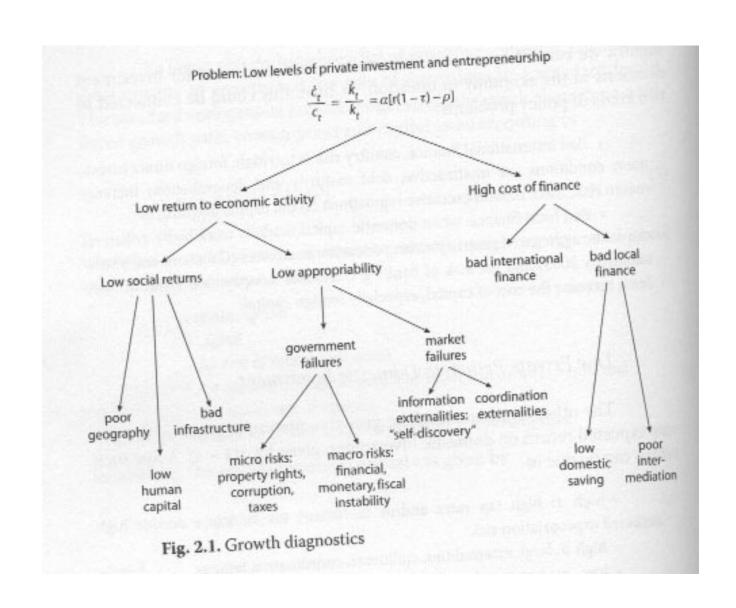
Proponents of microfinance argue that it has raised millions of poor people around the world out of poverty. Millions have been affected by MFIs and the welfare of the poor has increased due to microfinance—this point is not at stake in this paper. However, analyzing whether or not it can be used as a sustainable solution to poverty remains the concern. There is little evidence that poverty incidence has been affected by microfinance anywhere in the world and some studies actually indicate that other socioeconomic variables (such as health, education, women's empowerment) are also unaffected (in certain regions) (Banerjee et al, 2009). While the logic behind the Grameen model remains solid and various case studies do show entrepreneurship among micro-borrowers, unrestricted end-use of microcredit does not allow MFIs to effectively and strategically reduce poverty.

Grameen Bank has acquired an international reputation for enhancing the lives of millions of poor people, yet national rates of poverty have gone unchanged. China and Vietnam, two nations that have experienced massive reductions in poverty levels, have relied on state intervention and political/economic reform.

Poverty has proven to be a unrelenting hindrance for nations in sub-Saharan Africa, but causes of poverty remain widespread, infiltrating the paradigms of polity and economics. Covariant risks<sup>18</sup> are becoming increasingly difficult to deal with as a multiplicative effect takes place over time and post-colonial politics keep governance and internal development in pitiable quality. Access to credit may prove to be an issue that monetary policy and MFIs should address in conjunction, but solely hoping for microfinance to change the deeper issues that cause

Covariant risks include risks related to: "input markets(availability and quality of production inputs, including short-ages of family labor due to ill health), the production function (for example, covariant weather risks or idiosyncratic risks affecting business, crop, or livestock enterprises), output markets (risks in finding a buyer and price risks), sliding into chronic poverty in its worst form ([loss of all productive assets, including ability to work], for example, often caused by covariant risks such as natural disasters, war, political upheaval and major economic crises, HIV and AIDS), permanent inability to work, and old age/death of a family member (Zeller, 2001, p.219-20 [Table 9-1 and Table 9-2]).

continual low returns to economic activity is overly optimistic. To sustainably affect poverty at an aggregate level, evidence shows that reform on a much larger scale must occur. Furthermore, to identify the appropriate role of microfinance in development, more research must be undertaken.



# Appendix I I

(MIX Africa and Asia Benchmark Report 2003-8 participants)

## Africa:

ACEP SENEGAL, ACSI, Adansi RB, ADCSI, Ahantaman RB, Akiba, AKRB, Akuapem RB, AVFS, BG, CERUDEB, CRAN, CRG, DECSI, EBS, Enowid, Eshet, Faulu - UGA, Finadev, FINCA - MWI, FINCA - TZA, FINCA - UGA, First Allied S&L, FOCCAS, Garden City S&L, Gasha, Johnson S&L, Kafo Jiginew, K-Rep, KSF, Lower Pra RB, Meklit, Mepe Area RB, Metemamen, Midland S&L, MTA, Nwabiagya RB, OCSSC, OTIV Sava, PADME, PAMECAS, PAPME, PEACE, PRIDE - TZA, PTF, SEDA, SEF - ZAF, SFPI, Sidama, Sikaman S&L, Tchuma, UMU, UWFT, Vital Finance, WAGES, Wasasa, Wisdom.

