

Integrating Saving into Microenterprise Programs for the Poor: Do Institutions Matter?

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This study examines factors that affect saving performance among participants in a subsidized saving program who intend to use their savings to help capitalize a microenterprise. Using data from 14 community-based organizations promoting self-employment among the poor, and drawing on institutional theory, we find that individual-level theories do not fully explain the variance in savings and that institutional influences also are predictive. Policy makers may want to consider a range of institutional characteristics when designing policies and programs aimed at promoting self-employment among poor families.

Policy makers are exploring and experimenting with new antipoverty strategies to improve the well-being of the poor. Strategies that combine economic growth with increases in job opportunities seem to be at the forefront (see United Nations Development Programme 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).

Microenterprise programs aim at providing microloans, business advice, training assistance, and, in some cases, savings services. These services are provided to the poor, to welfare recipients, and to unemployed

people intending to start or expand a small family business. Simply stated, MEPs help the poor to afford resources and opportunities for the start-up, maintenance, or expansion of their own very small enterprises, referred to as microenterprises.¹ 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, savings services, and support, they would be able to start, expand, and strengthen their microbusinesses. Such assistance might eventually help to move them out of poverty. For those who are barely above the poverty line, the strategy is seen as something that would reduce vulnerability to sliding into and out of poverty. Indeed, to their supporters, microenterprise represents “nothing less than the most promising instrument available for reducing the extent and severity of global poverty” (Snodgrass 1997, p. 1).

Microenterprise programs, such as the Grameen Bank in Bangladesh, the Self-Employed Women’s Association in India, and ACCION International in Latin America, are often cited as pioneers in the promotion of MEPs as an alternative antipoverty strategy (see World Bank 1975; Adams and Von Pischke 1992; Rhyne and Otero 1992; Counts 1996; Rahman 1999; Schreiner 1999; Servon 1999). Indeed, it is believed that throughout the developing world, MEPs are serving hundreds of thousands of poor families. Microenterprise programs constitute one of the fastest-growing antipoverty strategies in these poor developing countries. According to the Microcredit Summit of 1996, the strategy could reach 100 million of the world’s poorest families by 2005 (Microcredit Summit 1996).

In the United States, support for use of MEPs in antipoverty initiatives has steadily increased among federal, state, and private community-development organizations, as well as among philanthropic foundations. In 1970, there were only a few dozen MEPs (Raheim, Alter, and Yarbrough 1996). Bonnie Dallinger (2001) estimates that in the United States alone, the number reached at least 700 by 2001.

In the political arena, support for the microenterprise development strategy has been sustainable because each side of the ideological divide thinks that the strategy speaks to its values. Conservatives think microenterprise development encourages individual self-reliance and hard work, while liberals praise it for reaching out to the poor and for promoting the idea that anyone is capable of owning a successful business (Bornstein 1995).

Generally, the majority of formal MEPs tend to focus on providing one of the two primary services: credit or training. However, with the growing realization that neither credit nor training would be solely sufficient to propel most poor microentrepreneurs out of poverty, a considerable number of U.S. MEPs are moving toward a multidimensional approach that integrates savings, training, and credit services into

one program design—a one-stop shop. According to the World Bank (2001), some programs in the developing countries, notably, Bank Rakyat in Indonesia and SafeSave in Bangladesh, already include a savings component in their program designs. However, the majority of the programs in the United States that use this multidimensional approach incorporate individual development accounts (IDAs) for microenterprise (Sherraden 1991). These programs combine standard MEP services with a savings requirement for program participants. The current study refers to this combination of services as IDAs for microenterprise.² This study focuses on such programs.

Unlike programs that focus on credit or training and that have received extensive scholarly scrutiny (e.g., Adams and Ladman 1979; Adams and Von Pischke 1992; Balkin 1993; Edgcomb, Klein, and Clark 1996; Raheim 1996; Sherraden, Sanders, and Sherraden 1998; Anthony 1999; Barnes and Keogh 1999; Clark and Kays 1999; Dumas 1999; Schreiner 1999; Servon 1999), IDAs for microenterprise are relatively new and have hardly received any scholarly attention. Yet, given the ongoing proliferation of IDA programs across the United States, it may be important to understand more fully the options for integrating IDAs and other savings strategies into MEPs to optimize participants' outcomes. This study is a first step toward that agenda.

Integrating IDAs into Microenterprise Programs

The idea of IDAs for microenterprises is suggested by Michael Sherraden (1991), who proposes that individual savings 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). The proposal builds on an earlier analysis of asset building as a strategy in social policy (Sherraden 1988).

