

# Research Report



## **Saving for Microenterprise in Individual Development Accounts: Lessons from the American Dream Demonstration**

Fred M. Ssewamala and Michael Sherraden

January 2004



## **Center for Social Development**

 **Washington**

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George Warren Brown School of Social Work

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## **Preface and Acknowledgements**

Support for this report comes primarily from Charles Stewart Mott Foundation. However, since the data used are from American Dream Demonstration (ADD), we would like to acknowledge all the additional foundations that fund ADD. They are the Ford Foundation, Joyce Foundation, F.B. Heron Foundation, John D. and Catherine T. MacArthur Foundation, Citigroup Foundation, Fannie Mae Foundation, Levi Strauss Foundation, Ewing Marion Kauffman Foundation, Rockefeller Foundation, and Moriah fund.

Center for Social Development (CSD) staff and research associates have worked for several years on ADD research. Particularly, we are grateful to Jami Curley, who helped collect institutional data; Mark Schreiner, who provided helpful comments on an earlier version of this report; and to Jenny Kraus, who formatted the final report.

To our knowledge, this is the first study that examines saving patterns of microentrepreneurs in an IDA program. The study highlights key findings regarding individual and institutional characteristics that programs and policy makers should consider when designing and implementing savings components in microenterprise programs for the poor.

## Executive Summary

Policy makers around the world are exploring and experimenting with anti-poverty strategies that would improve the well-being of the poor and move them into the mainstream economy. One of the many strategies being explored is the promotion of self-employment for the poor through microenterprise programs (MEPs), which provide micro-loans, business advice, training assistance, and in some cases saving services, to the poor.

Numerous theoretical frameworks have been used to explain factors that influence the outcomes of microentrepreneurship. Theories related to human capital, social capital, and financial assets have guided most studies. While these theories may provide part of the explanation, they do not adequately explain all the phenomena pertaining to microentrepreneurs' performance. This study examines both individual and institutional characteristics that may be related to performance.

Using a sub-set of the participants saving for ME (n=457) from the fourteen institutions comprising the American Dream Policy Demonstration (1997—2001), and drawing on institutional theory (Sherraden, 1991; Sherraden, Schreiner, and Beverly, 2003; Beverly and Sherraden, 1999; Peters, 1999), this study analyzes the role of individual and institutional characteristics in explaining the savings outcomes of poor microentrepreneurs in a savings-led MEP.

Overall, the results of the semipartial correlations from both the hierarchical OLS and simultaneous perspectives indicate that: (1) if facilitated, low-income microentrepreneurs can save and capitalize their small business to move out of poverty; and (2) controlling for a wide range of individual characteristics, there are statistically significant associations among institutional characteristics and participants' savings outcomes. These findings support an institutional theoretical perspective.

Programs and policy makers should consider a range of institutional characteristics when designing, implementing, and advocating for programs and policies aimed at incorporating savings into microenterprise programs for the poor. These characteristics include savings match, match caps, peer group modeling, program rules and financial education.

## Chapter 1: Background and Purpose

Policy makers are exploring and experimenting with new anti-poverty strategies to improve the well-being of the poor. Strategies that combine economic growth with more job opportunities seem to be at the forefront (see United Nations Development Program [UNDP], 1993). Although no single comprehensive strategy has yet emerged, one of the many strategies being explored is the promotion of self-employment for the poor mainly through microenterprise programs (MEPs).

MEPs aim at providing micro-loans, business advice, training assistance--and in some cases saving services--to the poor, welfare recipients and the unemployed intending to start and/or grow an existing small family business. Simply stated, MEPs help the poor to afford resources and opportunities--notably, small loans, grants, savings, training and technical assistance--for the start up, maintenance and/or expansion of their own very small enterprises, referred to as microenterprises.<sup>1</sup> The theory behind MEPs is simple: if poor people who have a propensity to self-employment could be helped to access affordable small business loans, grants, small business training, saving services and support, they would be able to start, expand and/or strengthen their micro businesses and eventually move out of poverty. For those who are barely above the poverty line, the strategy is seen as something that would reduce their vulnerability to "sliding back and forth" into and out of poverty. If nothing is done, "today's not-so-poor may well be tomorrow's poorest" (Wright, 2000, p.3). Indeed, to their supporters, promoting microenterprise represents "nothing less than the most promising instrument available for reducing the extent and severity of global poverty" (Snodgrass, 1997, p.1). Many supporters of microenterprises argue that entering the mainstream economy through microenterprise may be one important route that would eventually allow the poor to break the vicious cycle of poverty (see Clark & Huston, 1993; Dignard & Havard, 1995; Nelson, 2000; Raheim, 1996).

The strategy of promoting small businesses among the poor began in the developing countries of Africa, Asia and Latin America (see Adams & Von Pischke, 1992; Bastelaer, 1999; Counts, 1996; Rahman, 1999; Rhyne & Otero, 1994a; Schreiner, 1999; Servon, 1999; World Bank, 1975). Microenterprise programs such as the Grameen Bank in Bangladesh, the Self-Employed Women's Association (SEWA) in India, and ACCION International in Latin America are often cited as the programs that pioneered the experimentation of promoting MEPs as an alternative anti-poverty strategy (see Chen, 1997; Counts, 1996; Grameen, 2002; Servon, 1999). Indeed, it is believed that throughout the developing world, MEPs are serving hundreds of thousands of poor families (Boomgard, et al., 1992; Mead & Liedholm, 1998; Rhyne & Otero, 1994b), and they (MEPs) constitute one of the fastest growing anti-poverty strategies in these poor developing countries. According to the Microcredit campaign summit of 1996, the strategy could reach 100 million of the World's poorest families by 2005 (Microcredit Summit, 1996). Indeed, even major banks such as

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<sup>1</sup>The terms *microenterprise*, *micro-business* and *small business* are often used interchangeably, even though their meanings can be distinct. Nevertheless, because some of the studies reviewed here do not make a distinction between these concepts, the concepts will be used interchangeably in this study to mean a small business that has fewer than 5 employees (including the owner or "microentrepreneur"), and that generally lacks access to conventional loans, equity, or other banking services (United States Small Business Administration, 2002).

Citibank have jumped on the bandwagon of promoting some form of small businesses in order to “dispel the myth” that such banks only deal with large customers (The Monitor, February 8, 2002). In Europe, including the post-socialist countries of Eastern Europe, similar programs are also underway (Microcredit Summit, 1996). Most recently, Eastern Europe has registered a proliferation of MEPs intended to assist the poor microentrepreneurs in making the transition from communist command economies to capitalistic alternatives (Buss, 1999).

In the United States, support for promoting MEPs as an anti-poverty initiative has steadily increased among federal, state and private community development organizations and philanthropic foundations. For example, while in 1970 there were only a few dozen MEPs in the United States (Raheim, Alter & Yarbrough, 1996), the number had reached at least 341 by 1997, serving over 24,145 micro businesses, and lending over \$33 million (Langer, Orwick & Kays, 1999). Dallinger (2001) estimated the number to have reached at least 700 MEPs across the United States by 2001, with a diversity of funding and institutional characteristics, especially in regards to the rules and models. On the political arena, the microenterprise development strategy has been able to sustain its support because each side of the political aisle feels the strategy speaks to its values. For example, the conservatives favor it because they think it speaks to individual self-reliance and hard work, while the liberals praise it for its goal of reaching the poor and the philosophy that anyone is capable of owning a successful business (Bornstein, 1995).<sup>2</sup> Indeed, when asked about his position on federal support for microenterprise programs, George W. Bush said:

As President, I will expand our economic success to close the gap of hope. I have proposed a set of specific reforms to advance individual opportunity and upward mobility. I believe, for example, that small business is the backbone of our economy. For many Americans, microenterprise is a secure path to the American Dream and this path must be as wide and accessible as possible. I am a strong, enthusiastic supporter of microenterprise development programs-particularly programs that focus on helping economically disadvantaged, unemployed or under-employed Americans overcome obstacles and achieve their highest potential. Successful microenterprise programs yield a variety of social and economic benefits: creating jobs, enhancing skills, accumulating wealth, boosting income, strengthening families and communities, etc (Association for Enterprise Opportunity [AEO], 2001, ¶1).

Similarly, on several occasions during his Presidency, President Bill Clinton expressed his strong support for microenterprise programs arguing that such programs help “self-employed entrepreneurs obtain loans for small business enterprise to begin the process of growing of poverty” (Clinton, October 17, 2000, ¶3).

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<sup>2</sup> Current United States Federal government agencies supporting microenterprise development include: Department of Treasury: Small business administration community development financial institutions fund; Department of Commerce: the economic development administration; Department of Agriculture; Department of Health and Human Services: the office of community services and office of refugee resettlement; Department of Housing and Urban Development: community development block grants; and Department of Labor (SBA, 2002).



Generally, the majority of formal MEPs tend to focus either on credit alone, identifying themselves as credit led-programs<sup>3</sup>; or on training alone, identifying themselves as training-led programs<sup>4</sup>. However, having recently realized that neither credit alone nor training alone would be sufficient enough to propel most poor microentrepreneurs out of poverty, a considerable number of MEPs in the United States are moving toward a multidimensional approach integrating saving, training and credit services into one program design—a “one-stop shop”. This approach is not new. According to the World Bank (2001), some programs in the developing countries, notably Bank Rakyat in Indonesia and SafeSave in Bangladesh, already have a saving component in their program designs. However, the majority of the programs in the United States using this multidimensional approach are designing their programs based on Sherraden’s proposal for Individual Development Accounts (IDAs) for microenterprise (Sherraden, 1991). These programs are integrating a savings requirement for their program participants. We are calling these IDAs for microenterprise.<sup>5</sup> These programs are the focus of this study.

Unlike credit-led programs and training-led programs, which have received extensive scholarly research (e.g., Adams & Ladman, 1979; Adams & Von Pischke, 1992; Anthony, 1999; Balkin, 1993; Barnes & Keogh, 1999; Clark & Kays, 1999; Dumas, 1999; Edcomb, Klein & Clark; 1996; Else, 2001; Raheim, 1996; Schreiner, 1999; Servon, 1999; Sherraden, Sanders & Sherraden, 1998, forthcoming; Ssewamala, 2002), IDAs for microenterprise are relatively new and have hardly received any attention in scholarly microenterprise research. Yet, given the ongoing proliferation of IDA programs across the United States, there is a need to undertake an empirical study to explore and understand the best practice question, especially in regards to program design. In other words, what is the best way of integrating IDAs and other saving strategies into MEPs that would optimize participants’ outcomes? This study is a first step of understanding how best to integrate IDAs into MEPs.

Fourteen savings-led MEPs across the United States are studied to ascertain the individual and institutional factors influencing saving outcomes for microentrepreneurs associated with savings led MEPs. This study is important because theorists have observed that institutions matter in shaping and influencing opportunities, behaviors, and individual performance (see, e.g., Beverly and Sherraden, 1999, Hall & Taylor, 1996; Neale, 1987; North, 1990; Peters, 1999; Sherraden, 1991; Weaver & Rockman, 1993). For example, Sherraden (1991) has argued that the middle class “participates in retirement pension systems...not [as] a matter of making superior choices. Instead, a priori choices are made by social policy, and individuals walk into the pattern that has been established” (p.127). Guy Peters, a political scientist, advances a similar argument in his book, *Institutional theory in political science: the new institutionalism* (1999). He says that a mere focus on individual traits “whether explained from economic, sociological or psychological perspectives, was

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<sup>3</sup> Credit-led programs assume that the main problem with the poor microentrepreneurs is simply having inadequate financial capital. Thus by providing them with the necessary capital, they would be able to break the vicious cycle of small capital and probably be able to compete in the market place.

<sup>4</sup> Training-led programs consider the main problem with the poor microentrepreneurs to be lack of business skills, personal empowerment, self-confidence, self-esteem and determination, all topics usually emphasized in the trainings. The assumption is that if they (the poor microentrepreneurs) could get the knowledge (human capital), then they would be successful in finding the resources needed for starting and/or running a business (see Schreiner & Morduch, 2002).

<sup>5</sup> An alternative phrase might be savings-led microenterprise programs. IDAs for microenterprise have a somewhat different meaning because IDAs are matched (or subsidized) savings.

simply insufficient to bear the burden of understanding and explaining what was happening in the world...”(Peters, 1999, p.vi). Peters believes that one cannot fully explain individual opportunities, actions and outcomes without being “aware of institutional influences” (1999, p.2). Details of Peters’ arguments about the theoretical importance of institutions in influencing individual outcomes are looked at more closely in chapter 2.

The organizations offering IDAs for microenterprises are a diverse group of community development corporations, social service agencies, and for-profit and not-for profit organizations (see a detailed description by Sherraden, et al. 2000). Each program offers somewhat different opportunities, constraints and consequences. In this study, we hypothesize that program institutional characteristics have a great deal to do with the outcomes of the participants, perhaps mattering even more than the characteristics of individual participants.

Drawing on the institutional theoretical frameworks of Beverly & Sherraden (1999) and Sherraden, Schreiner & Beverly (2003) and applying it to 14 savings-led MEPs, this study attempts through quantitative empirical evidence supplemented with qualitative examples, to answer the following questions: (1) What individual characteristics are associated with saving outcomes of a microentrepreneur associated with an IDA program? (2) What institutional characteristics are associated with saving outcomes of a microentrepreneur associated with an IDA program?

These two questions are important for a number of reasons, but three predominate: First, to the best of our knowledge, this would be the first time that such questions, as they relate to savings-led MEPs in general and IDAs in particular, have been posed and empirically tested. Thus, answers to these questions will contribute to the current body of microenterprise knowledge. Second, results will inform programs and policies designed to connect IDAs and MEPs. More broadly, results will have implications for savings as a component in microenterprise programs and policies. Third, since this is a pioneering study in this field, the findings will inform, guide, and shape future research.

Many microenterprise studies attribute observable outcomes to the microentrepreneur’s individual resources. Factors like social, human and financial capital are usually highlighted as the key determinants (e.g., see Else & Gallagher, 2001; Servon & Bates, 1998; Also see Hulme & Mosley, 1996). For example, Else and Gallagher (2001) indicate that one of the variables that seemed to influence business success for poor families was the support of family and friends. Based on their findings, the authors conclude:

Starting and maintaining a business requires a tremendous amount of time and energy. Support from partners, immediate or extended family, and friends may be the differences in whether the business owners are able to achieve their goals. Support may be in the form of helping to staff the business when the owner deals with the business, family matters and require absence from the business, when the owner is sick, or when business activity is particularly heavy. It may be in the form of small amounts of short-term financing, simply listening to the frustrations, or helping to problem-solve (Else & Gallagher, 2001, p.36).

A few studies (e.g., see Jorgensen, Hafsi, & Kiggundu , 1986; Sebstad & Cohen, 2000; Sherraden, Ssewamala & Sanders, forthcoming; Wright, Kasente, Ssemogerere & Mutesasira, 1999) have commented on the external environment, including macro-economic conditions, the legal system, and business infrastructure, as important in influencing the performance of microentrepreneurs.

However, institutional characteristics of the MEPs themselves are rarely included as part of the explanation or discussion. In fact, in cases where the micro-businesses have failed, critics have typically debated and questioned the skills, determination, and ingenuity of poor people (see Nelson, 2000 for details). This study may reveal new information applicable to the microenterprise field, especially regarding program designs associated with successful outcomes.

### **Integrating IDAs into Microenterprise Programs**

*“Although their incomes may be tiny or irregular, there are many times when poor people need sums of money that are bigger than what they have in hand. The only reliable and sustainable way that they can obtain these sums is to build them, somehow or other, from their savings.”*

--Rutherford (2000, p.1)

The idea of IDA for microenterprises first appeared in Sherraden (1991), who proposed that individual accounts be “open to anyone eighteen years of age and over, with the restriction that the money be used as seed capital to start a business venture” (p.256). In putting this suggestion forward, Sherraden was building on his idea of an asset-based theory of wellbeing, which first appeared under the title “Rethinking social welfare: toward assets” (1988). Within this asset-based theoretical framework, he proposed IDA programs as a strategy aimed at helping poor families build and accumulate assets for socio-economic empowerment and to reach important life goals.

Participants in IDA programs receive general financial educational classes on how to save small amounts of money with a formal financial institution, and these small savings are then matched over time to enable a participant invest in homeownership, education or a microenterprise (Sherraden, 1991). The accounts are in some ways similar to other defined contribution plans, such as 401(k) retirement plans. Just like 401(k) retirement plans, IDAs offer a monetary incentive for participation. Every dollar saved by an IDA participant—in an IDA account—is matched by funds from a private source (e.g., charitable organizations or foundations) or from a public source. Although programs may vary, participants usually receive general financial education and “goal” specific training. For example, an account holder saving for a micro-business receives general basic instruction on financial management and consumption, including balancing a checkbook. In addition she/he receives micro-business specific training such as business-plan writing and marketing. The Corporation for Enterprise Development [CFED] (2002) estimates that by 2002, there were more than 500 IDA programs throughout the United States. Sherraden (2002a) estimated the number of people involved in some form of IDA program in the United States to be under 50,000 in over 40 states.<sup>6</sup>

IDAs enjoy bipartisan support in state and federal legislation. The 1996 “welfare reform” law included IDAs as a state option, and a federal IDA demonstration created by the Assets for Independence Act began in 1998. Indeed, the idea of matched savings continues to appear in United States policy discussions. For example, as governor of Arkansas, Bill Clinton supported

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<sup>6</sup> On the global scene, similar programs are underway. For example, the government of Canada plans to sponsor an IDA demonstration in 10 cities (Schreiner, et al., 2001), while in the United Kingdom, the government’s proposal for a Child Trust Fund is similar to IDAs ( Sherraden, 2002c).