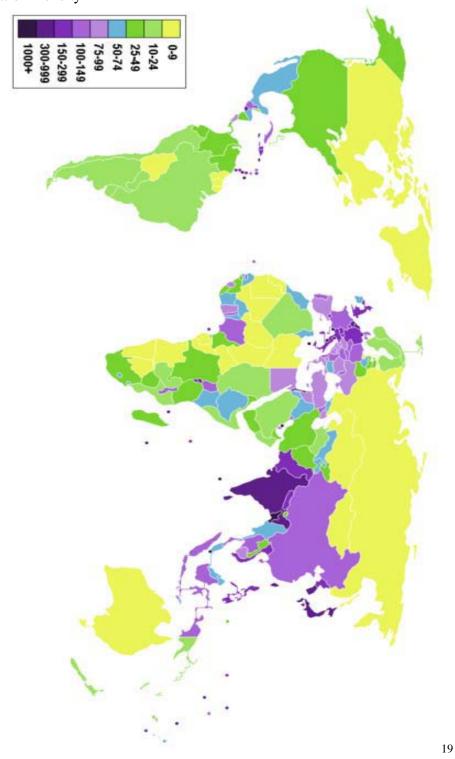
#### Asia:

ACLEDA, AMK, AMRET, ASA, Bank of Khyber, BCS, Bhartiya Samruddhi Finance Ltd., BPR Arta Kencana, BRAC, BRI, BURO Tangail, CARD NGO, CARD RB, CEP, CMEDFI, CREDIT MFI, DAMEN, FCBF, FICCO, FMFB, GK, GV, HKL, IDF, Kashf, KC, KMBI, LPD Bedha, LPD Buahan, LPD Celuk, LPD Ketewel, LPD Kukuh, LPD Kuta, LPD Panjer, LPD Pecatu, LPD Pemogan, LPD Ubung, MMPC, Nirdhan, Norfil, NWTF, OMB, PCCC, Prasac, RBKV, RBTC, RBV, SAFWCO, SCMPC, SHARE, SKS, Spandana, Sungi, TPC, TSKI, TSPI, USPD.

# Appendix III (Buckley, 1997, p.1088)

Table 5. The demand for debt in Ghana (percentage distrib	bution)		
(%) responses to the question: How do you feel about being in debt?			
Never want to be in debt	35		
Don't like it but sometimes it is necessary	41		
Don't mind as long as I can pay it off or the terms	14		
Are not too severe	0		
Don't know/other response	10		
Source: Authors fieldwork	•		

Appendix IV World Population Density



19 Source: http://startswithabang.com/wp-content/uploads/2008/03/800px-world\_population\_density\_map.PNG

Appendix V Outreach Indicator Definitions (MBB 2008, pp. 53-4).

#### INSTITUTIONAL CHARACTERISTICS

Number of MFIs Sample Size of Group

Age Years Functioning as an MFI

Total Assets Total Assets, adjusted for Inflation and standardized provisioning for loan impairment and write-offs Offices Number, including head office

Personnel Total number of staff members

#### FINANCING STRUCTURE

Capital/Asset Ratio Adjusted Total Equity/Adjusted Total Assets

Debt to Equity Adjusted Total Liabilities/Adjusted Total Equity

Deposits to Loans Voluntary Deposits/Adjusted Gross Loan Portfolio

Deposits to Total Assets Voluntary Deposits/Adjusted Total Assets

Portfolio to Assets Adjusted Gross Loan Portfolio/Adjusted Total Assets

#### **OUTREACH INDICATORS**

Number of Active Borrowers Number of borrowers with loans outstanding, adjusted for standardized write-offs

Percent of Women Borrowers Number of active women borrowers/Adjusted Number of Active Borrowers

Number of Loans Outstanding Number of loans outstanding, adjusted for standardized write-offs