Participants in IDA programs receive general classes on financial education that teach how to save small amounts of money in a formal financial institution. These small savings are matched over time to enable a participant to invest in home ownership, education, or a microenterprise. The accounts are in some ways similar to other defined-contribution plans, such as 401(k) retirement plans, that offer a monetary incentive for participation. The matched funds may come from a private, nonprofit, or public source. Although programs may vary, participants usually receive general financial education and goal-specific training. For example, an account holder saving for a microbusiness receives basic instruction on financial management and consumption, including training on balancing a checkbook. In addition, the participant receives training more specifically focused on microbusiness; such training might include business-plan writing and marketing. The Corporation for Enterprise Development (2002) estimates that by 2002 there were more than 500 IDA programs

throughout the United States. The 1996 welfare reform law (U.S. Public Law 104-193) includes IDAs as a state option. In 1998, a federal IDA demonstration was launched by the Assets for Independence Act (U.S. Public Law 105-285).

Individual development accounts for microenterprises mandate savings by program participants. There are several probable reasons for this. First, introducing poor microentrepreneurs to formal financial institutions is an important step in allowing some of them to establish the credit that may eventually support their businesses or to help deal with a family financial crisis. As the World Bank (2001) observes, MEPs should move toward incorporating savings into their program designs, "so that clients would not have to take out loans to cope with illness or death" (p. 157). Moreover, 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 or financial shocks. Second, money in IDAs, whether matched or not, could be used to supplement the very tiny loans associated with credit-led MEPs (for a critique of the size of the loans disbursed by credit-led MEPs, see Bates and Servon 1996). Several empirical studies find a positive association between the amount of starting capital and microbusiness performance (see Servon and Bates 1998; Koop, de Reu, and Frese 2000).

Third, IDA matches may provide participants with a chance to turn their tiny savings into relatively large lump sums that could easily enable them to take advantage of investment opportunities. Participants' savings in the IDAs could eventually turn into lump sums that could be used for larger acquisitions, even without the match. Fourth, developing an equity source (IDA funds added to 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 repay a loan (see Glackin and Mahony 2002).

The Study

Promoting IDAs for MEPs as a strategy to address poverty and promote development has been put into practice in hundreds of community programs in over 40 states. However, this is a relatively new program design in the MEP field, and because MEPs were originally established to provide credit instead of savings services, it may be necessary to explore how to connect savings and MEPs. The goal of this study is to identify individual and institutional factors that can help explain savings outcomes of poor microentrepreneurs in savings-led MEPs in the United States.

Theory

Many microenterprise studies attribute observable outcomes to the microentrepreneur's individual resources. Factors such as social, human, and financial capital are usually highlighted as key determinants (e.g., see Servon and Bates 1998; Else and Gallagher 2001; also see Hulme and Mosley 1996). A few studies (e.g., Jørgensen, Hafsi, and Kiggundu 1986; Sebstad and Cohen 2000; Sherraden, Ssewamala, and Sanders 2003; Sherraden, Sanders, and Sherraden 2004) comment on factors in the external environment, including macroeconomic conditions, the legal system, and business infrastructure, as important in influencing the performance of microentrepreneurs.

In cases where the microbusinesses have failed, critics have typically questioned the skills, determination, and ingenuity of poor people (see Nelson 2000 for details). Such discussions are related to theories concerning human capital, social capital, and financial assets. These theories have guided most studies on microenterprise performance. Yet, while these theories may provide part of the explanation, they do not fully and adequately explain microentrepreneur performance. Theorists observe that institutions matter in shaping and influencing opportunities, behaviors, and individual performance (e.g., Neale 1987; North 1990; Sherraden 1991; Weaver and Rockman 1993; Beverly and Sherraden 1999; Peters 1999). For example, Guy Peters writes in his book, *Institutional Theory in Political Science: The New Institutionalism* (1999), that one cannot fully explain individual opportunities, actions, and outcomes without being "aware of institutional influences" (1999, p. 2). Sherraden (1991) argues 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). Against that background, we propose to take a closer look at institutional theory as an important framework that can explain the outcomes of microentrepreneurs.

Our use of the term "institution" may require 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). Michael Sherraden, Mark Schreiner, and Sondra 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). Douglass North (1990), for example, 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). On the other hand, Melvin Blase (1973) describes institutions as organizations that are “change-inducing and change-protecting” (p. 4).

In this study, the term “institution” is used in a formal sense. It refers only to the purposefully created characteristics of the programs implementing IDAs for MEPs.³ As mentioned earlier, the programs promoting IDAs for microenterprises are a diverse group of community-development corporations, social service agencies, and financial institutions. 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 diversity of programs and outcomes 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). Indeed, Peters (1999) cautions academicians not to consider individuals as fully autonomous actors but to take into consideration the influence of institutions. Sherraden (1991) maintains that “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).