IDAs in his 1992 presidential campaign (Schreiner, et al., 2001), and as president, he proposed creating Universal Savings Accounts “to give all Americans the means to save ... and receive funds to match a portion of their savings” (Clinton, January, 1999, ¶22), which they could invest as they choose. During the 2001 presidential campaigns, both presidential candidates for the two main political parties proposed some form of individual asset accounts, with each having a billion-dollar IDA proposals in their platforms (Schreiner, et al., 2001; AEO, 2001).

IDAs for microenterprise puts an emphasis on savings by program participants. Indeed it is mandatory for a participant to have a savings account. Otherwise, she/he will not be allowed to participate in the program. There are several probable reasons why some MEPs in the United States have embraced the idea of integrating IDAs and/or savings into their programs.

First, introducing poor microentrepreneurs to formal financial institutions is an important step that may allow some of them to establish credit that they may eventually need to support their businesses or to deal with a family financial crisis without disrupting business operation.<sup>7</sup> As the World Bank (2001) observes, MEPs should move towards the direction of incorporating savings into their program designs “so that clients would not have to take out loans to cope with illness or death” (p.157). For example, in a study on credit accessibility to the rural poor in Uganda, Matovu and Okumu (1996) found that in the four districts studied, while 57% of the respondents in the study were borrowing for business capital, 43% mainly borrowed for payment of school fees, medical expenses, and consumption.<sup>8</sup> Moreover, just like any other financial savings, money in the IDA represents a form of self-insurance that can be drawn upon to buffer cash flow shortfalls and/or financial shocks of an IDA participant. In fact, some banks in the developing countries--such as Bank Rakyat in Indonesia, the Self-Employed Women’s Association (SEWA) Bank in India, and SafeSave in Bangladesh--have demonstrated the potential of combining savings in their program designs (see Chen & Snodgrass, 2001; Rutherford, 2000; World Bank, 2001).

Second, money in IDA accounts, whether matched or not, could be used to supplement the ‘very tiny loans’ associated with credit-led MEPs (for a review of the size of the loans disbursed by credit-led MEPs, see Bates & Servon, 1996). It is worth noting that several empirical studies have found a positive association between the amount of starting capital and micro-business performance (see Koop, de Reu & Frese, 2000; Servon & Bates, 1998).

Third, IDA matches provide the participants a chance to turn their tiny savings into relatively large lump sums that could easily enable them to take advantage of investment opportunities when they present themselves. This point is consistent with Sherraden’s argument that savings do not only create interest in the future, but they also “provide a foundation for risk taking” (1991, p.148). They stimulate investment in other assets. Moreover, even without the match, the participants’ savings in the IDAs could eventually turn into lump-sums that could be used for larger acquisitions.

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<sup>7</sup> For those financial lending institutions which consider savings before making a lending decision, savings in an IDA may be used as one of the indicators of the financial discipline of a potential borrower.

<sup>8</sup> The same study found that if the individual was borrowing to cover school and medical fees, the chances of not getting a loan were high.

Fourth, developing an equity source (IDA funds + match funds) of business financing may increase business stability, leverage loans for participating entrepreneurs, and mitigate lender risk.

Fifth, developing a pattern of saving behavior and regular account deposits may improve credit status, by demonstrating the ability to re-pay a loan (see Glackin & Mahony, 2002).

Schreiner and Morduch (2002) summarize the rationale for promoting and incorporating savings into MEP designs:

For the poorest people, savings is at least as important, if not more so, as loans in the effort to help households accumulate resources. First, if households can generate adequate assets on their own, the need for loans is reduced. Second, savings provide a buffer against misfortune (e.g., illness, business setbacks, or uninsured property loss). Third, the discipline of building up savings over time can yield important lessons for entrepreneurs. Fourth, funds within households tend to be largely fungible, and focusing just on financing for microenterprise misses much of how households need and use money. Funds earmarked for small businesses, for example are more likely to be diverted to paying for other expenses when borrowers lack other resources (e.g., savings) to address short-term contingencies (p.49).

### **Can Poor Microentrepreneurs Save?**

Since IDAs for microenterprise focus on the poor, the first question is, can the poor save?<sup>9</sup> Contrary to commonly held views about the poor, the poor can and do save, although it may be on a modest scale compared to the wealthy. Not much research exists on the saving behaviors of microentrepreneurs, probably because a majority of MEPs were originally established to provide credit as opposed to saving services. However, some research indicates that MEPs that have incorporated a saving component in their program designs tend to perform better.<sup>10</sup>

A study by Bairstow (1999) on microenterprises in Kenya (using both qualitative and quantitative methods), finds that groups which incorporated a savings component (for example a 'group fund') in their intra group arrangements, had a successful loan repayment history. It should be noted that the aim of Bairstow's study was not primarily on savings and microenterprise. The purpose of the study was to establish the influence of trust, within borrowing groups, on microenterprise performance. But given the robustness of the savings component in influencing performance in the groups, Bairstow observes that, although results of the role of trust in influencing microentrepreneurs performance were mixed, groups which incorporated a savings component had more successful loan performance histories.

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<sup>9</sup> Savings can be held in several forms. For example, while some individuals hold in-kind savings, others hold savings in form of cash or financial assets. In this article, savings refer to the cash deliberately stored either in formal or informal systems.

<sup>10</sup> Although the focus of this study is on the United States, it is worthwhile to present the available empirical data on what we know about savings and MEPs in a larger context.

Denise L. Anthony (1999) studied Working Capital (WC), one of the oldest and largest micro-enterprise organizations in the United States.<sup>11</sup> Her study, which combined both qualitative and quantitative methods, finds that groups that had ‘group savings’ performed significantly better than those that did not, hence giving their respective members an opportunity to borrow significantly more money.

According to Schaeffer-Kehnert (1983) in a study in Malawi, borrowing farmers pay 10 percent of the loan amount as a deposit into a common reserve fund kept in a trust by the credit institution for the group.<sup>12</sup> If there is a default, the shortfall is made up by drawing on the reserve fund. Farmers are free to apply for new credit as soon as the fund is replenished.

In a qualitative study, Rutherford (2000) explored the operation of Rotating Savings and Credit Associations (RoSCAs)<sup>13</sup> called “merry-go-rounds” in the slums of Nairobi, Kenya. The findings indicate that the microentrepreneurs participating in the RoSCAs were able to save and capitalize their individual tiny business and also take care of their family needs. For example, Rutherford cites a participant who was a member of a fifteen-member RoSCA for two and half years who had been able to sustain her vegetable selling business by participating in the RoSCA. According to Rutherford (2000), each of the fifteen RoSCA members saved 100 shillings each day, making a total of 1,500 shillings (about \$40) in savings. Then, each day one of the fifteen members took the full 1,500 shillings and could use it as she wanted. After each of the fifteen women had had their turn—which took fifteen days, the cycle started again. Rutherford also found that many RoSCA members in his study joined more than one RoSCA in order to overcome a disadvantage of RoSCAs, “an inflexibility in which everyone has to save the same amount in the same period, whereas individual households may have actual needs that vary in quantity and date” (2000, p.21). The great variety, popularity, and success of RoSCAs, especially in the poor developing countries, is a striking manifestation of poor microentrepreneurs’ ability to save and their need for saving services.

Another indication of the poor microentrepreneurs’ ability to save is the rate at which the village banking movement is spreading throughout Latin America, Africa, and Asia. Pioneered in 1984 through the Foundation for International Community Assistance (FINCA), there were about 3,500 village banks by 1994, serving over 90,000 poor people in more than 30 countries (Rutherford, 2000; also see FINCA, 2002).<sup>14</sup> The village banking movement started in Costa Rica, but has since extended to more than 30 countries, including El Salvador, Mexico, Honduras, Guatemala, the Dominican Republic, Haiti, Nicaragua, Ecuador, Peru, Uganda, Malawi, Tanzania, South Africa, Zambia and the United States. One of the elements of the village banking model is that each time a

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<sup>11</sup> Working Capital has been in operation since 1990 and has since extended to at least seven states within United States with at least 1800 clients in over 350 groups. During the period 1990–1996, members of this organization borrowed over 2,700 loans valued at United States \$2.5 million.

<sup>12</sup> Schaeffer-Kehnert reports that originally 20 percent of a group’s credit had been the agreed amount to be deposited into a security fund, but with time and experience, the farmers realized that a 10 percent deposit was sufficient to cover the risk.

<sup>13</sup> RoSCAs provide a money saving technique in which members regularly contribute a stipulated amount that falls to one or several members according to an agreed order of rotation (Holloh, 1998).

<sup>14</sup> Village banks are village-level institutions aimed at helping the poor to access micro-finance services, which could be in form of micro-business loans or simply micro-savings.

member makes a loan repayment, a percentage of it goes into a savings account so that, by the end of the loan repayment, the client will have some money in savings with the bank.

Wright, et al., (1999) reported that Uganda Women's Finance Trust (UWFT), an institution that serves over 34,000 poor microentrepreneur women in Uganda, has over \$1 million in client savings which have been steadily growing since its founding in 1984. A similar financial institution, Centenary Rural Development Bank (CERUDEB) founded in 1983 has seen its clientele base, which combines both the poor and the not so poor, grow to over 200,000 (CERUDEB, 2000). Hyman and Dearden (1996) found that Banco ADEMI, a MEP working in Dominican Republic had a clientele of 14,600 poor micro-savers and had reached over 16,800 micro-borrowers.

In the United States, data coming out of a seven-year research project (1997-2003), on a national demonstration of Individual Development Accounts called the American Dream Demonstration (the population on which this study is based), indicate that participants have saved an average monthly net deposit of \$19.07 in their IDAs (Schreiner, Clancy & Sherraden, 2002). With a typical match rate of 2:1, the average participant in ADD accumulated an average of \$57 a month, or \$684 a year. Overall, it seems likely that poor microentrepreneurs in the United States can save, and may want to save.

### **Microenterprises in the United States: What is the Justification?**

*"There is no doubt that small, entrepreneurial ventures are an important well spring not only of employment, but also of business ideas and future economic productivity"*

--Sherraden (1991, p.252).

*"[The] successes of microfinance in reducing vulnerability through income diversification and asset accumulation suggests that these programs should be a priority for government and donor support."*

--World Bank (2001, p.157).

Why should an industrialized country like the United States promote tiny businesses? Should this not be a strategy for less developed countries (LDCs), where poverty is rampant and where 1.2 billion people live on less than \$1 a day? (see World Bank, 2001). Is there a compelling reason for promoting micro-businesses in what is often considered to be the richest country in the world? These questions are important given the fact that some of the money being used to promote MEPs is from public funds.

Although the United States is a wealth nation, poverty is still an issue of intense concern (Danziger, Sandefur & Weinberg, 1994; Schiller, 2001; Song & Lu, 2002). "As rich as America is, its abundance is not shared equally. Some people have so little, in fact, [they are considered] to be poor" (Schiller, 1995, p.4). Recent statistics indicate that 12.7% of all United States residents fall below the poverty line, and if there were no government transfers, 19.2% of all United States residents would be considered poor (United Nations Development Program [UNDP], 2000). The numbers for specific minority groups is more disconcerting. For example, based on the United Nations Human Development Index [HDI], if the United States were to be divided into two countries, White (not of Hispanic origin) and Black, the country with the White population would rank number 1 in the world (in terms of prosperity), while that with the Black population would rank number 31 (UNDP, 1993). With a Gini Index of 40.8 (see UNDP, 2001), United States has the highest income

inequality among the western industrialized countries<sup>15</sup>, and with nearly 1 in 5 children living in poverty (see Schiller, 2001; Frey, Abresch & Yeasting, 2001; Song & Lu, 2002), the United States lags behind all western industrialized countries in child well-being. Moreover, a recent study by Rank & Hirschl (1999) using the PSID data to predict the likelihood of poverty across the American adult life span estimated that “by age 35 nearly one third of the United States population will have experienced a year in poverty, [while] by age 65 more than half of all Americans will have spent a year below the poverty line” (p.201). As Schiller observes, unless something is done, “we may confidently predict that poverty has a great future in this country” (2001, p.43).

The socio-economic and political effects of poverty and inequality have been well documented and therefore will not be discussed here (see Nagel 2000; Rank, 1994; Schiller, 2001; 1995; Sen, 1999; Sherraden, 1991; UNDP, 2000; 1999; 1993; World Bank, 2001). These studies, explicitly or implicitly, point to the devastating effects of poverty not only on the poor, but also on society as a whole. Yet, established social policies and welfare programs, for the most part, lack in their design the element of empowering the poor (Sherraden, 1991). Instead, the overwhelming majority of social & welfare policies have served only to sustain people while in poverty rather than help them move into the mainstream economy and eventually out of poverty (O’Hare, 1996). In the United States, poverty alleviation policies have paid little attention to strategies that would encourage and enable the poor to accumulate assets (Sherraden, 1991; 1999). O’Hare (1996) reports that only about 10% of income transfer benefits to the poor in the United States are for programs such as education or training that would empower the poor.

In *Assets and the Poor: A New American Welfare Policy* (1991), Sherraden demonstrates the need for a new anti-poverty approach, observing that the existing social welfare policies, “even though humane and justifiable, [are] not the only way—nor necessarily the best way—to structure welfare assistance” (p.4). According to Sherraden, there should be “another approach that would fundamentally promote the well being of the poor and the long-term growth of the nation” (1991, p.4). Similar critiques have been offered by many other poverty and welfare scholars (see, e.g., O’Hare 1996; Rank, 1994; Rank & Hirschl, 1999; Schiller, 1995), who explicitly or implicitly describe the extent to which poverty in the United States has persisted over the years and suggest that something should be done to alter this pattern.

Townsend (1970) states that poverty is not simply having inadequate income or being below an established poverty line, but having insufficient resources in terms of income, assets, and services. A meaningful anti-poverty strategy should not simply focus on income maintenance, but also on empowering the poor with productive resources/assets that would afford them a brighter future.

As one possible approach, promoting micro-businesses among the poor may have some justification even in a country like the United States. Jack Litzenberg of the Charles Stewart Mott Foundation has observed that “at a time when global economic forces are making it ever more difficult for low income Americans to gain a foothold in the economy, microenterprise offers a simple and effective point of entry into the economy...”(1999, p. iv). Some scholars have praised the strategy for its ability to help the poor microentrepreneurs do a better job of what they are already doing to survive:

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<sup>15</sup> The Gini Index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution (World Bank, 2001, p.320). A Gini Index of 100= “perfect inequality”, while a Gini index of 0= “perfect equality”.



self-employment (see Dignard & Havet, 1995). Although the strategy is not a “magic bullet” that gets everyone out of poverty, it may play a significant role in diversifying household income sources for social and economic security, and could be part of a multidimensional approach to fighting poverty and inequality in the United States. As Richard Taub observes, even in cases where micro-businesses may not be sufficient in fighting poverty by themselves, at least they can be used to “connect low-income people to the systems of greater resources hovering nearby” (Taub, 1997, p.16).

### **Motivation for the Study**

As mentioned earlier, IDAs for MEPs have been put to the test in over 40 states across the United States as one strategy intended to address poverty and promote development. The poor are being encouraged to save and their deposits are being matched. However, since this is a relatively new program design in the MEP field, and because MEPs were originally established to provide credit as opposed to saving services, there are many questions to be explored regarding how best to connect savings and MEPs. The goal of this study is to identify individual and institutional factors that can help explain outcomes of poor microentrepreneurs in savings led MEPs.

## Chapter 2: Theory and Questions

Numerous theoretical frameworks have been used to explain factors that influence the outcomes of microentrepreneurs. Theories related to human capital, social capital, and financial assets have guided most studies. While these theories may provide part of the explanation, they do not adequately explain all the phenomenon pertaining to microentrepreneur performance. Against that background, we propose to take a closer look at institutional theory as an important theoretical framework that can explain the outcomes of microentrepreneurs. As Peters (1999) observes, one cannot fully explain individual opportunities, actions and outcomes by exclusively focusing on individual characteristics. One needs to be “aware of institutional influences” (Peters, 1999, p.2) as well as individual characteristics.