Gross Loan Portfolio Gross Loan Portfolio, adjusted for standardized write-offs

Average Loan Balance per Borrower Adjusted Gross Loan Portfolio/Adjusted Number of Active Borrowers

Average Loan Balance per Borrower/GNI per Capita Adjusted Average Loan Balance per Borrower/GNI per Capita

Average Outstanding Balance Adjusted Gross Loan Portfolio/Adjusted Number of Loans Outstanding

Average Outstanding Balance/GNI per Capita Adjusted Average Outstanding Balance/GNI per Capita

Number of Depositors Number of depositors with any type of deposit account

Number of Deposit Accounts Number of all deposit accounts

Deposits Total value of all deposit accounts

Average Deposit Balance per Depositor Deposits/Number of Depositors

Average Deposit Balance per Depositor/GNI per capita Average Deposit Balance per Depositor/GNI per capita

Average Deposit Account Balance Depositors/Number of Deposit Accounts

Average Deposit Account Balance/GNI per capita Average Deposit Account Balance/GNI per capita

#### MACROECONOMIC INDICATORS

GNI per Capita Total income generated by a country's residents, irrespective of location/Total number of residents (World Development Indicators)

GDP Growth Rate Annual growth in the total output of goods and services occurring within the territory of a given country (World Development Indicators)

Deposit Rate Interest rate offered to resident customers for demand, time, or savings deposits (IMF/International Financial Statistics)

Inflation Rate Annual change in average consumer prices (IMF/International Financial Statistics)

Financial Depth Money aggregate including currency, deposits and electronic currency (M3)/GDP, measuring the monetization of the economy (IMF/International Financial Statistics)

#### OVERALL FINANCIAL PERFORMANCE

Return on Assets (Adjusted Net Operating Income - Taxes)/Adjusted Average Total Assets

Return on Equity (Adjusted Net Operating Income - Taxes)/Adjusted Average Total Equity

Operational Self-Sufficiency Financial Revenue/(Financial Expense + Impairment Losses on Loans + Operating Expense)

Financial Self-Sufficiency Adjusted Financial Revenue/Adjusted (Financial Expense + Impairment Losses on Loans + Operating

Expense)

#### REVENUES

Financial Revenue/Assets Adjusted Financial Revenue/Adjusted Average Total Assets

Profit Margin Adjusted Net Operating Income/Adjusted Financial Revenue

Yield on Gross Portfolio (nominal) Adjusted Financial Revenue from Loan Portfolio/Adjusted Average Gross Loan Portfolio

Yield on Gross Portfolio (real) (Adjusted Yield on Gross Portfolio (nominal) - Inflation Rate)/(1 + Inflation Rate)

#### **EXPENSES**

Total Expense/Assets Adjusted (Financial Expense + Net Impairment Loss + Operating Expense)/Adjusted Average Total Assets

Financial Expense/Assets Adjusted Financial Expense/Adjusted Average Total Assets

Provision for Loan Impairment/Assets Adjusted Impairment Losses on Loans/Adjusted Average Total Assets

Operating Expense/Assets Adjusted Operating Expense/Adjusted Average Total Assets

Personnel Expense/Assets Adjusted Personnel Expense/Adjusted Average Total Assets

Administrative Expense/Assets Adjusted Administrative Expense/Adjusted Average Total Assets

Adjustment Expense/Assets (Unadjusted Net Operating Income - Adjusted Net Operating Income)/Adjusted Average Total Assets

#### **EFFICIENCY**

Operating Expense/Loan Portfolio Adjusted Operating Expense/Adjusted Average Gross Loan Portfolio Personnel Expense/Loan Portfolio Adjusted Personnel Expense/Adjusted Average Gross Loan Portfolio Average Salary/GNI per Capita Adjusted Average Personnel Expense/GNI per capita Cost per Borrower Adjusted Operating Expense/Adjusted Average Number of Active Borrowers Cost per Loan Adjusted Operating Expense/Adjusted Average Number of Loans