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 include access, incentives, information, facilitation, and expectations. These authors observe that access, incentives, and information are constructs usually discussed in the institutional literature. Facilitation, which describes institutional arrangements that offer some form of saving assistance to the individual (e.g., through automatic payroll deduction), was added because it is a key feature of most contractual savings systems. Another construct, expectations, was proposed in light of qualitative research on IDAs (Sherraden, Moore, and Hong 2000). According to the qualitative data, many IDA participants explicitly say that they are trying to save the expected amount each month or that they are trying to reach a monthly savings target to fulfill staff expectations. This suggests that expectations fostered through institutional arrangements may cause low-income people to save more than they would otherwise.

Specific to an emerging institutional theory of savings, Beverly and Sherraden (1999, p. 465) 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.

Research Questions

This study attempts through quantitative empirical evidence to answer the two questions. First, what individual characteristics are linked with saving outcomes of a microentrepreneur associated with an IDA program? Second, what institutional characteristics are related to the saving outcomes of a microentrepreneur associated with an IDA program?

Data

The study uses data from the American Dream Demonstration (ADD). The 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). The ADD ran for 4 years (1997–2001). The Corporation for Enterprise Development in Washington, D.C., designed and guided ADD, while the Center for Social Development at Washington University in St. Louis designed and conducted much of the research. The research program in ADD is an extensive multimethod design, with eight different studies comprising both qualitative and quantitative methods.

Two primary data sets are used in this study. One is the ADD monitoring data, collected through the Management Information System for Individual Development Accounts (MIS IDA). The MIS IDA, designed

by the Center for Social Development for this research purpose, tracks program characteristics, participant characteristics (both sociodemographic and financial), and all IDA savings transactions for all ADD participants ($N = 2,351$) at all 14 ADD program sites.⁴ The savings 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 savings program, and probably the most detailed existing data set on saving behavior by a low-income population. Data used in this study cover savings transactions of the ADD participants from 1997 through December 31, 2001.

The 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 program sites in ADD. The interview questions were designed in light of the constructs proposed in the institutional theory of saving (Beverly and Sherraden 1999; Sherraden, Schreiner, and Beverly 2003). Interviews were conducted in fall of 2002. Because ADD was initially set up as a national demonstration for IDAs, program administrators and directors were committed to participating in studies until 2003.

From MIS IDA data, the study extracts all the microentrepreneurs, defined as all IDA program participants who have used their IDA savings for microenterprise and those participants who identified their intended savings goal as microenterprise. The final sample for the study includes 457 participants.

Measurement and Hypotheses

Dependent Variable

Consistent with existing research on IDA programs (see Schreiner et al. 2001; Schreiner, Clancy, and Sherraden 2002), this study uses average monthly net deposit (AMND) as the measure of savings among the microentrepreneurs in IDA programs. Average monthly net deposit is defined as net deposits per participant, per month of participation. The measure controls for the length of time that a participant has had the opportunity to save in an IDA program. 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,” used to calculate AMND, is defined as deposits plus interest, minus unmatched withdrawals. Net deposit includes matched withdrawals but excludes unmatchable deposits in ex-

Table 1

THE 13 HOST ORGANIZATIONS IN THE AMERICAN DREAM DEMONSTRATION

Host Organization	Location	Type of Community	Type of Organization	Targeted Participants for IDAs
ADVOCAP, Inc.	Fond du Lac, Wis.	Small town and rural area	Community action agency	Former AFDC or TANF recipients, working poor people
Alternatives Federal Credit Union	Ithaca, N.Y.	Small city and rural area	Community development credit union	Single parents, youth
Bay Area IDA Collaborative	Oakland, Calif.	Urban	Collaborative of 13 community-based organizations	Low-income Asian Americans, African Americans, Latinos
Capital Area Asset Building Corporation	Washington, D.C.	Urban	Collaborative of eight community-based organizations	TANF recipients, youth, African Americans, Latinos, Asian Americans
Central Texas Mutual Housing Association	Austin, Tex.	Urban	Nonprofit 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, Okla.	Urban	Community-based antipoverty organization	Program 1: working families at or below 200% of poverty; program 2: working families 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 MACED	Portland, Oreg. Berea, Ky.	Urban Small towns and rural areas	Nonprofit housing organization Association of community development organizations	Rental property residents African Americans, rental property residents, working poor
Near Eastside IDA Program	Indianapolis	Urban	Social service organization and community development credit union	Neighborhood residents, youth
Shorebank Corporation	Chicago	Urban	Community development bank with nonprofit affiliate	Rental property residents, Shorebank customers
Women's Self-Employment Project	Chicago	Urban	Microenterprise-development organization	Low-income, self-employed women, public housing residents

SOURCE.—Sherraden, Johnson, and associates (2000).