The use and application of the term “institution” calls for clarification. According to Walter C. Neale (1987), although the term *institution* is widely used in all the social sciences, it has no well-defined meaning, whether across the social sciences or within any one of them. Peters (1999) concurs in stating that “there is little if any agreement on what an institution is”(p.vi). Sherraden, Schreiner and Beverly (2003) espouse the same view when they argue that although institutional perspectives are not a new phenomenon, “they are not well specified” (p.97). Therefore, when applying an institutional perspective in any research work, the term “institution” needs to be clearly specified to avoid confusion. For example, Douglass North (1990) considers institutions to include “any form of constraint that human beings devise to shape human interaction” (p.4). He describes institutions as the rules of the game in a society. North divides institutions into two forms: formal institutions and informal institutions. He considers formal institutions to include written rules, laws and conventions created to shape human interaction, while informal institutions include cultural norms and codes of behavior, which all shape human behavior and human interactions (North, 1990, 1993). North (1990) makes a clear distinction between institutions and organizations. He describes organizations as structures created in response to the rules and conventions (institutions) laid before them. On the other hand, Blase (1973) describes institutions as organizations that are “change-inducing and change-protecting” (p.4). John R. Commons, as cited by Neale (1987), simply defines an institution as “collective action in control of individual action” (p.1178). He does not make a clear distinction between formal or informal institutions, nor does he make a clear distinction between organizations and institutions.

In this study, the use of the term “institution” is more specific than the way it is conceptualized by North or Commons. The term is used to refer to the characteristics of the programs implementing IDAs for MEPs. As mentioned earlier, the programs promoting IDAs for microenterprises are a diverse group of community development corporations, social service agencies, and for-profit and not-for profit organizations. Each program offers somewhat different opportunities, constraints, and consequences. It would be logical to assume that the diversity of these programs, in terms of institutional characteristics, has a lot to do with the outcomes of the participants. This is the basis for applying an institutional theoretical framework to this study. The core proposition to which most institutional theorists subscribe is that institutions modify behavior, opportunities and outcomes (see Neale, 1987).

Sherraden (1991), Beverly & Sherraden (1999) and Sherraden, Schreiner & Beverly (2003) suggest that the ability and willingness of people to save is shaped by institutional structures. According to Beverly and Sherraden (1999), the poor have below average savings compared to the middle class

not simply because of their individual characteristics but also because they are substantially less likely to have access to institutions that would enable them save. Beverly and Sherraden (1999) and Sherraden, Schreiner and Beverly (2003) identify key institutional constructs which they consider to increase individual savings and asset accumulation, especially among low income households: These institutional constructs are: access, incentives, information, facilitation and expectations. Sherraden, Schreiner and Beverly (2003) observe that access, incentives and information are constructs usually discussed in the institutional literature. Facilitation, which describes institutional arrangements that offer some form of assistance to the individual in the depositing process (for example through automatic payroll deduction) was added because it is a key feature of most contractual saving systems. Expectation as a construct was proposed based on qualitative research in ADD. Sherraden, Schreiner & Beverly (2003) report that according to the qualitative data, “many IDA participants say they are trying to save the expected amount each month” (p.97), or that they are trying to reach a monthly saving target to “fulfill the staff expectation” (p.98). This implies that expectations may cause low-income people to save more than would otherwise be anticipated.

Specific to an emerging institutional theory of savings, Sherraden (1999) and Beverly and Sherraden (1999) advance the following hypotheses:

Incentives:

1. The higher the matching deposits, the greater the participation and savings.
2. The higher the earnings on savings, the greater the participation and savings.

Information:

1. The more the program outreach, the greater the participation and savings.
2. The more educational programming and “economic literacy,” the greater the participation and savings

Access:

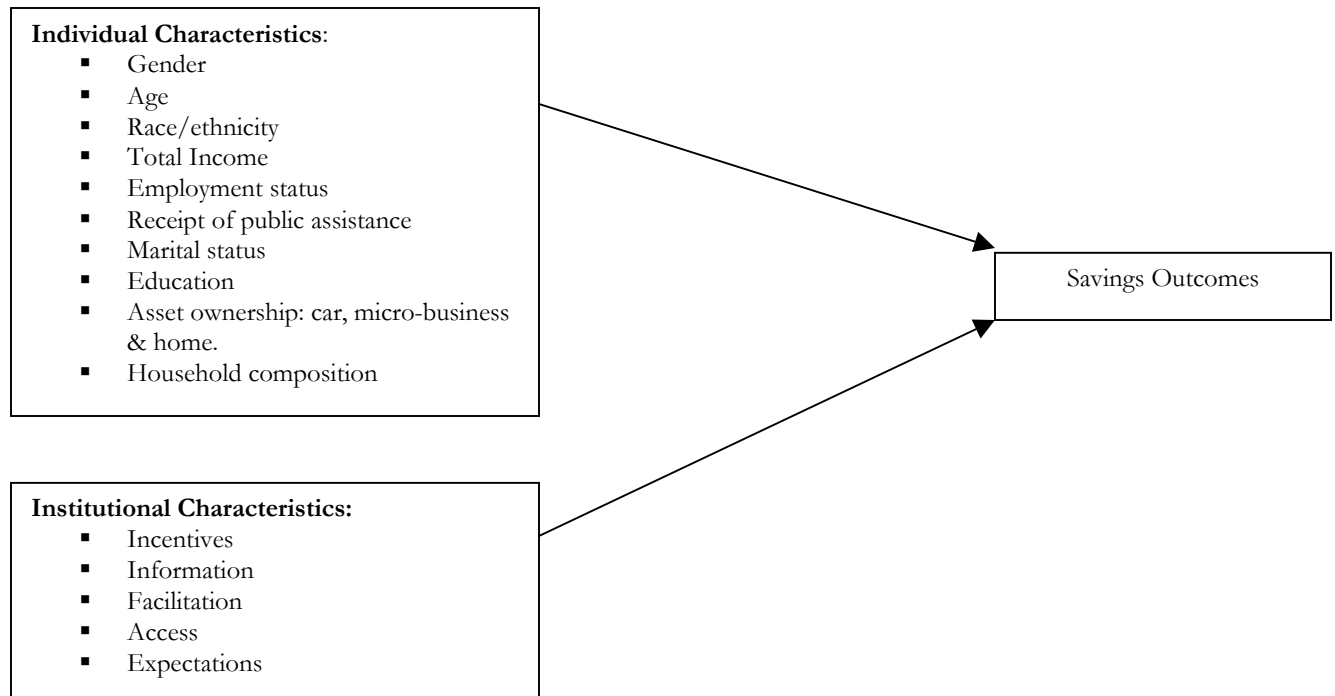
1. The closer the proximity of the savings program, the greater the participation and savings.
2. The more the use of electronic deposits, the greater the participation and savings.

Facilitation:

1. The more involved the program and staff in assisting with saving, the greater the participation and savings
2. The more automatic the system (especially automatic deposits), the greater the participation and savings.

As mentioned earlier, the emerging institutional theory of saving is consistent with the work of Peters (1999) who cautions academicians not to consider individuals as fully autonomous actors, but take into consideration the influence of institutions. As Sherraden (1991) maintains, “the middle class accumulates its wealth, not so much through superior individual investment, but through structured, institutionalized arrangements that are in many respects difficult to miss... these institutionalized arrangements provide tremendous access and incentives to accumulate assets” (p.127).

**Figure 1. Theoretical Model**



### **Research Questions and Hypotheses**

In view of the overall purpose of this study, i.e., identifying factors related to the saving performance of IDA participants who intend to use their IDA savings for microenterprise, the following specific research questions guide the study:

1. Among IDA participants, who are using their IDA savings for microenterprise?
2. For IDA participants saving for microenterprise, how much do they participate and how well do they save compared to others?
3. What individual characteristics are associated with participation and saving among the microenterprise group?
4. What IDA institutional characteristics are associated with participation and saving among the microenterprise group?

For question number 4, given the theoretical framework guiding this study (see chapter 2), we offer the following hypotheses, some of which have been replicated from Sherraden (1999) and Beverly and Sherraden (1999):

#### Incentives

Hypothesis 1. The higher the match rate, the greater the participation and savings.

#### Information

Hypothesis 2. The more economic education (in hours), the greater the participation and savings.

Hypothesis 3. Participants in programs with peer group meetings (which allow for information sharing) have greater participation and savings.

#### Access

Hypothesis 4. The more the number of saving deposit locations, the greater the participation and savings.

Hypothesis 5. The more flexible the program rules and staff, the greater the participation and savings.

#### Facilitation

Hypothesis 6. The more automatic the system (especially automatic deposit), the greater the participation and savings.

#### Expectations

Hypothesis 7. The higher the match cap, the greater the participation and savings.

### **Dependent Variables**

Consistent with existing studies on IDA programs (see Sherraden et al., 2000; Schreiner, et al., 2001; Schreiner, Clancy & Sherraden, 2002), this study uses the following as the measures of “participation and saving” in an IDA program:

#### Average monthly net deposit (AMND)

This is defined as net deposits per month of participation. AMND controls for the length of time that a participant has had the opportunity to save. Higher AMND implies higher savings.

$$\text{AMND} = \frac{\text{Deposit} + \text{Interest} - \text{Unmatched withdrawals} - \text{Unmatchable deposits}}{\text{Total number of months of participation}}$$

The variable “net deposit”, which is used to calculate AMND, is defined as deposits plus interest minus unmatched withdrawals. Net deposit includes matched withdrawals, but excludes unmatchable deposits in excess of the match cap or after the cap period. Higher net deposits imply higher savings. The major weakness of the measure, however, is that it does not account for differences in the length of participation, match caps<sup>16</sup>, time caps<sup>17</sup> or timing of cash flows (Schreiner, et al., 2001). The Theoretical range could be zero to total match cap.

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<sup>16</sup> Match cap is the limit on the amount of matchable deposits possible during a specified period of time. For example, in an *annual match-cap structure*, participants face a match cap in each participation-year.

<sup>17</sup> Time cap is the number of months after opening an account in which a participant may make matchable deposits.

### Net deposits as a percentage of match cap

This is the ratio of the average monthly net deposits to the monthly savings target. The monthly saving target is derived by dividing the total match cap with the time cap (that is, the amount if deposited each month and not withdrawn unmatched, would lead to net deposits equal to the lifetime match cap in the month of the time cap (see Schreiner, et al. 2001).

$$\text{Net deposit as a percentage of the match cap} = \frac{\text{Average monthly net deposit}}{\text{Monthly savings target}}^{18}$$

The measure “net deposits as a percentage of the match cap” indicates the closeness of the actual saving behavior of a participant that would take full advantage of the match incentives. For example, a measure of 100 percent indicates that a participant is on track to use all match eligibility (Schreiner, et al., 2001). Because this variable has a percentage unit, it has a theoretical range from 0 to 100.

### Saving rate

This is defined as the ratio of the average monthly net deposit to gross monthly household income. It is measured as a percentage, with a theoretical range from 0 to 100 (although in some cases it may be 0 to infinity because some people may report zero income but at the same time save).

$$\text{Saving rate} = \frac{\text{Average monthly net deposit (AMND)}}{\text{Gross monthly household income}}$$

### Deposit frequency

This is defined as the percentage of months in which deposits could have been made and deposits were made. It is measured as a percentage with a theoretical range of 0 to 100.

$$\text{Deposit frequency} = \frac{\text{Total number of months a participant made deposits}}{\text{Number of months of participation}}$$

## **Independent Variables**

### **Institutional Characteristics**

#### Incentives

Incentives constitute mechanisms provided by programs to encourage higher participant savings. The following survey items are used to measure incentives for microenterprise participants.

1. What was the match rate offered to the IDA participants saving for microenterprises? It is hypothesized that the higher the earnings on savings (exemplified by a higher match rate), the greater the participation and savings.

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<sup>18</sup> Monthly savings target is the ratio of total match cap to time cap.

### Information

This construct is specified as the training provided by the program related to IDAs. In this study, the following items are used to measure information.

1. How much financial education (in hours) was offered to each participant? It is hypothesized that the more financial education (in hours) offered to the participant, the greater the participation and savings.

2. What was the format of the classes used during financial education classes? (i.e., was it small group, seminar or other?). It is hypothesized that more peer modeling and information sharing (through small groups), the greater the participation and savings.

### Facilitation

This construct describes institutional arrangements that make depositing for the participant easier. It includes arrangements whereby depositing is actually done for the participant, as in automatic payroll deduction, or occurs with some other form of assistance. According to Sherraden, Schreiner & Beverly (2003), this construct is a key feature of most contractual saving systems. For this study, the following item is used to measure facilitation:

1. Was automatic direct deposit offered to participants? It is hypothesized that the more automatic the system, the greater the participation and savings.

### Access

This construct describes institutional mechanisms that make the saving process by the participant convenient. The following items are used:

1. How many deposit locations were available to participants? It is hypothesized that the more the number of saving deposit locations, the greater the participation and savings.

2. Were there penalties if minimum saving requirements were not met?

3. Were the penalties enforced? For items 2 and 3, it is hypothesized that the more flexible the program rules and staff, the greater the participation and savings.

### Expectations

Expectations constitute what programs expected from participants. The following item is used:

1. Did participants have a minimum required monthly savings amount? If yes, what was the amount? It is hypothesized that the higher the minimum required monthly savings amount, the greater the participation and saving.

## **Entrepreneur's Socio-demographic Characteristics**

### Gender

This is a nominal variable in which each participant is asked to indicate whether they are male or female.

### Age

This is a continuous variable that is measured by asking each participant to give his/her year of birth.

### Race/ethnicity

Is a nominal variable that is established by asking each participant to indicate his or her ethnicity. Respondents are given a list of six choices which include: African-American; Caucasian; Latino or Hispanic; Asian, Pacific Islander; Native American; Other.

### Marital status

This is a five-level polychotomous variable in which participants are asked to select the response that best describes their marital status. The responses are: (1) single (2) married (3) separated (4) divorced (5) widowed.

### Employment status

This is an eleven-level polychotomous variable that is measured by asking participants to choose from a list of employment statuses. The list includes: Employed more than full-time (overtime, or working more than one job); Employed full-time (35-40 hours); Employed part-time (up to 35 hours); Working and in school; Laid off, waiting for a call back; Currently seeking employment; Currently in school or job training program; Homemaker, not seeking employment; Disabled, not seeking employment; Retired, not seeking employment; Unknown. These groups are later condensed into four main groups: (1) employed full-time (>35 hours per week), (2) employed part-time (<35 hours per week); (3) unemployed/not working; (4) student

### Total income

This is a continuous variable that is measured by asking each participant to give his/her monthly gross income by source. The following is the list of sources provided to the participants: Formal employment; Self-employment (selling things you make; doing laundry, sewing, child care; etc.); Government assistance (TANF, Food Stamps, SSI, Social Security; Unemployment Benefits, Veteran's Benefits); Pensions or retirement income; Child support/alimony payments; Friends or family; Investment Income; Other (please specify).

### Receipt of TANF/AFDC

This is measured using the following items: (1) Have you ever been a recipient of TANF or AFDC? (2) Are you presently a TANF recipient?

### Car ownership

This is measured using a dichotomous variable. Participants are asked: Do you own a car?

### Home ownership

This is also measured using a dichotomous variable. Participants are asked: Do you own a home?

### Business ownership

This is also measured using a dichotomous variable. Participants are asked: Do you own a business?

### Education

This is an eight-level polychotomous variable used to indicate the highest level of education completed by a participant. Participants are asked to choose from the following list: (1) grade K-5<sup>th</sup>,



(2) grade 6-8; (3) grade 9-12; (4) high school diploma or GED; (5) some college; (6) 2-year degree; (7) 4-year degree; (8) attended graduate school.

Household status of participant

Two items are used to measure this construct: (1) How many adults (18 years and older) currently live in participant's household? (2) How many children (under 18 years) currently live in participant's household?

## Chapter 3: Research Methods

### Operational Definition of “Performance”

In general, MEPs define and conceptualize the term performance differently and use different indicators to ascertain whether the desired performance has been achieved. According to the United States Small Business Administration (SBA), despite various objectives and continued support of microenterprises, the field lacks uniform and consistent performance indicators and measures (SBA, 2000).<sup>19</sup> For example, credit-led programs, whose primary product is credit, may primarily use loan repayment as participants’ outcome indicators. On the other hand, training-led programs, whose primary product is business training, may use the ability for training participants to start and/or expand on their business after undertaking training as the measure of outcomes. Likewise, it would be logical for savings-led MEPs to use savings’ related outcomes to measure the participants’ performance. This study uses savings related outcomes, notably average monthly net deposit, deposit frequency, saving rate, and saving as a percentage of match caps (matchable amount) as measures of participation and saving.

### Operational Definition of “Microentrepreneur”

In this study, all the participants who have used their IDA savings for microenterprise, or those participants who identified their intended saving goal as microenterprise, are referred to as “microentrepreneurs”. This definition is consistent with the operational definition of the term microenterprise provided earlier (see chapter 1). The definition explicitly includes those planning to “initiate” or “grow” their business as microentrepreneurs.