#### **PRODUCTIVITY**

Borrowers per Staff Member Adjusted Number of Active Borrowers/Number of Personnel Loans per Staff Member Adjusted Number of Loans Outstanding/Number of Personnel Borrowers per Loan Officer Adjusted Number of Active Borrowers/Number of Loan Officers Loans per Loan Officer Adjusted Number of Loans Outstanding/Number of Loan Officers Depositors per Staff Member Number of Depositors/Number of Personnel Deposit Accounts per Staff Member Number of Deposit Accounts/Number of Personnel Personnel Allocation Ratio Number of Loan Officers/Number of Personnel

#### RISK AND LIOUIDITY

Portfolio at Risk > 30 Days Outstanding balance, portfolio overdue> 30 Days + renegotiated portfolio/Adjusted Gross Loan Portfolio

Portfolio at Risk > 90 Days Outstanding balance, portfolio overdue> 90 Days + renegotiated portfolio/Adjusted Gross Loan Portfolio

Write-off Ratio Adjusted Value of loans written-off/Adjusted Average Gross Loan Portfolio

Loan Loss Rate (Adjusted Write-offs - Value of Loans Recovered)/Adjusted Average Gross Loan Portfolio Risk Coverage Ratio Adjusted Impairment Loss Allowance/PAR > 30 Days

Risk Coverage Ratio Adjusted impairment Loss Antowanee/TAR > 50 Days

Non-earning Liquid Assets as a % of Total Assets Adjusted Cash and banks/Adjusted Total Assets

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# Rebecca S. Rockey

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#### **EDUCATION**

### The Pennsylvania State University, The Schreyer Honors College

Bachelor of Science in Economics, expected May 2010

Bachelor of Arts in French: Language and Culture Option, expected May 2010

Bachelor of Science in International Studies, expected May 2010

Current Overall GPA: 3.81

#### **EXPERIENCE**

## Bates White LLC/ The Pennsylvania State University, June 2009-September 2009

University Park, PA

REU Researcher with Dr.David Shapiro

♦ Analyzed data using the programming software Stata and performed research for the updating of *Transition in Kinshasa*, a book focusing on the fertility, migration, employment, and economic patterns of the last 50 years in the Democratic Republic of the Congo

## The Pennsylvania State University: Penn State Learning, April 2008-Present

University Park, PA

Supplemental Instructor, Tutor

- ♦ Served as a Supplemental Instructor for Introduction to Microeconomic Principles attended faculty lecturer's course to follow curriculum and offered three supplemental classes per week
- ◆ Private tutor for Economics and French

## The Pennsylvania State University, September 2006-present

University Park, PA

Fitness Instructor and Pass Checker

♦ Worked at the on-campus gyms, taught fitness classes, completed special projects, mentored for new instructors

# **The AIDS Project,** September 2002-December 2008

State College, PA

HIV Test Counselor, Risk Reduction Counselor, Co-Advisor of Student AIDS Educators

♦ Certification for Test Counseling by the PA Department of Health, co-advised of the Student AIDS Educators (SAE), participated and designed fund raisers, United Way Panel representative, educated various student bodies

## Miller, Kistler, Campbell, Miller, Williams, and Benson: Attorneys of Law, Summer 2005 State College, PA

Intern for Esquire Betsy Dupuis and Esquire Richard Campbell

Performed clerical tasks—real estate law involved the filing, updating, and editing of files, part-time secretarial work while secretary was on a medical leave, participation in real estate closings, preparation of real estate deeds, and updating of financial information

## HONORS AND ACTIVITIES

- ◆ **Dean's List**: Fall 2006, Spring 2007, Summer 2007, Fall 2007, Spring 2008, Summer 2008, Spring 2009, Fall 2009
- ♦ 2006 Student AIDS Global Initiative, on-campus HIV test counselor
- ♦ Superior Academic Achievement Summer 2007, Penn State Summer Institute of Slavic Languages
- ♦ Club Field Hockey National Champions, 2007
- THON: Club Field Hockey Team for THON 2007, Fitness Instructor Team for THON 2008
- ♦ Independent Pianist,
- ♦ Argentine Tango Club
- ♦ IES Study Abroad in Spring 2009 Paris, France
- ♦ National Scholars Honor Society member

## **SKILLS**

- ♦ COMPUTER: Microsoft Word, Excel, Access, Powerpoint, Minitab, Stata, C++ Proficient
- ♦ LANGUAGE: Advanced in French, Conversational in Russian
- ♦ OTHER: First AID, CPR