NOTE.—IDA = Individual Development Accounts; AFDC = Aid to Families with Dependent Children; TANF = Temporary Assistance for Needy Families; MACED = Mountain Association for Community Economic Development; Community Action Project of Tulsa County has two IDA programs in ADD. The first program targets families at or below 200% of the poverty line, and the second program (has an experimental design) and targets families at or below 150% of the poverty line.

cess of the match cap or after the time cap period.⁵ Higher net deposits imply higher savings.⁶

Independent Variables

Institutional characteristics.—Incentives constitute mechanisms provided by programs to encourage higher participant savings. The survey item regarding incentives asks agency representatives, “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.

Information is measured as the training provided by the program related to IDAs, using a question that considers “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.

A second question on information asks, “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 the more peer modeling and information sharing (through small groups), the greater the participation and savings.

Facilitation describes institutional arrangements that make depositing easier for the participant. 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, and Beverly (2003), this construct is a key feature of most contractual saving systems. The item asks, “Was automatic direct deposit offered to participants?” It is hypothesized that the more automatic the system, the greater the participation and savings.

Access describes institutional mechanisms that facilitate convenience for the participant in the saving process. The question considers “How many deposit locations were available to participants?” It is hypothesized that the more the number of savings deposit locations, the greater the participation and savings. The question considers, “Were there penalties if minimum saving requirements were not met?” and “Were the penalties enforced?” It is hypothesized that the more flexible the program rules and staff, the greater the participation and savings.

Expectations constitute what programs expected from participants. The item asks, “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 savings.

Entrepreneurs' sociodemographic characteristics.—The sociodemographic characteristics included in this study are gender, age, race or ethnicity, marital status, education, employment status, total household income,

receipt of welfare, car ownership, home ownership, microbusiness ownership, and household status of participant.⁷

Analyses

A hierarchical multiple regression model is carried out on the dependent variable measuring savings. In the first step of the regression, the dependent variable is regressed on microentrepreneurs' individual characteristics. The second step of the hierarchical regression adds program characteristics. Based on the theoretical framework guiding this study, it is hypothesized that the variance explained significantly increases when institutional characteristics are entered into the regression.

Results

Descriptive Statistics

As indicated in table 2, the majority of participants are female (79 percent), and the average age is 39 years. About 49 percent are African American, 35 percent are Caucasian, 8 percent are Latino, 2 percent are 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), 20 percent are married, 29 percent are divorced or separated, and 3 percent are widowed.

At least 51 percent of the participants work full-time (35 hours per week or more), while 25 percent work part-time. Sixteen percent are unemployed or not working, while 7 percent are students. About 12 percent have not completed high school, 21 percent completed high school or have a general equivalency diploma (GED), 37 percent attended some college but did not graduate, and 29 percent have a college degree (2-year, 4-year, and above).

About 34 percent report former or present receipt of AFDC or TANF. Slightly above 90 percent (91 percent) live in households with incomes below 200 percent of the poverty line, and about 54 percent have household incomes below the poverty line. About 22 percent own a home, and 29 percent own a microbusiness (see table 2).

Institutional Characteristics

About 22 percent of the ADD participants saving for microenterprises have received or will receive a 1 : 1 match rate on their savings to start or capitalize their existing businesses.⁸ Slightly above half of the participants (51 percent) have received or will receive a 2 : 1 match rate; 27 percent have received or will receive a match rate between 2.5 : 1 and 6 : 1 (see table 3). The average monthly saving target is \$32.16 (this

Table 2CHARACTERISTICS OF THE SAMPLE ($N = 457$)

Variable	Percentage or Mean
Gender (%):	
Female	79
Male	21
Age (mean)	39
Race or ethnicity (%):	
African American	49
Hispanic or Latino	8
Asian	2
Native American	2
Caucasian	35
Other	3
Marital status (%):	
Married	20
Divorced or separated	29
Widowed	3
Never married	48
Household composition (mean):	
Adults (18 years or older)	1.5
Children (17 years or younger)	1.4
Employment status (%):	
Full-time (>35 hours per week)	51
Part-time (<35 hours per week)	25
Not working	16
Student	7
Education (%):	
High school graduate—no	12
High school graduate or GED—yes	21
Attended some college (did not graduate)	37
Graduated (2-year or 4-year college+)	29
Welfare use (%):	
TANF or AFDC never	66
TANF or AFDC used or using	34
Poverty levels (relative to federal poverty line) (%):	
At or below 50	26
At or below 100	54
At or below 150	79
At or below 200	91
Assets ownership (%):	
Car	66
Home	22
Microbusiness	29

NOTE.—GED = General Equivalency Diploma; TANF = Temporary Assistance for Needy Families; AFDC = Aid to Families with Dependent Children.