### Data Set

The study uses data from the “American Dream Demonstration (ADD).” ADD is the first and most extensive study of IDAs. Starting in 1997, ADD followed over 2,000 low-income participants at 14 community-based program sites (hosted within 13 programs) across the United States (see Table 1). ADD ran for four years (1997-2001). The Corporation for Enterprise Development (CFED) in Washington, DC, designed and guided ADD, while the Center for Social Development (CSD) at Washington University designed and conducted much of the research. The research design is an extensive multi-methods design comprising both qualitative and quantitative methods.<sup>20</sup> The multiple research methods include: (1) program implementation case studies (N=14); (2) survey of program characteristics (N=14); (3) program cost studies and cost-benefit study (N=1); (4) participant survey on IDA behavior and outcomes (N=298); (5) case studies on participants (N=16); (6) monitoring of saving patterns of all participants through the Management Information System for Individual Development Accounts (MIS IDA) (N=2364); (7) experiment with random assignment (N=1,038); (8) in-depth interviews with a sub sample of the experiment (N=84) (see Sherraden, 2002c).

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<sup>19</sup> Given such a realization, the SBA argues that as the microenterprise field matures and expands, it is important to establish “agreed-upon indicators” of performance, which would, in turn, help the field share best practices, document success, and attract additional funding.

<sup>20</sup> Multi-methods are designed to examine ADD from as many perspectives as possible and to gather timely data in order to inform the development of IDA policy and programs outside ADD (Schreiner *et al.*, 2002, p.1)

**Table 1. The 13 Host Organizations in ADD**

<b>Host Organization</b>	<b>Location</b>	<b>Type of Community</b>	<b>Type of Organization</b>	<b>Targeted Participants for IDAs</b>
ADVOCAP	Fond du Lac, WI	Small town and rural area	Community action agency	Former AFDC/TANF recipients; working poor people
Alternatives Federal Credit Union	Ithaca, NY	Small city and rural area	Community development credit union	Single parents; youth
Bay Area IDA Collaborative	Oakland, CA	Urban	Collaborative of 13 community-based organizations	Low-income Asian Americans; African Americans; Latinos
CAAB Corporation	Washington, DC	Urban	Collaborative of 8 community-based organizations	TANF recipients; youth; African Americans; Latinos; Asian Americans
Central Texas Mutual Housing Association	Austin, TX	Urban	Not-for-profit housing organization	Rental property residents; youth
Central Vermont Community Action Council	Barre, VT	Small towns and rural areas	Community action agency and community development corporation	TANF recipients; youth
Community Action Project of Tulsa County	Tulsa, OK	Urban	Community-based anti-poverty organization	Program 1: Working families with children at or below 200% of poverty. Program 2: at or below 150% of poverty.
Heart of America Family Services	Kansas City, MO	Urban	Community-based family-services agency	Latinos; African Americans
Human Solutions	Portland, OR	Urban	Not-for-profit housing organization	Rental property residents
MACED	Berea, KY	Small towns and rural areas	Association of community development organizations	African Americans; rental property residents; working poor
Near Eastside IDA Program	Indianapolis, IN	Urban	Social-service organization / Community development credit union	Neighborhood residents; youth
Shorebank Corporation	Chicago, IL	Urban	Community development bank with not-for-profit affiliate	Rental property residents; Shorebank customers
Women's Self-Employment Project	Chicago, IL	Urban	Microenterprise-development organization	Low-income, self-employed women; public housing residents

Source: Sherraden, *et al.* (2000)

Two primary data sets are used in this study. One is the ADD monitoring data, collected through MIS IDA. MIS IDA, designed by CSD for this research purpose, tracks program characteristics, participant characteristics (both socio-demographic and financial), and all IDA saving transactions for all ADD participants (N=2,351) at all 14 ADD program sites.<sup>21</sup> The saving transaction data come from financial institutions and as such are highly accurate. This is the most detailed existing data set on saving behavior in a matched saving program and probably the most detailed existing data set on saving behavior by a low-income population (Sherraden, 2002a). Data used in this study cover saving transactions of the ADD participants through December 31, 2001. The Center for Social Development at Washington University developed a data quality control tool, MIS IDA QC, to complement MIS IDA. This tool checks for data-entry errors, missing values, and accounting inconsistencies (see Schreiner, Clancy & Sherraden, 2002). MIS IDA QC reports are crosschecked for data-entry errors, missing values, and accounting inconsistencies. Programs are then asked to correct missing or inconsistent data. This extra step significantly improves the quality of data.

MIS IDA data are supplemented with more extensive data on IDA programs from a survey conducted across the 14 ADD programs. The program survey data were collected using a combination of face-to-face and telephone interviews with personnel from the 14 IDA programs sites in ADD. The interview questions were designed based on the constructs proposed in the institutional theory of saving (Beverly & Sherraden, 1999; Sherraden, Schreiner & Beverly 2003). Interviews were conducted by Fred Ssewamala and Jami Curley. Prior to the interviews, the survey was pre-tested on two IDA organizations in St. Louis. The interviews were conducted in fall of 2002. Because ADD was initially set up as a national demonstration for IDAs, program administrators/directors were committed to participating in studies until 2003. ADD program directors were initially contacted by e-mail and then by telephone to describe the project and ask permission to do the interviews. Interviews lasted an average of two hours and organizations were compensated for their time. We interviewed IDA program directors. In the instances where there was leadership turnover, both current and previous administrator(s) were interviewed. The survey consisted of both open-ended and closed-ended questions. Open-ended questions were intended to help clarify some of the closed-ended questions.

After the program-level data were collected and cleaned, the data set was merged with participant-level data already gathered from MIS IDA using SPSS. Responses to open-ended questions were entered into EXCEL spread sheets.

In addition, examples from in-depth interviews at the experimental site, conducted in summer of 2000, provide a qualitative context for the quantitative findings (Maracek, Fine & Kidder, 1997).

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<sup>21</sup> MIS IDA generates a comprehensive database on program characteristics and participant characteristics. IDA staff record five types of data in MIS IDA: account-structure parameters at the start of the program, socio-economic data on participants at enrollment, monthly cash-flow data from account statements, monthly inputs and expenses, and intermittent events such as class attendance and exit (Schreiner *et al.*, 2001. Also see Johnson, Hinterlong, & Sherraden, 2000).

The qualitative examples used in this study simply illustrate particular results and bring them to life. They (the quotations) are not part of the analysis.<sup>22</sup> The names of participants are disguised.

### **Statistical Analyses**

As mentioned above, the total sample size is 2,351. Of these, 457 are saving for microenterprise. As a first step, this study compares the characteristics of the microenterprise group (n=457) with those of other participants (n=1,894) to see if they are similar or different on socio-demographic and economic characteristics.

Next, saving performance of the microenterprise group (n=457) is compared with saving performance of other participants in ADD (n=1,894). As outlined above, saving performance is measured in four ways: (1) average monthly net deposit (AMND), (2) deposit frequency, (3) net deposits as a percentage of the match cap, and (4) saving rate.

The main part of the study is a multivariate analysis of the microenterprise group. On each of the four dependent variables measuring saving performance, a hierarchical multiple regression model is carried out. In the first step of the regression, the dependent variable is regressed on entrepreneurs' individual characteristics. This is an exploratory multiple regression model asking the question: what individual characteristics influence the saving performance of a microentrepreneur? The second step of the hierarchical regression asks two questions: (1) Controlling for the effects of individual characteristics, what program characteristics are associated with saving performance? (2) Controlling for the effects of individual characteristics, do institutional characteristics (as a block) influence the saving performance of a microentrepreneur? Based on the theoretical framework guiding this study, it is hypothesized that the variance explained in the original model (which includes only individual characteristics) would significantly increase when institutional characteristics are entered into the regression.

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<sup>22</sup> Qualitative analysis based on 59 IDA program participants and 25 controls from one of the ADD sites is underway as part of the overall ADD survey.

## Chapter 4: Results

### Missing Data

Missing data affects the integrity and generalizeability of results (Downey & King, 1998. Also see Allison, 2002). As noted earlier (see chapter 3), the Center for Social Development at Washington University developed a data quality control tool—MIS IDA QC—to complement MIS IDA. This tool checks for data-entry errors, missing values, and accounting inconsistencies. For the overall sample, missing values ranged from 0 to 6.7% (with the majority of the variables having no missing) (see Table 2), while for the microenterprise sub-sample, missing values ranged from 0 to 2.2%, with the majority of the variables having no (zero) missing values. A visual examination of the cases with the missing values on the different variables revealed no observable pattern in their distribution. Thus, the findings from this study may be generalizable to the microenterprise sub-sample.

### Univariate Analysis of Study Variables

#### Individual Characteristics

The overall sample for this study consisted of 2,351 participants. The majority of the participants are female (80 percent) and the average age is 36 years. About 46 percent are African American, 38 percent are Caucasian, 9 percent are Latino, 3 percent Native Americans and 2 percent are Asian. About 3 percent of the participants identify themselves as “other” ethnicities. Slightly under half of the participants (48 percent) are single (never married), 22 percent are married, 27 percent are divorced/separated while 2 percent are widowed.

At least 59 percent of ADD participants work full time (35 hours per week or more), while 23 percent worked part-time. Ten percent were unemployed or not working while 9 percent were students. About 16 percent have not completed high school, 26 percent completed high school or have a GED, 37 percent attended some college but did not graduate, and 22 percent have a college degree (2-year/4-year and above).

About 38 percent had formerly used AFDC/TANF, while 10 percent are using TANF. Slightly under 90 percent (89%) live in households with incomes below 200 percent of the poverty line, and about 48 percent are below the poverty line. About 16 percent own a home and 11 percent own a micro-business (see Table 2).

**Table 2. Characteristics of Overall ADD Sample [N=2,351]**

<b>Variables</b>	<b>Percentage; Mean (Standard Deviation)</b>
<i>Gender</i>	
Female	80%
Male	20%
Missing	0
<i>Age</i>	
Age	36 (10)
Missing	0
<i>Race/Ethnicity</i>	
African American	46%
Hispanic/Latino	9%
Asian	2%
Native American	3%
Caucasian	38%
Other	3%
Missing	0
<i>Marital Status</i>	
Married	22%
Divorced/separated	27%
Widowed	2%
Never Married	48%
Missing	1%
<i>Household Composition</i>	
Adults (18yrs or older)	1.5 (0.7)
Missing	1%
Children (17 yrs or younger)	1.7 (1.5)
Missing	0.5%
<i>Employment Status</i>	
Full-time (>35 hrs per week)	59%
Part-time (<35 hrs per week)	23%
Not working (not looking)	4%
Unemployed (looking)	5%
Student	6%
Work Student	3%
Missing	0
<i>Education</i>	
High school grad - no	16%
High school grad or GED - yes	26%
Attended some college	37%
2 year college grad	4%
2 or 4 year college unspecified	11%
4 year college grad or more	7%
Missing	0

**Table 2 (continued)**

<b>Variables</b>	<b>Percentage; Mean (Standard Deviation)</b>
<i>Welfare use</i>	
TANF or AFDC never	61%
Missing	1%
TANF or AFDC formerly	37%
Missing	1%
TANF or AFDC current	10%
Missing	0.3%
<i>Income/Poverty (%)</i>	
0 to 49	19%
50 to 74	13%
79 to 99	16%
100 to 124	14%
125 to 149	12%
150 to 174	9%
175 to 199	6%
200 to 329	9%
Missing	2%
<i>Income to poverty ratio</i>	107%
Missing	2.5%
<i>Assets ownership</i>	
Own a car	65%
Missing	0.2%
Own a home	16%
Missing	0.1%
Own a micro-business	11%
Missing	0.1%
<i>Date of Enrollment</i>	
Before June 30th, 1999	42%
After June 30th, 1999	58%
Missing	0

**Notes:** Percentages are presented for categorical variables and Mean (Standard Deviations) are presented for continuous variables.



## ADD Participants vs. Overall U.S. Population Below 200 Percent of Poverty

Sherraden, et al., (2000) have compared ADD participants to the overall U.S. population below 200 percent of the poverty line and found that compared to the overall U.S. population below 200 percent of the poverty line (see Table 3), ADD participants are more likely to be female, African-American, and never married. Also, ADD participants are more educated and are more likely to be employed than the overall U.S. population below 200 percent of the poverty line.

**Table 3. ADD Participant Characteristics vs. Overall US Population Below 200 Percent of Poverty Line<sup>1</sup>**

Variables	ADD Participants	US Population 200% of Poverty Line
<i>Gender</i>		
Female	80%	59%
Male	20%	41%
<i>Race/Ethnicity</i>		
African American	46%	16%
Caucasian	38%	64%
Hispanic/Latino	9%	16%
Asian American, Native Americans, Other	7%	4%
Native American		
<i>Marital Status</i>		
Married	22%	42%
Never Married	48%	28%
Widowed, divorced, or separated	29%	30%
<i>Employment Status</i>		
Full-time (>35 hrs per week)	59%	31%
Part-time (<35 hrs per week)	23%	11%
Unemployed	6%	6%
Not working or student	12%	52%
<i>Education</i>		
High school grad - no	16%	35%
High school grad or GED	26%	39%
Attended some college (didn't graduate)	37%	18%
Graduated (2yr/4yr college +)	22%	8%

**Notes:**<sup>1</sup> The comparison statistics, (U.S. overall population characteristics below 200% PL) have been extracted from Sherraden *et al* (2000) and Schreiner, *et al* (2001). The data come from the ninth wave of the 1993 Survey of Income and Program Participation (SIPP) from the United States Census Bureau.

## Institutional Characteristics

About 26 percent of the ADD participants have received or will receive a 1:1 match rate for their saving goal. Slightly above half of the participants (51 percent) have received or will receive a 2:1 match rate; and 23 percent have received or will receive a 2.5:1 to 6:1 match rate (see Table 4). The average monthly target is \$41.65 and the average hours of general financial education is 10.4. Thirty-five percent of all the participants are in programs which have a peer-group mentoring system, and on average, participants can make in each program an IDA deposit at 16 saving deposit locations. Forty percent are in programs which identified themselves as being “strict” with enforcing program rules and penalties. Seventy-nine percent of the participants are in programs associated with financial institutions with direct deposit for the IDA deposits.

**Table 4. Institutional Characteristics of ADD [N=2,351]**

Variables	Percentage; Mean (Standard Deviation)
<i>Match Rates</i>	
1:1	26%
2:1	51%
2.5:1	3%
3:1	15%
4:1 to 6:1	5%
Missing	0
<i>Match Cap(Monthly Target)</i>	41.65 (21)
Missing	0
<i>Hours of General Financial Education</i>	10.4 (7.6)
Missing	6.7%
<i>Peer Group Meetings</i>	
Yes	35%
No	65%
Missing	0
<i>Number of Saving Deposit Locations</i>	16 (21)
Missing	2.5%
<i>Program rules enforced (penalties enforced)</i>	
Strict	46%
Not strict	54%
Missing	0
<i>Program Encourages Direct Deposit</i>	
Yes	79%
No	21%
Missing	0

**Notes:** Percentages are presented for categorical variables and Mean (Standard Deviation ) are presented for continuous variables.

## Regression Diagnostics

A zero-order correlation between independent variables was conducted to test for collinearity. Morrow-Howell (1994) has argued “there is no agreement about what constitutes too high a correlation between independent variables, and there is no magic number” (p.249). However, in the same writing, Morrow-Howell cites Beck (1980) who gives a correlation of .80 as the most frequently used guideline. This study uses the same guideline (a correlation coefficient of .80) as the point above which a problem of collinearity would be expected. An examination of the zero-order correlation matrix among the independent variables revealed no collinearity problem by this standard.

According to Fox’s rule of thumb (Fox, 1991), in multiple regression a tolerance value of less than .25 would imply that a variable is exhibiting a multi-collinearity problem with other variables in the regression. If not addressed, multi-collinearity may affect the precision of estimation (although not necessarily its correctness). Based on Fox’s rule of thumb, an analysis of the tolerance values was undertaken. The results indicated there were multicollinearity problems when program dummies (unobserved factors linked with programs) were included in the model. Therefore, program dummies were used only in the hierarchical regression testing for the increment in the variance explained. They were excluded when analyzing the influence of each independent variable.<sup>23</sup>

## Intended Use and Actual Use

This study looks at participants who intend to use their IDA savings for microenterprise. It includes participants who had taken a matched withdrawal by December 31, 2001, and participants who had not used their savings for microenterprise programs by the same date. Forty-three percent (n=197) of the participants who were saving for microenterprise had taken a matched withdrawal. Of the participants who had taken a matched withdrawal, 2.6 percent (n=12) had changed their intended use from microenterprise to something else (or their actual use differed from their intended use). Thus, at this writing, the best estimate available for the share of participants who intend to use their savings for microenterprise and who will actually follow through on that intention is 97 percent.

### IDA Participants Who Are Using their IDA Savings for Microenterprise

This topic is addressed using bivariate analyses, specifically a series of t-tests. The results (see Table 5) indicate that there are no significant differences between the microenterprise group and the non-microenterprise group on gender, race, marital status, household composition, welfare use and car ownership. The two groups are significantly different on several individual characteristics including age, employment status, education attainment, income to poverty ratio, and asset ownership (home ownership and micro-business).