Table 3

INSTITUTIONAL CHARACTERISTICS (N = 457)

Variable	Percentage or Mean
Match rates (%):	
1 : 1	22
2 : 1	51
2.5 : 1 to 6 : 1	27
Match cap (monthly target) (mean)	32.16
Hours of general financial education (mean)	13.15
Peer-group meetings (%):	
Yes	47
No	53
Number of saving deposit locations (mean)	12.6
Program rules enforced (penalties enforced) (%):	
Strict	46
Not strict	54
Program encourages direct deposit (%):	
Yes	58
No	42

excludes the match), and the average number of hours of general financial education is 13.15. Forty-seven percent of all the participants saving for microenterprises are in programs that have a peer-group mentoring system. On average, participants can make an IDA deposit at 12.6 savings deposit locations in each program. Forty-six percent are in programs that identified themselves as being “strict” in enforcement of program rules and penalties. Fifty-eight percent of the participants saving for microenterprises are in programs associated with financial institutions that encourage direct deposit for the IDA deposits.

Ordinary Least Squares Regression Models

Relationships of individual characteristics, institutional characteristics, and average monthly net deposit.—Table 4 reports the results of the model in which AMND is regressed on individual characteristics and institutional factors. It indicates that the overall model is statistically significant ($F(30, 394) = 7.04, p < .01$) and explains 35 percent of the variance in the dependent variable ($R^2 = 0.35$, adjusted $R^2 = 0.30$).

With respect to individual characteristics, relations are not statistically significant for gender, race or ethnicity, age, marital status, employment status (participants working part-time, the unemployed or not working, and students do not differ from participants employed full-time to a statistically significant degree on savings. Those who are employed full-

Table 4

REGRESSION ANALYSIS: INDIVIDUAL CHARACTERISTICS, INSTITUTIONAL CHARACTERISTICS, AND AVERAGE MONTHLY NET DEPOSIT ($N = 457$)

Independent Variable	<i>b</i>	SE	<i>t</i>	<i>p</i> -value
Intercept	-19.96	9.66	-2.07	.04*
Individual characteristics:				
Gender:				
Female	1.84	2.71	.68	.50
Male (reference group)				
Race or ethnicity:				
African American	-2.44	2.90	-.84	.40
Hispanic or Latino	3.79	4.26	.89	.37
Other ethnicities	.04	4.17	.01	.99
Caucasian (reference group)				
Age	-.11	.10	-1.07	.28
Marital status:				
Single	3.79	2.88	1.32	.19
Married (reference group)				
Household composition:				
Adults (18 years or older)	1.54	1.57	.98	.33
Children (17 years or younger)	.18	.78	.23	.82
Employment status:				
Employed full-time (>35 hours per week; reference group)				
Employed part-time (<35 hours per week)	2.25	2.52	.89	.37
Unemployed or not working	.68	3.19	.21	.83
Student	1.61	4.07	.40	.69
Education:				
Did not graduate from high school	-11.32	3.62	-3.13	.002**
Completed high school or earned GED	-.88	2.94	-.30	.77
Attended college but did not graduate	-6.53	2.52	-2.59	.01**
Graduated (2-year or 4-year college+; reference group)				
Welfare use:				
TANF or AFDC using now or used formerly	2.01	2.44	.82	.41
TANF or AFDC never (reference group)				
Income to poverty ratio	4.93	1.64	3.00	.003**
Assets ownership:				
Car	-.92	2.35	-.39	.70
Home	11.60	2.70	4.30	.000**
Microbusiness	7.13	2.39	2.99	.003**
Institutional characteristics:				
Match rate:				
1 : 1	-13.19	4.49	-2.94	.003**
2 : 1	1.35	2.74	.49	.62
2.5 : 1 to 6 : 1 (reference group)				
Match cap (monthly savings target)	.29	.12	2.45	.02*
Hours of general financial education (spline): ^a				
1-6	2.79	.76	3.66	.000**
7-12	-.41	.67	-.61	.55
13 or more	.01	.14	.09	.93
Peer-group meetings:				
Yes	9.53	2.63	3.62	.000**
No				

Table 4 (Continued)

Independent Variable	<i>b</i>	SE	<i>t</i>	<i>p</i> -value
Penalty enforcement:				
Not strict	9.66	3.45	2.80	.003**
Strict				
Number of savings deposit locations	.20	.07	2.98	.005**
Direct deposit encouraged:				
Yes	2.34	3.13	.75	.45
No				
<i>R</i> ²	.35			
Adjusted <i>R</i> ²	.30			
<i>F</i>	7.04			
df	30			

NOTE.—*b* = Unstandardized regression coefficients; GED = General Equivalency Diploma.