Compared to the non-microenterprise group, the microenterprise group is on average four years older ( $p < .01$ ). Also, compared to the non-microenterprise group, the microenterprise group is more

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<sup>23</sup> When the program dummies are excluded, there are only two cases which register tolerance values lower than .37, that is, match rate 1:1 (tolerance value .26), and monthly savings target (tolerance value .27). The majority of the tolerance values are above a tolerance value of .55.

likely to have graduated from either a 2-year college/4-year college and beyond ( $p < .01$ ), more likely to own a home ( $p < .01$ ), and more likely to own a micro-business ( $p < .01$ ).

Compared to the non-microenterprise group, the microenterprise group is more likely to be income poorer ( $p < .05$ ) and unemployed/not working ( $p < .01$ ), and less likely to be working full-time ( $p < .01$ ). Further, although the microenterprise group is more likely to have graduated from either a 2-year college/4-year college and beyond, the same group is less likely to have a high school diploma or GED ( $p < .05$ ).

There is also a likelihood of unobserved heterogeneity; that is, the two groups may differ along other unknown dimensions not analyzed here (some of which may be difficult to capture through purely quantitative means).

Overall, based on bivariate statistics, we can say that compared to the non-microenterprise group, the microenterprise group is more “advantaged” in terms of higher educational achievement and asset homeownership, but less advantaged in terms of income to poverty ratio and employment.

**Table 5. Participant Characteristics:  
Non Microenterprise (Non-ME) vs. Microenterprise (ME)**

Independent Variables	<u>N</u>		<u>Mean</u>		t-value	p-value
	Non-ME (n=1,894)	ME (n=457)	Non-ME	ME		
<i>Gender</i>	1,894	457				
Female			80%	79%	0.40	0.7
Male			20%	21%	-0.40	0.7
<i>Age</i>	1,894	457	35	39	-6.34	0.01 **
<i>Race/Ethnicity</i>	1,894	457				
African American			46%	49%	-1.51	0.13
Hispanic/Latino			9%	8%	1.07	0.42
Asian			2%	2%	-0.79	0.43
Native American			3%	2%	1.10	0.27
Caucasian			38%	35%	1.01	0.29
Other			3%	3%	-0.12	0.9
<i>Marital Status</i>	1,875	452				
Married			22%	20%	1.00	0.32
Divorced/separated			27%	29%	-0.66	0.51
Widowed			2%	3%	-0.90	0.37
Never Married			49%	48%	0.72	0.94

**Table 5 (continued)**

Independent Variables	<u>N</u>		<u>Mean</u>		t-value	p-value
	Non-ME (n=1,894)	ME (n=457)	Non-ME	ME		
<i>Household Composition</i>						
Adults (18yrs or older)	1,873	453	1.5	1.5	-1.16	0.25
Children (17 yrs or younger)	1,884	456	1.8	1.4	4.75	0.01 **
<i>Employment Status</i>						
Full-time (>35 hrs per week)	1,893	456				
Part-time (<35 hrs per week)			61%	51%	3.67	0.01 **
Not working			22%	25%	-1.35	0.18
Student			8%	16%	-4.30	0.01 **
			9%	7%	0.98	0.33
<i>Education</i>						
High school grad - no	1,891	457				
High school grad or GED - yes			16%	12%	2.42	0.02 *
Attended some college (didn't graduate)			27%	21%	2.53	0.01 **
Graduated (2yr/4yr college +)			37%	37%	-0.20	0.84
			20%	29%	-3.98	0.01 **
<i>Welfare use</i>						
TANF or AFDC never	1,876	452	61%	66%	-1.89	0.06
TANF or AFDC now/used formerly	1,889	457	39%	34%	1.88	0.06
<i>Income to poverty ratio</i>	1,853	442	1.10	1.00	2.15	0.03 *
<i>Assets ownership</i>						
Own a car	1,891	456	64%	66%	-0.82	0.41
Own a home	1,893	456	14%	22%	-3.60	0.01 **
Own a micro-business	1,893	455	6%	29%	-10.61	0.01 **

\*p ≤ .05 \*\* p ≤ .01

### IDA Participants Saving for Microenterprise Compared to Others

We next examine participation and saving performance. To begin, t-tests were conducted testing the relationship between IDA intended use (microenterprise vs. non-microenterprise use) and participation and saving. As mentioned earlier, the dependent variables of interest are average monthly net deposit (AMND), net deposit as a percentage of match cap, deposit frequency, and saving rate.

Table 6 presents relationships between IDA intended use and the dependent variables. Compared to the non-microenterprise group, the microenterprise group is associated with a higher net deposit as a percentage of the match cap (p<.01). On average the microenterprise group saves 64 percent of the total amount that could be matched and the non-microenterprise group saves 47 percent of the

total amount that could be matched.<sup>24</sup> One possible reason for this observation is that several IDA programs give a lower match rate for microenterprise use and a higher match rate for some uses, for example homeownership. Thus, in order to reach savings goals, microentrepreneurs tend to use more of their match eligibility. There is, however, no significant difference between the non-microenterprise group and the microenterprise group on the other three measures of participation and saving, that is, average monthly net deposit ( $p=.73$ ), saving rate ( $p=.19$ ), and deposit frequency ( $p=.12$ ).

**Table 6. Participation and Saving in IDAs:  
Non-Microenterprise (Non-ME) vs. Microenterprise (ME)**

Variables	<u>N</u>		<u>Mean</u>		t-value	p-value
	Non-ME (n=1,894)	ME (n=457)	Non-ME	ME		
<b>Dependent Variable</b>						
Average Monthly Net Deposit	1,894	457	19.12	18.70	0.34	0.73
Deposit Frequency	1,894	457	0.48	0.46	1.58	0.11
Net Deposit as a % of Match Cap	1,894	457	0.48	0.64	-4.42	0.01**
Saving Rate	1,851	441	1.69	1.87	-1.32	0.19

\*\*p<.01

### Individual and Institutional Characteristics

This section addresses research question 3 (what are the individual characteristics associated with participation and saving among the microenterprise group?), and research question 4 (what are the institutional characteristics associated with participation and saving among the microenterprise group?). We present results from a series of OLS multivariate models that are executed on the microenterprise group (n=457) to establish the association between: (1) participant characteristics and IDA participation and saving, and (2) institutional characteristics and IDA participation and saving.

First, we present OLS regression models for each of the four measures of participation and saving (average monthly net deposit, deposit frequency, saving rate, and net deposit as a percentage of the monthly match cap) regressed on the independent variables (individual and institutional characteristics). The results are presented in Tables 7, 8, 9, and 10.

Next, using hierarchical regression, we assess the contribution of institutional characteristics, as a block, when the effects of individual characteristics are controlled for. The results are presented in Tables 11, 12, 13, and 14.

<sup>24</sup> Net deposit as a percentage of the match cap indicates the closeness of the actual saving behavior of a participant that would take full advantage of the match incentive (see Schreiner, et al., 2001).

## OLS Regression Models

### Relationships of individual characteristics, institutional characteristics, and average monthly net deposit (AMND)

The results of the model when AMND is regressed on individual characteristics and measured institutional factors (see Table 7), indicate that the overall model is significant [F (30, 394)=7.04,  $p < .01$ ], and explains 35 percent of the variance in the dependent variable ( $R^2 = .35$ , Adjusted  $R^2 = .30$ ).

**Table 7. Regression Analysis: Individual Characteristics, Institutional Characteristics and Average Monthly Net Deposit [n=457]**

<b>Independent Variables</b>	<b>b</b>	<b>se</b>	<b>t</b>	<b>p-value</b>
Intercept	-19.96	9.66	-2.07	0.04 *
<i>Individual Characteristics</i>				
Gender				
Female	1.84	2.71	0.68	0.50
Male (reference group)				
Race/ethnicity				
African American	-2.44	2.90	-0.84	0.40
Hispanic/Latino	3.79	4.26	0.89	0.37
Other ethnicities	0.04	4.17	0.01	0.99
Caucasian (reference group)				
Age	-0.11	0.10	-1.07	0.28
Marital status				
Single	3.79	2.88	1.32	0.19
Married (reference group)				
Household composition				
Adults [18 years or older]	1.54	1.57	0.98	0.33
Children [17 years or younger]	0.18	0.78	0.23	0.82
Employment status				
Employed full-time [ $>35$ hrs/week] (ref. group)				
Employed part-time [ $<35$ hrs per week]	2.25	2.52	0.89	0.37
Unemployed/not working	0.68	3.19	0.21	0.83
Student	1.61	4.07	0.40	0.69
Education				
Did not graduate from high school	-11.32	3.62	-3.13	0.002 **
Completed high school or earned GED	-0.88	2.94	-0.30	0.77
Attended college but didn't graduate	-6.53	2.52	-2.59	0.01 **
Graduated [2yr/4yr-college+] (ref. group)				

**Table 7 (continued)**

<b>Independent Variables</b>	<b>b</b>	<b>se</b>	<b>t</b>	<b>p-value</b>	
Welfare use					
TANF or AFDC using now/used formerly	2.01	2.44	0.82	0.41	
TANF or AFDC never (reference group)					
Income to poverty ratio	4.93	1.64	3.00	0.003	**
Assets ownership					
Own a car	-0.92	2.35	-0.39	0.70	
Own a home	11.60	2.70	4.30	0.000	**
Own a micro-business	7.13	2.39	2.99	0.003	**
<i>Institutional Characteristics</i>					
Match rate					
1:1	-13.19	4.49	-2.94	0.003	**
2:1	1.35	2.74	0.49	0.62	
2.5:1 to 6:1 (reference group)					
Match cap (monthly savings target)	0.29	0.12	2.45	0.02	*
Hours of general financial educ (spline)					
1 to 6	2.79	0.76	3.66	0.000	**
7 to 12	-0.41	0.67	-0.61	0.55	
13 or more	0.01	0.14	0.09	0.93	
Peer Group Meetings	9.53	2.63	3.62	0.000	**
Yes					
No					
Penalty enforcement					
Not strict	9.66	3.45	2.80	0.003	**
Strict					
Number of Savings Deposit Locations	0.20	0.07	2.98	0.005	**
Direct Deposit Encouraged					
Yes	2.34	3.13	0.75	0.45	
No					
R <sup>2</sup>	.35				
Adjusted R <sup>2</sup>	.30				
F	7.04				
df	30				

\*p ≤ .05    \*\* p ≤ .01

Notes: b= Unstandardized regression coefficients; se= Standard error

Relationships of individual characteristics, institutional characteristics and net deposit as a percentage of match cap

Table 8 shows the results of the OLS model when net deposit as a percentage of match cap is regressed on the same individual characteristics introduced earlier (in the regression model with AMND) and the same measured institutional factors introduced earlier. The overall model is significant [F (30, 394)=6.80, p<.01)], and explains 34 percent of the variance in the dependent variable (R<sup>2</sup>=.34, Adjusted R<sup>2</sup>=.29).



**Table 8. Regression Analysis: Individual Characteristics,  
Insitutional Characteristics and Net Deposit as a Percentage  
of Match Cap [n=457]**

<b>Independent Variables</b>	<b>b</b>	<b>se</b>	<b>t</b>	<b>p-value</b>
Intercept	0.01	0.31	0.04	0.97
<i>Individual Characteristics</i>				
Gender				
Female	0.14	0.09	1.61	0.11
Male (reference group)				
Race/ethnicity				
African American	-0.13	0.09	-1.34	0.18
Hispanic/Latino	0.11	0.14	0.80	0.43
Other ethnicities	0.09	0.14	0.70	0.48
Caucasian (reference group)				
Age	-0.002	0.003	-0.58	0.56
Marital status				
Single	0.11	0.09	1.12	0.26
Married (reference group)				
Household composition				
Adults [18 years or older]	0.05	0.05	1.02	0.31
Kids [17 years or younger]	-0.01	0.02	-0.53	0.60
Employment status				
Employed full-time [>35 hrs/week](ref. group)				
Employed part-time [<35 hrs per week]	0.02	0.08	0.29	0.77
Unemployed/not working	0.01	0.10	0.13	0.89
Student	3.5E-04	0.13	0.003	0.99
Education				
Did not graduate from high school	-0.35	0.12	-2.95	0.003 **
Completed high school or earned GED	0.04	0.10	0.40	0.69
Attended college but didn't graduate	-0.16	0.08	-2.00	0.05 *
Graduated [2yr/4yr-college+] (reference group)				
Welfare use				
TANF or AFDC using now/used formerly	0.05	0.08	0.65	0.52
TANF or AFDC never (reference group)				
Income to poverty ratio	0.13	0.05	2.37	0.02 *
Assets ownership				
Own a car	0.03	0.08	0.45	0.65
Own a home	0.31	0.09	3.54	0.000 **
Own a micro-business	0.21	0.08	2.75	0.006 **

**Table 8 (continued)**

<b>Independent Variables</b>	<b>b</b>	<b>se</b>	<b>t</b>	<b>p-value</b>
<i>Institutional Characteristics</i>				
Match rate				
1:1	-0.07	0.15	-0.49	0.63
2:1	0.01	0.09	0.15	0.88
2.5:1 to 6:1 (reference group)				
Match cap (monthly savings target)	-0.02	0.004	-4.38	0.000 **
Hours of general financial educ (spline)				
1 to 6	0.10	0.03	4.15	0.000 **
7 to 12	-0.009	0.02	-0.41	0.68
13 or more	-6.8E-04	0.004	-0.16	0.88
Peer Group Meetings				
Yes	0.30	0.09	3.52	0.000 **
No				
Penalty enforcement				
Not strict	0.39	0.11	3.48	0.001 **
Strict				
Number of Savings Deposit Locations	0.004	0.002	2.01	0.05 *
Direct Deposit Encouraged				
Yes	0.10	0.10	1.04	0.30
No				
R <sup>2</sup>	.34			
Adjusted R2	.29			
F	6.80			
df	30			

\*\*p ≤ .01

\*p &lt; .05

Notes: b= Unstandardized regression coefficients; se= Standard error

Relationships of individual characteristics, institutional characteristics and saving rate

Table 9 shows the results of the OLS model when the saving rate (ratio of AMND to gross monthly household income) is regressed on individual characteristics and measured institutional factors. The overall model is significant [F (30, 393)=5.76, p<.01)], and explains 31 percent of the variance in the dependent variable (R<sup>2</sup>=.31, Adjusted R<sup>2</sup>=.25).

**Table 9. Regression Analysis: Individual Characteristics, Institutional Characteristics and Saving Rate [n=457]**

<b>Independent Variables</b>	<b>b</b>	<b>se</b>	<b>t</b>	<b>p-value</b>
Intercept	2.06	1.07	1.92	0.06
<i>Individual Characteristics</i>				
Gender				
Female	0.28	0.30	0.93	0.35
Male (reference group)				
Race/ethnicity				
African American	-0.41	0.32	-1.26	0.21
Hispanic/Latino	-0.39	0.48	-0.82	0.41
Other ethnicities	-0.18	0.46	-0.38	0.70
Caucasian (reference group)				
Age	-0.02	0.01	-1.90	0.06
Marital status				
Single	0.31	0.32	0.98	0.33
Married (reference group)				
Household composition				
Adults [18 years or older]	-0.03	0.17	-0.16	0.87
Children [17 years or younger]	-0.29	0.09	-3.30	0.001 **
Employment status				
Employed full-time [>35 hrs/week](ref. group)				
Employed part-time [<35 hrs per week]	0.15	0.28	0.52	0.60
Unemployed/not working	-0.20	0.35	-0.57	0.57
Student	-0.12	0.45	-0.27	0.79
Education				
Did not graduate from high school	-1.27	0.40	-3.16	0.002 **
Completed high school or earned GED	-0.18	0.33	-0.54	0.59
Attended college but didn't graduate	-0.63	0.28	-2.26	0.02 *
Graduated [2yr/4yr-college+] (reference group)				
Welfare use				
TANF or AFDC using now/used formerly	-0.20	0.27	-0.73	0.47
TANF or AFDC never (reference group)				
Income to poverty ratio	-1.00	0.18	-5.45	0.000 **
Assets ownership				
Own a car	0.13	0.26	0.48	0.63
Own a home	1.24	0.30	4.13	0.000 **
Own a micro-business	0.52	0.26	1.96	0.05 *

**Table 9 (continued)**

<b>Independent Variables</b>	<b>b</b>	<b>se</b>	<b>t</b>	<b>p-value</b>
<i>Institutional Characteristics</i>				
Match rate				
1:1	-1.07	0.50	-2.14	0.03 *
2:1	-0.21	0.30	-0.68	0.50
2.5:1 to 6:1(reference group )				
Match cap (monthly target)	0.02	0.01	1.88	0.06
Hours of general financial educ (spline)				
1 to 6	0.25	0.08	2.99	0.003 **
7 to 12	-0.05	0.07	-0.69	0.50
13 or more	-6.3E-03	0.01	0.42	0.68
Peer Group Meetings				
Yes	0.70	0.29	2.38	0.01 **
No				
Penalty enforcement				
Not strict	0.34	0.38	0.90	0.37
Strict				
Number of Savings Deposit Locations	0.02	0.008	2.54	0.01 **
Direct Deposit Encouraged				
Yes	-0.30	0.35	-0.86	0.39
No				
R <sup>2</sup>	.31			
Adjusted R <sup>2</sup>	.25			
F	5.76			
df	30			

\*\*p≤ .01

\*p≤ .05

**Notes:** b= Unstandardized regression coefficients; se= Standard error

Relationships of individual characteristics, institutional characteristics and deposit frequency

Table 10 shows the results of the OLS model when deposit frequency is regressed on individual characteristics and measured institutional variables. The overall model is significant [F (30, 394)=3.11, p<.01], and explains 19 percent of the variance in the dependent variable (R<sup>2</sup>=.19, Adjusted R<sup>2</sup>=.13).

**Table 10. Regression Analysis: Individual Characteristics,  
Institutional Characteristics and Deposit Frequency [n=457]**

<b>Independent Variables</b>	<b>b</b>	<b>se</b>	<b>t</b>	<b>p-value</b>
Intercept	0.27	0.12	2.17	0.03 *
<i>Individual Characteristics</i>				
Gender				
Female	0.03	0.04	0.94	0.35
Male (reference group)				
Race/ethnicity				
African American	0.02	0.04	0.48	0.63
Hispanic/Latino	0.03	0.05	0.46	0.65
Other ethnicities	0.01	0.05	0.19	0.85
Caucasian (reference group)				
Age	0.001	0.001	0.89	0.37
Marital status				
Single	0.006	0.04	0.15	0.88
Married (reference group)				
Household composition				
Adults [18 years or older]	0.005	0.02	0.23	0.82
Children [17 years or younger]	-0.02	0.01	-1.71	0.09
Employment status				
Employed full-time [>35 hrs/week](ref. group)				
Employed part-time [<35 hrs per week]	-0.03	0.03	-0.97	0.33
Unemployed/not working	-0.06	0.04	-1.37	0.17
Student	0.02	0.05	0.44	0.66
Education				
Did not graduate from high school	-0.69	0.05	-1.48	0.14
Completed high school or earned GED	0.008	0.04	0.21	0.83
Attended college but didn't graduate	-0.08	0.03	-2.59	0.01 **
Graduated [2yr/4yr-college+] (reference group)				
Welfare use				
TANF or AFDC using now/used formerly	0.002	0.03	0.08	0.94
TANF or AFDC never (reference group)				
Income to poverty ratio	-0.03	0.02	-1.47	0.14
Assets ownership				
Own a car	0.005	0.03	0.16	0.88
Own a home	0.04	0.04	1.29	0.20
Own a micro-business	0.008	0.03	0.25	0.80

**Table 10 (continued)**

<b>Independent Variables</b>	<b>b</b>	<b>se</b>	<b>t</b>	<b>p-value</b>
<i>Institutional Characteristics</i>				
Match rate				
1:1	-0.12	0.06	-2.12	0.03 *
2:1	-0.07	0.03	-1.94	0.05 *
2.5:1 to 6:1 (reference group)				
Match cap (monthly savings target)	0.003	0.002	2.30	0.02 *
Hours of general financial education (spline)				
1 to 6	0.008	0.01	0.87	0.38
7 to 12	0.02	0.01	2.81	0.005 **
13 or more	-0.001	0.002	-0.76	0.45
Peer Group Meeting				
Yes	0.02	0.03	0.70	0.49
No				
Penalty enforcement				
Not strict	0.03	0.04	0.58	0.56
Strict				
Number of Savings Deposit Locations	3.4E-04	0.001	0.39	0.7
Direct Deposit Encouraged				
Yes	0.001	0.04	0.03	0.98
No				
R <sup>2</sup>	.19			
Adjusted R <sup>2</sup>	.13			
F	3.11			
df	30			

\*\* p ≤ .01      \*p ≤ .05

**Notes:** b= Unstandardized regression coefficients; se= Standard error

### **Individual Characteristics Associated with Participation and Saving**

We turn now to a closer look of regression results for saving performance and individual characteristics. To begin, we note nonsignificant results for gender, race/ethnicity, age, marital status, employment and welfare use.

There are no significant differences on participation and saving between women and men (see Tables 7-10).

Compared to Caucasians, African Americans, Hispanics and “other races/ ethnicities” do not differ on participation and saving (see Tables 7-10).

Age is not significantly associated with participation and saving (see Tables 7-10).

Marital status is not statistically different on any of the measures of participation and saving in IDA (see Tables 7-10).

There is no statistical difference in any of the four measures of participation and saving in IDA across the different employment categories (see Tables 7-10). Participants working part-time, the unemployed/not working and students are not statistically different on participation and saving, from participants employed full time (reference group).

Also, current or former receipt of TANF/AFDC is not associated with any of the four measures of participation and saving in IDA (see Tables 7-10). This may imply that controlling for other factors, welfare recipients saving for microenterprise in IDA may fair just as well or just as bad as non-welfare recipients. This result is consistent with findings by Zhan & Sherraden (forthcoming), on the overall ADD population.

#### Household composition

Number of children (17 years or younger) in a participant’s household is statistically associated with saving rate ( $b=-0.29$ ,  $p<.01$ ) (see Table 9). An additional child is associated with a decrease in the savings rate of 0.29 percentage points. This is a large effect compared to the average savings rate among the microenterprise group of 1.9 percentage points. The results, however, indicate no significant association between number of children in a participant’s household and: AMND ( $b=0.18$ ,  $p=0.82$ ) (see Table 7); net deposit as a percentage of match cap ( $b=-0.01$ ,  $p=0.6$ ) (see Table 8); nor deposit frequency ( $b=-0.02$ ,  $p=0.09$ ) (see Table 10).

One example from the in-depth interviews indicates that having children may increase the “difficulty” of IDA saving. The following is what Denise, a single mother of four children, from the IDA experimental site, had to say about juggling saving in an IDA and taking care of children:

I’ve got to put this \$10 in my account, but I really do need this \$10....I got to make sure those four kids’ needs are met and they have clothes and have shoes and have food, you know. It’s hard.

Turning to adults, there is no statistical association between number of adults (18 years and older) in a participant’s household and any of the four measures of participation and saving.

#### Education

Compared to the reference education group (college graduates, 2-year or 4-year and above), participants with no high school diploma save significantly less (\$11.32 less) in average monthly net deposit [AMND] ( $b=-11.32$ ,  $p<.01$ ) (see Table 7). These two groups also have significant differences on net deposit as a percentage of the match cap ( $b=-0.35$ ,  $p<.01$ ) (see Table 8). Compared to reference education group, having no high school diploma is associated with a decrease in net deposit as a percentage of the match cap of 0.35 percentage points. Moreover, compared to the reference education group, having no high school diploma is associated with a decrease in the savings rate of 1.27 percentage points. This is a statistically significant difference

( $b=-1.27$ ,  $p<.01$ ) (see Table 9). However, compared to the reference education group, participants with no high school diploma do not significantly differ on deposit frequency.

However, we also find that, compared to the reference education group, participants with some college (but no degree) save significantly less (\$6.52 less) per month in AMND ( $b=-6.52$ ,  $p\leq.05$ ). Also, significant differences between the reference education group and participants with some college (but no degree) exist on: deposit frequency ( $b=-0.08$ ,  $p\leq.05$ ), meaning that compared to the reference education group, having some college (but no degree) is associated with a decrease in deposit frequency of 8 percentage points (see Table 10); net deposit as a percentage of match cap ( $b=-0.16$ ,  $p\leq.05$ ), meaning that compared to the reference education group having some college (but no degree) is associated with a statistically significant decrease in net deposits as a percentage of the match cap of 0.16 percentage points (see Table 8); and saving rate ( $b=-0.63$ ,  $p\leq.05$ ) meaning that compared to the reference education group, having some college (but no degree) is associated with a statistically significant decrease in the savings rate of 0.63 percentage points (see Table 9).

There are no significant differences on any of the four measures of participation and saving in IDA between participants in the reference education group and participants who graduated from high school (see Tables 7-10).

#### Income to poverty ratio

Income-to-poverty ratio is positively associated with AMND ( $b=4.9$ ,  $p<.01$ ), meaning that compared to a participant with an income-to-poverty ratio of 100 percent, a participant with an income-to-poverty ratio of 200 has an expected AMND that is \$4.90 higher (see Table 7). Income to poverty ratio is associated with saving rate ( $b=-1.00$ ,  $p<.01$ ), meaning that compared to a participant with an income to poverty ratio of 100 percent, a participant with an income-to-poverty ratio of 200 percent has an expected savings rate of one percentage point less, a large difference (see Table 9). Income to poverty ratio is also associated with net deposit as a percentage of match cap ( $b=0.13$ ,  $p\leq.05$ ), meaning that compared to a participant with an income-to-poverty ratio of 100 percent, a participant with an income-to-poverty ratio of 200 percent has an expected net deposit as a percentage of the match cap of 0.13 percentage points more, also a large difference (see Table 8). There is, however, is no significant association between income-to-poverty ratio and deposit frequency (see Table 10).

#### Asset ownership

Asset ownership (specifically owning a micro-business and owning a home) is strongly associated with three measures of participation and saving (AMND, net deposit as a percentage of match cap and saving rate). Participants who already own a micro-business, controlling for other factors, save \$7.13 more in AMND and this effect is statistically significant ( $b=7.13$ ,  $p<.01$ ) (see Table 7). Also, owning a micro-business is associated with net deposit as a percentage of match cap ( $b=0.21$ ,  $p<.01$ ). This means that compared with not owning a micro-business, owning a business is associated with a significant increase in net deposits as a percentage of the match cap of 0.21 percentage points (see Table 8). Owning a micro-business is also linked with saving rate ( $b=0.52$ ,  $p\leq.05$ ). Compared with not owning a business, owning a business is associated with an increase in the savings rate of 0.52 percentage points, a large difference (see Table 9).

Similarly, participants who own a home, controlling for other factors, save \$11.60 more in AMND and this effect is statistically significant ( $b=11.60$ ,  $p<.01$ ). Moreover, this same group is associated with a positive significant difference in net deposits as a percentage of match cap ( $b=0.31$ ,  $p<.01$ ),



meaning that compared with not owning a home, owning a home is associated with an increase in net deposits as a percentage of the match cap of 0.31 percentage points. Also, owning a home has a positive significant relationship with saving rate ( $b=1.24$ ,  $p<.01$ ). In other words, compared with not owning a home, owning a home is associated with an increase in the saving rate of 1.24 percentage points.

There is, however, no significant association between asset ownership and deposit frequency (see Table 10). Also, there is no significant association between owning a car and any of the four measures of participation and saving (see Tables 7-10).

### Summary

Overall, the results presented above indicate that, among the individual characteristics examined, when other factors are controlled for, education, asset ownership (especially homeownership and micro-business ownership), and income to poverty ratio are highly predictive of participation and saving in IDAs among the microenterprise group.<sup>25</sup> The results may support two major theories: (1) human capital theory (see Becker, 1993; Beverly & Sherraden, 1997; Organization for Economic Cooperation and Development [OECD], 2001); and (2) asset theory (Sherraden, 1991). Or it could be that those who already function well in education, income, and asset accumulation are also good savers in IDAs. These results are considered more carefully in the discussion section.

## **Institutional Characteristics Associated with Participation and Saving**

### Incentives

Hypothesis 1: The higher the match rate, the greater the participation and saving.

There are significant associations between match rate and three of four measures of participation and saving (AMND, deposit frequency, and saving rate). Compared to the reference group (participants with a 2.5:1 to 6:1 match rate), participants in programs which provide a match rate of 1:1 (matching a dollar to a dollar) are associated with less savings in AMND (\$13.19 less) ( $b=-13.19$ ,  $p<.01$ ). (See Table 7). However, there is no significant difference in AMND between the reference group and those with a match rate of 2:1 ( $b=1.35$ ,  $p=0.62$ ).

Compared to the reference group (participants with 2.5:1 to 6:1 match rate), participants with a match rate of 1:1 are associated with a significantly lower deposit frequency of 12 percentage points ( $b=-0.12$ ,  $p\leq.05$ ). (See Table 10). Also, compared to the reference group, participants with a match rate of 2:1 are associated with a significantly lower deposit frequency of 7 percentage points ( $b=-0.07$ ,  $p\leq.05$ ).

Significant differences also exist between the reference group and participants with a match rate of 1:1 on saving rate. Compared to the reference group, participants with a match rate of 1:1 are associated with a significantly lower saving rate of 1.07 percentage points ( $b=-1.07$ ,  $p\leq.05$ ). (See Table 9). There is, however, no significant difference between the reference group and participants with a match rate of 2:1 on saving rate ( $b=-0.21$ ,  $p=0.50$ ).

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<sup>25</sup> With each case, these variables are predictive of participation and saving on at least three out of the four measures used.

Compared to the reference group, however, there are no significant differences on net deposit as a percentage of match cap either with participants with a match of 1:1 ( $b=-0.07$ ,  $p=.63$ ) or participants with a match of 2:1 ( $b=0.01$ ,  $p=0.88$ ). (See Table 8).

The association of matching (as an incentive) with participation and saving is perhaps illustrated by examples from in-depth interviews. For example, this IDA participant said she would probably not have saved had it not been for the match. This is what she said:

If there wasn't some motivation for getting it matched, I probably wouldn't save at all. I mean, there has to be some goal, some reason why you are doing it. And uh, I have a house and I have bills that I could spend that money on. So if there wasn't a reason for me to have to save, then I probably wouldn't be doing it at all.

Moreover, Jack, who is in the control group at the experimental site, highlighted the importance of matching as an incentive for participation and saving.

If we would have been in the other group of this program, or they did a match savings, now that would have really motivated us to keep saving (laughter). But I don't know, the way it is, we just lost interest in saving.

The following discussion between the interviewer and Richard indicates how much some of the participants prized the match as an incentive for saving:

Interviewer: So what makes it easier to save in the IDA? What makes it, like what motivates you to save in the IDA?

Richard: Umm, the match. The match funds. That's plenty of motivation right there. I have saved \$500; it's automatically \$1000. That's the motivation

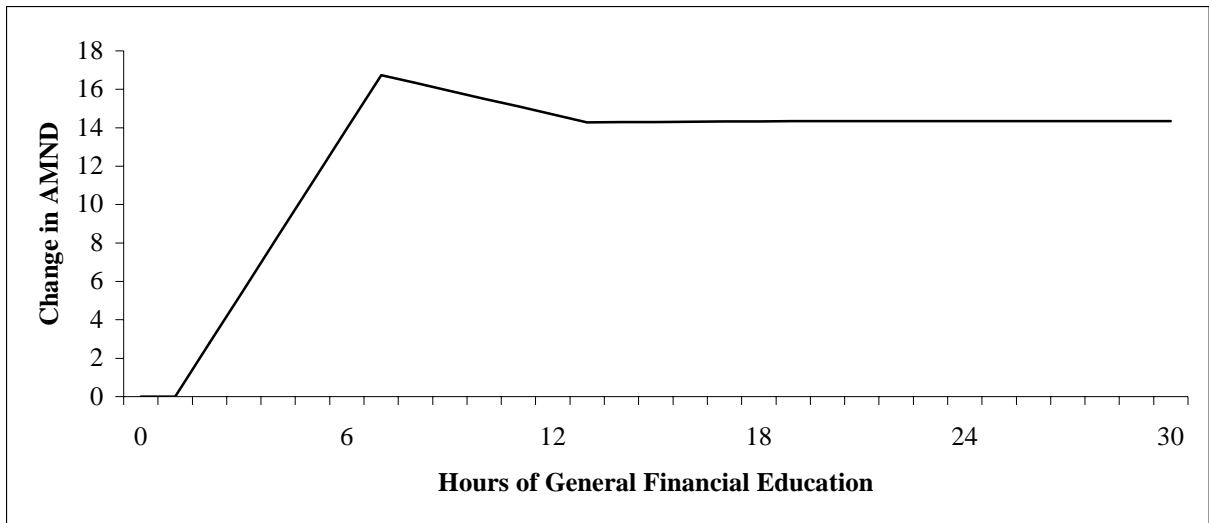
### Information

Hypothesis 2. The more economic education (in hours), the greater the participation and savings.

There is a significant association between hours of general financial education and all the four measures of participation and saving. Between 1 to 6 hours of general financial education (or for the first six hours of general financial education), AMND increases by \$2.79 dollars per an additional hour ( $b=2.79$ ,  $p<.01$ ). However, after the sixth hour, the relationship between general financial education and AMND becomes statistically insignificant (Table 7 and Figure 2).

As indicated in Figure 2, the slope is steepest between 1 to 6 hours meaning that a small amount of general financial education (1 to 6 hours) is associated with a significant increase in savings, but after six hours, additional hours do not have a significant link with participation and saving.

**Figure 2. Effect of Hours of General Financial Education on Average Monthly Net Deposit**



Similarly, the effect of hours of general financial education on net deposit as a percentage of match cap is statistically significant for 1 to 6 hours ( $b=0.10$ ,  $p<.01$ ). That means that between 1 to 6 hours of general financial education (or for the first six hours of general financial education), each additional hour of general financial education is associated with an increase of 0.10 percentage points in net deposit as a percentage of match cap. However, after the sixth hour, the relationship between general financial education and saving rate becomes statistically insignificant.