^a Hours of general financial education is a continuous variable that, for this analysis, is split into a three-segment spline: 1–6 hours, 7–12 hours, and 13 or more hours. In regression analysis, dividing a variable into a spline allows for the effect on the expected value of the dependent variable to be more specific to a particular range or section of a variable. A spline takes one variable and divides it into separate segments with the sum of all the new segments equaling the total number in the original variable. For example, in the case of hours of general financial education, if a participant has had 12 hours of general financial education, the 1–6 spline segment would show 6 hours of general financial education, the 7–12 spline segment would show 6 hours, and the 13 or more spline segment would show zero hours of general financial education. (For details about use of splines in regression analysis, see Jerome Friedman 1991.) The spline segments used in this analysis are consistent with existing ADD research (see Schreiner et al. 2001, 2002; Ssewamala 2003).

* *p* = .05.

** *p* = .01.

time compose the reference group),⁹ household composition, and welfare use.

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 (*b* = −11.32, *p* < .01; see table 4). Moreover, having some college (but no degree) is associated with \$6.52 less in AMND than the reference education group. This is a statistically significant difference (*b* = −6.52, *p* ≤ .05; see table 4) and 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]). Educational attainment is often used as a proxy for human capital. However, it is not clear why there is 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.

Income to poverty ratio.—Income-to-poverty ratio is positively associated with AMND (*b* = 4.9, *p* < .01). This means 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 4). Less income may translate into a struggle for saving, regardless of how much an individual may want to participate and save.

Asset ownership.—The regression suggests that asset ownership (specifically, owning a microbusiness and owning a home) is strongly associated with savings in an IDA program. Participants who already own a microbusiness save \$7.13 more in AMND. This relation is statistically significant ($b = 7.13, p < .01$). Similarly, participants who own a home save \$11.60 more in AMND, and the relation also is statistically significant ($b = 11.60, p < .01$). Asset theory suggests multiple positive effects of asset ownership (Sherraden 1991).

However, asset ownership may be a proxy for unobserved financial management and resource allocation skills that would increase savings. It may also serve as a proxy for unobserved future orientation, a presence of resources (social, political, financial, and psychological) that can be drawn upon in case of an emergency (Schreiner et al. 2001).

Institutional Characteristics Associated with Savings

Incentives.—There are significant associations between match rate and savings in an IDA program. Compared to the reference group (participants with a match rate between 2.5 : 1 and 6 : 1), participants in programs that provide a match rate of 1 : 1 (matching a dollar to a dollar) are found to save less in AMND (\$13.19 less; $b = -13.19, p < .01$; see table 4). However, there is no statistically significant difference in AMND between the reference group and those with a match rate of 2 : 1 ($b = 1.35, p = .62$).

Information.—There is a statistically significant association between hours of general financial education and savings in an IDA program. Between 1 and 6 hours of general financial education (or the first 6 hours of general financial education) increases AMND by \$2.79 dollars per hour ($b = 2.79, p < .01$). However, after the sixth hour, the relationship between general financial education and AMND becomes statistically insignificant. Also related to information, peer-group meetings are associated with savings. Participants in programs that have peer-group meetings, on average, have a statistically significant higher AMND (\$9.53; $b = 9.53, p < .01$).

Access.—The number of savings deposit locations is significantly associated with savings. Table 4 shows that a positive, statistically significant association exists between number of savings deposit locations and AMND ($b = 0.20, p < .01$). Each additional deposit location is associated with \$0.20 increase in AMND. Also related to access, the flexibility of program rules and staff is statistically significantly associated with savings. Table 4 indicates that, on average, participants in programs that identified themselves as “not strict” in enforcing program rules saved sig-