The effect of hours of general financial education on saving rate is also statistically significant for 1 to 6 hours ( $b=0.25$ ,  $p<.01$ ). Between 1 to 6 hours of general financial education (or for the first six hours of general financial education), each additional hour of general financial education is associated with 0.25 percentage points in saving rate. However, after the sixth hour, the relationship between general financial education and saving rate gets weaker and statistically insignificant (see Table 9).

Also, there is a significant association between general financial education (6-12 hours) and deposit frequency ( $b=0.02$ ,  $p<.01$ ). (See Table 10). Each additional hour, in the 6-12 range of general financial education, is associated with an increase in deposit frequency of 2 percentage points. Above 12 hours, there is no significant association.

Overall, there seems to be a relationship between general financial education and participation and saving, especially for the first six hours. This finding is illustrated by an example from the in-depth interviews:

Well, I think they could probably condense their sessions into maybe... maybe four or five and then have special sessions for people that want to go to them.

Also, in-depth interviews suggest that there are some content areas/topics within financial education that participants feel are more beneficial than others, and perhaps that is where the programs should put more emphasis. For example, according to Theresa, the budgeting session was “the best part.”

[Budgeting was] the best part, the class that I liked the most, that taught me the most...because, like I said, I had forgotten, I didn't really think about it actually...it made me compare if I was over or under my budget, because we kept receipts for everything, every single thing we spent money on.... It was just amazing to me... when I actually sat down and did the receipts of how much was for cigarettes, pop, greeting cards...it was amazing. So that was the one class I was the most impressed with.

Hypothesis 3: Participants in programs with peer group meetings (which allow for information sharing) have greater participation and savings.

Peer group meetings are significantly associated with three of the four measures of participation and saving (AMND, net deposit as a percentage of match cap, and saving rate). Participants in programs which have peer group meetings, on average, are associated with a significantly higher AMND (\$9.53 more) than participants in programs that do not have peer group meetings ( $b=9.53$ ,  $p<.01$ ) (see Table 7). In other words, programs which provide peer group meeting save an average of \$9.53 more. Participants in programs with peer group meetings are also associated with a 0.30 percentage point increase in net deposit as percentage of match cap ( $b=0.30$ ,  $p<.01$ ). (See Table 8). In addition, participants in programs with peer groups meetings are associated with an increase of 0.70 percentage points in savings rate ( $b=0.70$ ,  $p\leq.05$ ) (see Table 9). There is, however, no significant relationship between peer group meetings and deposit frequency ( $b=0.02$ ,  $p=.49$ ) (see Table 10).

As an illustration of the effects of peer group meetings, Fred mentioned that one of the women who was in his peer group “encouraged him” and he was determined to start his own business:

Oh yeah, yeah, that one lady she had her own restaurant up and running and it made me say, you can do it. I'm gonna get my own business, you watch and see.

#### Access

Hypothesis 4: The more the number of saving deposit locations, the greater the participation and savings.

Number of saving deposit locations is significantly associated with three of the measures of participation and saving (AMND, net deposit as a percentage of match cap, and saving rate). As indicated in Table 7, there is a positive association between number of saving deposit locations and AMND ( $b=0.20$ ,  $p<.01$ ). Each additional deposit location would be associated with \$0.20 increase in AMND. The relationship between number of saving deposit locations and net deposit as a percentage of match cap is also positive ( $b=0.004$ ,  $p\leq.05$ ), meaning that each additional saving deposit location is associated with 0.004 percentage point increase in net deposit as a percentage of match cap (see Table 8). Also, there is a positive relationship between number of saving deposit locations and saving rate ( $b=0.02$ ,  $p\leq.05$ ). An additional saving deposit location is associated with an increase in saving rate of 0.02 percentage points (see Table 9). However, the relationship between number of saving deposit locations and deposit frequency is statistically insignificant ( $b=0.0003$ ,  $p=.70$ ) (see Table 10).

Referring to how “inconvenient” having one deposit location is, Janice said:

It is kind of bothersome [going to the bank to make a deposit] because it is very out of my way. It is not anywhere near where I live or work. And so, there has been times that I had

the money that I could have put in there but it was too inconvenient to get over there and I really need to find a better location, a bank that is closer to either home or work.

Hypothesis 5: The more flexible the program rules and staff, the greater the participation and savings.

Flexibility of programs rules and staff is significantly associated with two of the measures of participation and saving (AMND and net deposit as a percentage of match cap). Table 7 indicates that, on average, participants in programs which identified themselves as “not strict” with enforcing program rules saved significantly more in AMND (\$9.66 more) than participants in programs which identified themselves as “strict” with enforcing program rules ( $b=9.66$ ,  $p<.01$ ). In addition, participants in programs which indicated that they were “not strict” with enforcing program rules were associated with a 0.39 percentage points increase in net deposit as a percentage of match cap than participants in programs which were “strict” with enforcing programs rules ( $b=0.39$ ,  $p<.01$ ) (see Table 9). Flexibility of programs rules and staff, however, was not significantly related to saving rate ( $b=.344$ ,  $p=.37$ ) (see Table 9), nor to deposit frequency ( $b=0.02$ ,  $p=.56$ ) (see Table 10).

Overall, there seems to be some relationship regarding flexibility of program rules and participation and saving in the IDA among the microenterprise group. As an example, Natalie indicated how important program staff and program rules were in making her participate and save in an IDA:

Well, you know, if you miss a deposit, you know, well you’re not gonna get penalized that first time you missed it, you know. And even when I did miss it, those, they never said anything or said, well you know, you missed this deposit...they, they’ve always been easy and they just want, want the program to work, you know.

Ian indicated that the flexibility of the program rules and staff enabled him to continue in the program.

Yeah, they [the IDA program staff] are easy to work with..., [the] contact I have had has been very good. One time they, they called me because I hadn’t made a deposit in three months and I, I was worried and I said, “Well gosh, am I going to get kicked out of the program?” And they, they were very nice and they said, “No, so, you just, you know, you need to change.” I said, “Ok, I’ll repent.”

### Facilitation

Hypothesis 6. The more automatic the system (especially automatic deposit), the greater the participation and savings.

Direct deposit is not statistically associated with any of the measures of participation and saving used in this study (see Tables 7-10). For example, it is not statistically related to AMND ( $b=2.34$ ,  $p=.45$ ), nor to deposit frequency ( $b=0.001$ ,  $p=.98$ ), nor to saving rate ( $b=-0.30$ ,  $p=.39$ ) nor to net deposit as a percentage of match cap ( $b=0.10$ ,  $p=.30$ ). Thus, the hypothesis that the more automatic the system, the greater the participation was not supported by the quantitative results of this study. The in-depth interviews, however, suggest that participants with an option of direct deposit prize having that option, while several with no option of direct deposit seem to believe that if they had it, it would improve their participation and saving. Natalie, for example, who did not have direct deposit,

seemed to believe that direct deposit would help her procrastination and eventually improve her participation and saving. This is what she said:

Natalie: To go and make it is hard. I forget. I have so many things goin on in my mind that I can, like I say, I can think about it that morning and forget about it come lunch time and say, I forgot to go to that bank, you know. And you know, even, even, you know, they have night deposits. It's like, why didn't I go to the night deposit? It's procrastination. I'm a procrastinator.

Interviewer: So, tell me, what would make it easy for you to save...?

Natalie: Actually, actually what I need to do is have it automatically take it out of my checking account. I really do.

However, not everyone would use direct deposit even if it were offered. Some participants seem to prefer doing the depositing "in person". For example, Sam said the following:

I've been thinking about going direct deposit. It is just going through all the hassle of it. Now they can go through my bank and do it or go through my work and do it. It is just...I just don't really like direct deposits that much...I prefer going up there and putting it in there myself. That way I can check up on it and stuff like that.... It is just I prefer dealing with people than having my money just drawn out. People contact. I prefer that.

### Expectation

Hypothesis 7. The higher the match cap, the greater the participation and savings

Expectation, measured by monthly saving target, is statistically associated with three of the measures of participation and saving (AMND, deposit frequency, and net deposit as a percentage of match cap).

As indicated in Table 7, monthly savings target is highly associated with AMND ( $b=.29$ ,  $p\leq.05$ ). This means that that each additional dollar (\$1) in monthly savings target is significantly associated with an additional 29 cents in AMND. Also, match cap is highly associated with deposit frequency ( $b=0.003$ ,  $p\leq.05$ ). A \$1 increase in monthly savings target is associated with a 0.3 percentage point increase in deposit frequency (see Table 10). These findings are consistent with Schreiner et al. (2001) who have argued that higher savings targets would be associated with higher participation and saving because "participants change caps into targets in their minds" (p.66).

As might be expected, the relationship between monthly savings target and net deposit as a percentage of match cap is negative ( $b=-0.02$ ,  $p<.01$ ). This means that a \$1 increase in the monthly savings target is associated with a 0.02 percentage point decrease in net deposit as a percentage of the match cap (see Table 8). Seen another way, a \$10 dollar increase in monthly savings target is associated with a 0.2 percentage point decrease in net deposit as a percentage of the match cap. There is a nearly significant association between monthly savings target and saving rate ( $b=0.02$ ,  $p=0.06$ ) (see Table 9).

Overall, there seems to be a relationship between the monthly savings target and participation and saving in IDA, although Schreiner, et al. (2001) are cautious about such a finding, because of the

possible effects of censoring. That is, the match cap may to some extent cause people to save less than they would otherwise be expected to save.

An example from in-depth interviews indicates that participants tend to deposit the amount “expected of them” by the program so they would not miss out on the match. This is what Janice said when asked how much she deposited:

I think the important thing is that I've put the seven hundred and some at the end of the year, because I didn't want to miss getting matched [the] maximum amount.

### **Institutional Characteristics as a “Block”**

Institutional theorists point out that we cannot expect individual factors to explain all phenomena. In order to assess the extent to which institutional characteristics can account for the outcomes of a microentrepreneur in an IDA program, hierarchical regression was used. The individual factors, as a block, were entered in the multiple regression model first and their variance explained in the dependent variables noted.

Next, if there is a significant increment in the regression model when measured institutional characteristics as a block are added, then the institutional theorists’ argument that institutions matter would be supported. Tables 11, 12, 13 and 14 show that, controlling for individual characteristics, institutional characteristics as a block significantly increase the variance explained in participation and saving in an IDA among the microenterprise group.

Table 11 indicates that individual characteristics as a block account for 23 percent of the variance in AMND ( $R^2=.23$ ). However, when measured institutional characteristics are entered into the model as a block, controlling for individual characteristics, the variance explained in AMND increases to 35 percent. This is a change in  $R^2$  of .12 and this change is statistically significant ( $p<.01$ ). Moreover, when program dummies (unobserved factors linked with programs) are included in the model, the variance explained in the overall model increases by another 10 percent, resulting in the overall variance explained in model 3 (individual characteristics + measured institutional characteristics + program dummies) to 45 percent ( $R^2=.45$ ). This change is also statistically significant ( $p<.01$ ).

**Table 11. Hierarchical Regression: Influence of Individual and Institutional Characteristics on Average Monthly Net Deposit**

Model	R <sup>2</sup>	Adjusted R <sup>2</sup>	Change in R <sup>2</sup>
Model 1: <i>Individual Characteristics:</i> [gender, race/ethnicity, age, marital status, household composition, employment status, education, welfare use, income to poverty ratio, asset ownership, date of enrollment]	.23	.19	
Model 2: <i>Measured Institutional Characteristics</i> [match rate, match cap, hours of general financial educ, peer group meetings, penalty enforcement, # of savings deposit locations, direct deposit]	.35	.30	.12**
Model 3: <i>Unobserved factors linked with programs/ program/site dummies</i> [ADVOCAP, Alternative Federal Credit Union, Bay Area IDA Collaborative, Central Texas Mutual Housing, Community Action Project of Tulsa, OK., Heart of America Family Services, Human Solutions, MACED, Near Eastside IDA Program, Shorebank Corporation, Women's Self-Employment Project]	.45	.39	.10**

\*\*p<.01

Notes: See Table 1 for descriptions of programs.

In Table 12, individual characteristics as a block account for 21 percent of the variance in net deposit as a percentage of the match cap ( $R^2=.21$ ). However, when measured institutional characteristics are entered into the model as a block, controlling for individual characteristics, the variance explained in net deposit as a percentage of the match cap increases to 34 percent, an  $R^2$  change of .13. The effect of this change on the model is statistically significant ( $p<.01$ ). When program dummies are added into the regression model, the explanatory power of the overall model (individual characteristics + measured institutional characteristics + program dummies) increases by 6 percent, resulting in total variance explained of 40 percent ( $R^2=.40$ ).



**Table 12. Hierarchical OLS: Influence of Institutional Characteristics on Net Deposit As a Percentage of the Match Cap**

Model	R <sup>2</sup>	Adjusted R <sup>2</sup>	Change In R <sup>2</sup>
Model 1: <i>Individual Characteristics:</i> [gender, race/ethnicity, age, marital status, household composition, employment status, education, welfare use, income to poverty ratio, asset ownership, date of enrollment]	.21	.17	
Model 2: <i>Measured Institutional Characteristics</i> [match rate, match cap, hours of general financial education, peer group meetings, penalty enforcement, # of savings deposit locations, direct deposit]	.34	.29	.13**
Model 3: <i>Unobserved factors linked with programs/ program/site dummies</i> [ADVOCAP, Alternative Federal Credit Union, Bay Area IDA Collaborative, Central Texas Mutual Housing, Community Action Project of Tulsa, OK., Heart of America Family Services, Human Solutions, MACED, Near Eastside IDA Program, Shorebank Corporation, Women's Self-Employment Project]	.40	.34	.06**

\*\*p<.01

**Notes:** See Table 1 for descriptions of programs.

In Table 13, individual characteristics as a block account for 26 percent of the variance in saving rate (R<sup>2</sup>=.26). However, when measured institutional characteristics are entered into the model as a block, controlling for individual characteristics, the variance explained in saving rate increases to .31, an R<sup>2</sup> change of .05. The effect of this change on the model is statistically significant (p<.01). Table 14 also indicates that when program dummies are included in model, controlling for individual characteristics and measured institutional characteristics, the program dummies increase the variance explained by 4 percent, bringing the total variance explained by the overall model (individual characteristics + measured institutional characteristics + program sites) to 35 percent (R<sup>2</sup>=.35).

**Table 13. Hierarchical Regression: Influence of Individual and Institutional Characteristics on Saving Rate**

Model	R <sup>2</sup>	Adjusted R <sup>2</sup>	Change in R <sup>2</sup>
Model 1:	.26	.22	
<i>Individual Characteristics:</i> [gender, race/ethnicity, age, marital status, household composition, employment status, education, welfare use, income to poverty ratio, asset ownership, date of enrollment]			
Model 2:	.31	.25	.05**
<i>Measured Institutional Characteristics</i> [match rate, match cap, hours of general financial educ, peer group meetings, penalty enforcement, number of savings deposit locations, direct deposit]			
Model 3:	.35	.29	.04**
<i>Unobserved Factors Linked with Programs</i> [ADVOCAP, Alternative Federal Credit Union, Bay Area IDA Collaborative, Central Texas Mutual Housing, Community Action Project of Tulsa, OK., Heart of America Family Services, Human Solutions, MACED, Near Eastside IDA Program, Shorebank Corporation, Women's Self-Employment Project]			

\*\*p < .01

**Notes:** See Table 1 for descriptions of programs.

Table 14 indicates that individual characteristics as a block account for 10 percent of the variance in deposit frequency ( $R^2=.10$ ). However, when measured institutional characteristics are entered into the model as a block, controlling for individual characteristics, the variance explained in deposit frequency increases to 19 percent, an  $R^2$  change of .09. Table 14 also indicates that, controlling for individual and measured institutional characteristics, program dummies increase the variance explained in the overall model by .10. Thus, the overall model (individual characteristics, measured institutional characteristics and program dummies) explains 29 percent of the variance ( $R^2=.29$ ).

**Table 14. Hierarchical Regression: Influence of Individual and Institutional Characteristics on Deposit Frequency**

Model	R <sup>2</sup>	Adjusted R <sup>2</sup>	Change in R <sup>2</sup>
Model 1: <i>Individual Characteristics:</i> [gender, race/ethnicity, age, marital status, household composition, employment status, education, welfare use, income to poverty ratio, asset ownership, date of enrollment]	.10	.06	
Model 2: <i>Measured Institutional Characteristics</i> [match rate, match cap, hours of general financial educ, peer group meetings, penalty enforcement, number of savings deposit locations, direct deposit]	.19	.13	.09**
Model 3: <i>Unobserved Factors Linked with Programs</i> [ADVOCAP, Alternative Federal Credit Union, Bay Area IDA Collaborative, Central Texas Mutual Housing, Community Action Project of Tulsa, OK., Heart of America Family Services, Human Solutions, MACED, Near Eastside IDA Program, Shorebank Corporation, Women's Self-Employment Project]	.29	.22	.10**

\*\*p < .01

**Notes:** See Table 1 for descriptions of programs.

Overall, increments in the variance explained when measured institutional characteristics and program dummies (representing unobserved factors linked with IDA programs) were entered into the regression models, controlling for the effects of individual characteristics, support the view of institutional theorists (Sherraden, 1991; Beverly and Sherraden, 1999; Sherraden, Schreiner & Beverly, 2003) that institutions modify saving behavior and outcomes. In other words, we cannot fully understand saving by focusing exclusively on individual traits.

Examples from in-depth interviews illustrate this finding. Richard noted his appreciation of ADD's institutional arrangements using the following words:

To save money, it's gotta be a program like this. It has to be a thing like, it has to be like a bill. That makes it easy to save. So the way they have this program, set up, you know...it's easy to make those deposits.

## Chapter 5: Discussion and Implications

Overall, the findings of this study support existing studies that have explicitly or implicitly shown that some microentrepreneurs can save (see Anthony, 1999; Bairstow, 1999; FINCA, 2002; Rutherford, 2000). The average monthly net deposit (AMND) for the microentrepreneurs in this study is \$18.70. Given the average match rate of 2:1, the microentrepreneurs in this study on average accumulated \$56.10 per month (savings + match), or \$673.20 a year. Thus, participants in the IDA programs who are saving for microenterprise can more readily capitalize their businesses. While this amount of capital may seem small to some observers, an infusion of even a few hundred dollars for a piece of equipment or supplies can be crucial for very small businesses. We do not know from the current study, however, how the businesses actually performed.

We turn now to specific individual and institutional characteristics associated with IDA participation and saving. Several contributions to the microenterprise field may stem from the findings of this study (see Table 15 for a summary of quantitative results):

**Table 15. Significance Levels Across the Measures of Participation and Saving in an IDA**

Independent Variables	Average Monthly Net Deposit	Average Monthly Net Deposit_TAR <sup>1</sup>	Saving Rate	Deposit Frequency
<i>Individual Characteristics:</i>				
Gender				
Race				
Age				
Marital status				
House hold composition				
adults [18 years or older]				
children [17 years or younger]			**	
Employment status				
employed full-time [>35 hrs/week]				
employed part-time[<35 hrs/week]				
unemployed/not working				
student				
Education				
did not graduate from high school	**	**	**	
completed high school or earned GED				
attended college but didn't graduate	**	*	*	**
graduated [2yr/4yr-college+] ref. group				
Welfare Use				
TANF or AFDC using now/used formerly				
TANF or AFDC never (ref. group)				
Income to poverty ratio	**	*	**	
Assets ownership				
own a car				
own a home	**	**	**	
own a micro-business	**	**	*	

**Table 15 (continued)**

Independent Variables	Average Monthly Net Deposit	Average Monthly Net Deposit_TAR <sup>1</sup>	Saving Rate	Deposit Frequency
<i>Institutional Characteristics</i>				
Match rate				
1:1	**		*	*
2:1				*
2.5:1 to 6:1 (reference group)				
Match cap (monthly savings target)	*	**		*
Hours of general financial education (spline)				
1 to 6	**	**	**	
7 to 12				**
13 or more				
Peer group meetings				
yes	**	**	**	
no				
Penalty enforcement				
not strict	**	**		
strict				
Number of savings deposit locations	**	*	**	
<i>Direct deposit encouraged</i>				

\*\* p ≤ .01

\*p ≤ .05

Notes: <sup>1</sup>Net deposit as a percentage of match cap

### Individual Characteristics and IDA Participation and Saving

First, we find that low educational attainment may decrease participation and saving in an IDA. Compared to participants who had a 2-year or 4-year college degree and above, participants who did not graduate from high school, and those who attended college but did not graduate, are associated with lower levels of participation and saving in the IDA programs. As mentioned earlier, this finding is consistent with human capital theory, which identifies capital invested in human beings as “the most valuable of all capital” (Alfred Marshall, cited by Becker, 1993, p.27). Human capital is often conceptualized in terms of an individual’s overall skills, educational experience, and productive potential (see Barker, 1995; Becker 1993; Beverly & Sherraden, 1997). Educational attainment is often used as a proxy to represent human capital. Based on the premises of human capital theory, it would be logical to suggest that microentrepreneurs with higher educational achievements would participate and save better. Even with the financial education provided by the IDA programs, microentrepreneurs who come to the program with higher education levels may be more likely to learn from such training. They may also be more likely to understand issues regarding financial management. According to Beverly and Sherraden (1997), human capital generally promotes “disciplined work habits [and] qualities which may be directly relevant to productive economic performance” (p.8). Therefore, higher saving performance might be expected.

However, these conclusions on human capital are tentative. It is not clear why there was no statistical difference between the participants who completed high school or earned a GED and those who graduated from a 2-year or 4-year college. Additional research would be helpful.

Second, asset ownership, especially homeownership and micro-business ownership, seems to be highly predictive of participation and saving in IDAs among the microenterprise group. This finding is consistent with asset theory, which suggests multiple positive effects of asset ownership. For example, in addition to their ability to improve household stability and create interest in the future, assets may “enable people to focus and ...provide a foundation for risk taking” (Sherraden, 1991, p.148). Assets may stimulate development of other assets (Sherraden, 1991). From this perspective, it is not surprising that, in this study, microentrepreneurs with assets participated and saved significantly more than those without.

On the other hand, asset ownership may be a proxy for: (1) unobserved financial management and resource allocation skills that would increase participation and saving; (2) unobserved future orientation; (3) a presence of resources (social, political, financial, and psychological) that, in case of an emergency, can be drawn upon (Schreiner et al., 2001). From this perspective, assets would not be causing other positive outcomes, but rather representing greater capacity overall.

Third, instead of using total income as the measure of poverty, in this study we use income to poverty ratio, which controls for household size, and finds that participants who are more income poor are associated with lower levels of participation and saving. Indeed, such a finding could be expected because, less income may translate into a struggle for saving regardless of how much a participant may want to participate and save. As economic theory predicts, people with greater incomes may save more.

However, we also find that welfare receipt may not affect saving performance in an IDA program for microenterprise. Across all the measures of participation and saving used in this study, there was no significant association between welfare use and participation and saving. These results suggest that welfare recipients, if connected to the institutions of saving, may perform as well as others, and may be able to capitalize a micro-business. This finding is consistent with the findings of Zhan & Sherraden (forthcoming), who use the overall ADD sample and report that welfare receipt is not associated with saving performance in IDAs.

### **Institutional Characteristics and IDA Participation and Saving**

Many studies (e.g., Anthony, 1999; Dumas, 1999; Else & Gallagher, 2001; Little, 1997; Sherraden, Sanders, & Sherraden, 1998; forthcoming; Servon & Bates, 1998) have explicitly or implicitly shown that individual factors (human capital, social support and financial assets) are associated with microenterprise performance. People like Dumas (1999) argue that “business knowledge and skills are the most critical gaps that must be filled before business success can be achieved” (p.205), and Servon and Bates (1998) conclude that microenterprise programs can only be effective if targeted toward people with skills. Little (1997) stresses the importance of social networks in influencing the performance of microentrepreneurs, stating that given the lower levels of income and high risks associated with microenterprise, social networks may mean “the difference between survival and pauperization” (p. 12). Given such assertions, most microenterprise programs have concentrated on changing participants’ individual traits.

However, institutional theorists suggest that we cannot expect individual factors to explain all phenomena. In order to assess the extent to which institutional characteristics (as distinct variables and as a block) can account for the outcomes of a microentrepreneur in an IDA program, hierarchical regressions have been used. Below we discuss the findings.

First, this study supports the view that institutions matter in influencing opportunities and outcomes. The significant increments in variance explained when both measured institutional characteristics and program dummies (representing unobserved factors with IDA programs) were entered into the regression models, controlling for the effects of individual characteristics, lend support to the view that institutions matter. The examples from in-depth interviews in which participants explicitly mentioned that they would probably not be saving had it not been for the institutional arrangements provided by the IDA programs, illustrate this basic finding. Results support the argument espoused by institutional theorists that institutions modify saving opportunities, behavior, and outcomes (Sherraden, 1991; Beverly and Sherraden, 1999; Sherraden, Schreiner & Beverly, 2003). If this is so, then there may be a positive role for policy and programs designed to promote and subsidize saving for microenterprise.

Second, consistent with earlier studies on ADD (Sherraden, et al. 2000; Schreiner, et al. 2001; Schreiner, Clancy & Sherraden, 2002), this study finds that general financial education may increase participation and saving up to a point. Thus, in order to cut down on program costs, IDA programs, which require more than 12 hours of general financial education should re-evaluate that requirement and perhaps reduce on the number of hours of financial education. To use Ian's words from the in-depth interview, programs "could probably condense" the general financial education classes into a few sessions.

Third, the study finds that expectations for saving may increase saving performance. For three of the four measures of participation and saving, a high match rate is associated with positive outcomes among the microentrepreneurs in an IDA program. In in-depth interviews, several participants said that they were trying to save the "expected amount", which is the match cap. This implies that setting a higher match cap may cause microentrepreneurs in IDA programs to take advantage of the higher match caps and more substantially capitalize their businesses.

Fourth, the study finds that programs that are more flexible with enforcing rules are associated with more positive participation and saving. This is not to suggest that programs should not enforce rules, but perhaps they should be mindful of the fact that a considerable number of the IDA participants, however much they may want to participate and save, have constraints making it difficult to do so. For example, Denise, who has no private means of transport, indicated that "rigid" rules make it difficult for her to save:

When you don't have transportation, they [the rules] make it difficult. 'Cause you gotta be there before their deadline. So it makes it sort of difficult for me sometimes when I can't get to the bank.

Fifth, results indicate that the number of saving deposit locations is positively associated with participation and saving among the microenterprise group in ADD. This would be expected because of the convenience and reduced transaction costs associated with more saving deposit locations. In in-depth interviews, for example, respondents indicated that having more saving

deposit locations would be desirable and would make it more “convenient” for participation and saving.

Sixth, regarding match rate, the results indicate that participants who receive a match rate of 1:1 participate and save less compared to participants who receive a match rate of 2:1 (the reference group). However, there is no significant difference between participants who receive a match rate of 2.5:1 to 6:1 and participants who receive a match rate of 2:1. This suggests that financial incentives, up to a point, may provide motivation to save.

Seventh, IDA programs that use peer group meetings register higher levels of participation and saving. Thus, programs may want to consider incorporating peer group meetings within their program designs.

Lastly, although the quantitative findings indicate that direct deposit is not statistically associated with participation and saving, examples from in-depth interviews suggest that, where direct deposit is available, participants appreciate it. A comment from Pat illustrates the importance of direct deposit:

Before I started the direct-deposit it was real hard for me. It’s just like everything else, you don’t put it up there with your other bills, you put it over to the side and it slips your mind. Or you find another reason to spend the money on, another purpose, you know? “Well I’d like to have this new shirt, or I’d like to....” So you don’t end-up putting it in savings.

It seems likely that direct deposit will be a positive feature of IDA programs, as found by Sherraden, Schreiner and Beverly (2003).

### Multiple Outcomes

In this study, multiple dependent variables are used to measure participation and saving performance in an IDA. The meaning of each of the four dependent variables used in this study is quite clear, that is, each measures some aspect of participation and saving (see detailed description of each of the dependent variables in chapter 2). Although the four variables are positively correlated among themselves, they are not all perfectly correlated (see Table 16). Each of the outcome measures is distinctly important in its own way, not merely for theoretical reasons, but for policy and program reasons.

**Table 16. Correlations of Dependent Variables**

<b>Independent Variables</b>	<b>Average Monthly Net Deposit</b>	<b>Deposit Frequency</b>	<b>Average Monthly Net Deposit_TAR</b>	<b>Average Monthly Net Deposit_INC</b>
Average Monthly Net Deposit (AMND)	-			
Deposit Frequency (DEP_FREQ)	0.45**	-		
Net Deposit as a % of Match Cap (AMND_TAR)	0.81**	0.39**	-	
Saving Rate (AMND_INC)	0.68**	0.41**	0.60**	-

\*\*p ≤ .01



## Limitations

Six limitations should be highlighted. First, the IDA participants are not a random sample. They are both self-selected and program selected. As Schreiner et al, (2001) observe, IDA programs target certain people, and the eligibles in the target group who expect the greatest net benefits are the ones most likely to enroll. Therefore, results of this study may not be representative of how the poor overall would perform in an IDA program.

A second limitation is that the individual characteristics analyzed in this study were recorded at enrollment. There is a possibility for some characteristics, which may have a direct influence on saving outcomes, to change. However, we do not know whether some characteristics changed, or how they changed.

Third, lack of control in the data used in this study makes it difficult to establish the effects of institutions on participants' outcomes. It is not possible to say how these participants would have performed if they had not interacted with ADD programs. One of the ways of ascertaining this would be use a control group. In ADD, one of the study methods is an experiment with a control group. However, these data are not yet available.

Fourth, this study is based on a "matched" savings program. The results may not be generalizable to unsubsidized savings programs for poor microentrepreneurs.

Fifth, this study assumes that "successful saving now" is a likely predictor of success at running a business in the future. Although there is a considerable amount of research indicating that microentrepreneurs who are able to save are more likely to be successful at microentrepreneurship, this may not always be the case, and this study does not test this.

Lastly, since this study is based on a developed country with generally supportive socio-economic and political systems, results may not be replicable in a poor developing country.

## Implications

Incorporating savings into MEPS may be desirable. This study has documented that poor microentrepreneurs can save in IDAs, and some participants consider the money in their IDA savings to be their "road map" to owning and capitalizing their own businesses. Moreover, money in the IDA represents a form of readily available self-insurance that can be drawn upon to buffer cash flow shortfalls and/or financial shocks of a poor microentrepreneur in an IDA program. Thus, public policy should consider IDAs for microenterprise.

Second, IDA programs that intend to integrate savings into microenterprise should focus not simply on individual characteristics, but on institutional characteristics as well. The programs' implementation plans should focus not simply on changing individual traits but also on creating institutions that facilitate high participation and saving. For example, institutional characteristics, such as savings match and financial education should be considered.

Third, although the "size" of the match rate beyond 2:1 may not be important, some degree of incentives matters. The results indicate that participants who receive a match rate of 1:1 participate

and save significantly less compared to participants who receive a match rate of 2:1. However, there is no significant difference between participants who receive a match rate 2.5:1 to 6:1 and participants who receive a match rate of 2:1. This finding is consistent with several studies on savings patterns in 401(k) plans (see Engen, Gale & Scholz, 1996; Kusko, Poterba & Wilcox, 1994; Papke, 1995). For example, using plan level data from Internal Revenue Services form 5500 filings, Papke (1995) finds that participation increases substantially when an “employer moves from a zero to a small or moderatory sized match; but that at higher match rates employee contributions fall” (p.311). Similarly, a study by Kusko, Poterba & Wilcox (1994) regarding participation and contribution by employees in a 401(k) plan, finds little effect on either participation or contribution, by the plan participants, at higher match rates. One plausible explanation for these results is that a positive match is necessary to get people to participate and save, but a high match is not necessary for those who are inclined to save to max out on savings. In other words, a 2:1 match might generate just as much savings as a 6:1 match, as we have found in this study.

However, an alternative explanation, specifically for IDAs (which are targeted to low-income families), is that low-income families have, in most cases, fixed incomes and/or financial resources that they can transfer or shift into savings accounts to maximize on the rate of return. Indeed, everything being equal, these families can only save “so much” at any one given time, given the financial resources and assets available to them. In other words, although participants who receive a higher match rate may be willing to save more to maximize the rate of return on their savings, they may not be able to do so because they have limited financial resources.

Match rate has other important purposes besides incentivizing savings. With higher match rates, assets accumulate faster, and this may be a legitimate policy objective. As Sherraden (1991) observes, current policy already provides substantial subsidies for asset accumulation for the non-poor. Why not do the same for low income families?

Fourth, we find that general financial education, up to a point, is positively associated with participation and saving in IDAs. Thus, financial education, at least up to six hours, should be considered as part of programs offering IDAs for microenterprise. As indicated in the discussion section, this finding is important because of the cost of running IDAs. If IDA programs are to go to full scale, costs must be contained. Why provide 12 financial education sessions when six or perhaps less would be sufficient to produce the desired results in IDA participation and saving?

Fifth, the study finds that peer group meetings among participants may encourage information sharing, and may increase participation and saving. In microenterprise practice, the idea of promoting peer groups is not new. In fact, a considerable number of microenterprise programs in developing countries (such as the Grameen Bank in Bangladesh; Uganda Women’s Finance Trust; FINCA in Latin America) use peer groups in extending loans and related services such as training to microentrepreneurs. It is believed that the group members, who usually have similar social and economic backgrounds, act as a source of support, networking, and training for each other. However, in the United States, the support for using peer groups as a way of promoting microentrepreneurship has been mixed. There are claims that peer groups would not be successful in the United States because the poor “are relatively impoverished in social capital” (Balkin, 1993, p. 253-4; see also Schreiner, 2000). Results of this study suggest that, when integrating savings into microenterprise programs, some form of peer groups may be desirable.

Finally, more research is needed on institutional effects on saving performance. This study suggests that some variance attributable to the institutional characteristics was not captured by measured institutional characteristics. It will be important to learn more specific what institutional characteristics that affect saving performance.

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