Table 5

HIERARCHICAL REGRESSION: INFLUENCE OF INDIVIDUAL AND INSTITUTIONAL CHARACTERISTICS ON AVERAGE MONTHLY NET DEPOSIT

Model	R^2	Adjusted R^2	Change in R^2
1. Individual characteristics (gender, race or ethnicity, age, marital status, household composition, employment status, education, welfare use, income to poverty ratio, asset ownership, date of enrollment)	.23	.19	
2. Measured institutional characteristics (match rate, match cap, hours of general financial education, peer-group meetings, penalty enforcement, number of savings deposit locations, direct deposit)	.35	.30	.12**
3. Unobserved factors linked with programs (ADVOCAP, Inc., Alternatives Federal Credit Union, Bay Area IDA Collaborative, Central Texas Mutual Housing, Community Action Project of Tulsa, Okla., Heart of America Family Services, Human Solutions, MACED, Near Eastside IDA Program, Shorebank Corporation, Women's Self-Employment Project) ^a	.45	.39	.10**

^a See table 1 for descriptions of programs.

** $p < .01$.

nificantly more (\$9.66) than participants in programs that identified themselves as “strict” in enforcement ($b = 9.66, p < .01$).

Facilitation.—In this study, direct deposit is not statistically associated with savings ($b = 2.34, p = .45$; see table 4). This finding could be affected by the small proportion of IDA participants using direct deposit.

Expectations.—Measured by monthly savings target, the expectations construct is statistically associated with savings ($b = 0.29, p \leq .05$). Each additional dollar in monthly savings target is significantly associated with an additional \$0.29 in AMND.

Institutional Characteristics as a Block

Table 5 shows that, controlling for individual characteristics, institutional characteristics as a block significantly increase the variance explained in savings in an IDA among the microenterprise group. Individual characteristics as a block account for 23 percent of the variance in savings in an IDA program ($R^2 = 0.23$). Institutional characteristics, entered into the model as a block, increase the variable by 12 percentage points. 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. This change is also statistically significant ($p < .01$).¹⁰ Overall variance explained in model 3 (individual characteristics + measured institutional characteristics + program dummies) is 45 percent ($R^2 = 0.45$). This value is high compared with that found by most studies of saving performance, further indicating that models incorporating institutional variables may be more explanatory and useful than models that do not.

Discussion and Implications

Discussion

Overall, the findings of this study are consistent with evidence showing that some microentrepreneurs can save (see Anthony 1999; Rutherford 2000; Foundation for International Community Assistance [FINCA] 2002). The AMND for the microentrepreneurs in this study is \$18.70. Given the average match rate of 2:1, the microentrepreneurs accumulate \$56.10 per month on average (savings + match), or \$673.20 a year. This means that participants in 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. However, we do not know how the businesses actually performed.

Results of this study support the view that institutions matter in influencing savings opportunities and outcomes. If this is so, a positive role may exist for policy and programs designed to promote and subsidize savings for microenterprise.

Results also produce several specific points that may be important. Consistent with earlier studies on ADD (Schreiner et al. 2001, 2002), this study finds that general financial education may increase savings, but only up to a point. If the results are accurate, in order to cut down on program costs, IDA programs that require more than 12 hours of general financial education should reevaluate that requirement and perhaps reduce the number of hours.

The study also finds that expectations for saving may increase savings performance. These findings are consistent with those of Schreiner and associates (2001), who argue that higher savings targets are associated with higher savings because "participants change caps [saving expectations] into targets in their minds" (p. 66). This implies that setting a higher match cap may cause microentrepreneurs in IDA programs to take advantage of those higher caps, and more substantially capitalize their businesses.

The study also suggests that those programs more flexible in enforcing

rules may spur savings. This is not to suggest that programs should not enforce rules but perhaps that they should be mindful of the fact that a considerable number of IDA participants, regardless of their desire to save, have constraints. Results further indicate that the number of savings deposit locations is positively associated with savings among the microenterprise group participants in ADD. This would be expected because of the convenience and reduced transaction costs associated with more savings deposit locations.

Regarding match rate, the results indicate that participants who receive a match rate of 1 : 1 save less compared with participants who receive a match rate of 2 : 1 (the reference group). However, there is no statistically significant difference between participants who receive a match rate between 2.5 : 1 and 6 : 1, on the one hand, and participants who receive a match rate of 2 : 1, on the other. This suggests that financial incentives may provide motivation to save, but only up to a point.

Individual development account programs that use peer-group meetings are shown to register higher levels of savings, suggesting that programs may want to consider incorporating peer-group meetings within program designs. On the other hand, direct deposit is not statistically associated with savings, although examples from in-depth interviews (not presented here) suggest that, when direct deposit is available, participants appreciate it. Also, Sherraden, Schreiner, and Beverly (2003) find that direct deposit may be a positive feature of IDA programs. It appears to help people as savers in the IDA program.

Three limitations of this study should be highlighted. First, the IDA participants are not a random sample. They are both self-selected and program selected. As Schreiner and colleagues (2001) observe, IDA programs target certain people, and those 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 would perform overall in an IDA program. Second, the individual characteristics analyzed in this study were recorded at enrollment. Some of the characteristics that may directly influence saving outcomes could change. Third, lack of control in the data 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 of a control group. While one of the study methods in ADD is an experiment with a control group, those data are not yet available.

Implications

The data most generally suggest that IDA programs intending to integrate savings into microenterprise should focus not solely on individual

characteristics but also on institutional characteristics. That is, program implementation plans should focus not simply on changing individual traits but also on creating institutional structures and incentives that facilitate savings.

What will happen to ADD participants in the future? It seems likely that microentrepreneurs in ADD are responding to institutional structures and incentives in IDA programs. When these structures and incentives are removed, the best guess is that savings will decline. To take a comparative example, it is very likely that middle-class workers would save less for retirement if their 401(k) programs no longer existed.

Still, harnessing institutional factors can be challenging. For example, results suggest that, although the size of the match rate beyond 2 : 1 may not be important, some degree of incentives matters: participants who receive a match rate of 1:1 save significantly less compared with participants who receive a match rate of 2 : 1. Above 2 : 1, match rate appears to have no effect on savings. This finding is consistent with several studies on savings patterns in 401(k) plans (see Kusko, Poterba, and Wilcox 1994; Papke 1995; Engen, Gale, and Scholz 1996). For example, using plan-level data from Internal Revenue Service form 5500 filings, Leslie 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 Andrea Kusko, James Poterba, and David Wilcox (1994) considers participation and contribution by employees in a 401(k) plan. The study finds that higher match rates have little effect on either participation or contribution. One plausible part of the explanation is that a positive match is necessary to get people to save, but the total effect of this incentive occurs at modest levels of match. Another plausible part of the explanation is that at higher match rates, the income effect begins to counter the incentives effect, perhaps even overwhelming it. This latter explanation is consistent with the findings of Papke (1995; see above).

Match rate has other important purposes besides incentivizing savings. With higher match rates, assets accumulate faster, and more rapid growth of assets may be a legitimate policy objective. Indeed, asset accumulation may be the primary policy objective.

As Sherraden (1991) observes, current policy already provides substantial subsidies and structures to encourage asset accumulation for the nonpoor. Why should we not aim to do the same for the poor? If this is to be achieved, it will be important to learn more about how institutional characteristics affect saving performance for microentrepreneurs, as well as others who are involved in IDAs and other asset-building programs.

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Notes

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1. The terms "microenterprise," "microbusiness," and "small business" are often used interchangeably, even though their meanings can be distinct. Because some of the studies reviewed here do not make distinctions among these concepts, the concepts are used interchangeably in this study to mean a small business that has fewer than five employees

(including the owner or microentrepreneur) and that generally lacks access to conventional loans, equity, or other banking services (for details, see U.S. Small Business Administration [SBA] 2002).

2. An alternative phrase might be savings-led microenterprise programs. Individual development accounts for microenterprise have a somewhat different meaning because IDAs are matched (or subsidized) savings.

3. In this article, the term “institution” is used in a particular sense of formal policy and program arrangements. The usage does not include informal social arrangements or social norms. We take this focus because it has direct public policy implications. That is the purpose of this applied research. Thus, our theoretical perspective is purposefully selected for both intellectual and applied reasons.

4. The MIS IDA generates a comprehensive database on program and participant characteristics. The IDA staff record five types of data in MIS IDA: account-structure parameters at the start of the program, socioeconomic 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, and Sherraden 2000).

5. 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 year of participation. Time cap is the number of months after opening an account in which a participant may make matchable deposits. We extract all microentrepreneurs from MIS IDA data because that is the group of interest in this study. For two reasons, we believe there is no possibility of selecting participants with zero deposits. First, as indicated in the data section of the article, the saving transaction data used in this study come from financial institutions. Each participant in the sample has an IDA account with a financial institution. None of the participants included in the study had a zero deposit because obtaining a savings account with any financial institution requires account holders to make a deposit at least at the time of opening the account. Second, 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 et al. 2002), and reports are cross-checked. Programs are then asked to correct missing or inconsistent data. This extra step significantly improves the quality of data.

6. Although unmatchable deposits constitute money in the bank, they are in excess of match caps or they are deposits after the time cap period. This means that these balances are not eligible for matching funds. In subsidized savings programs, excluding match-ineligible balances in calculating savings ensures standardization and reliability of the savings measure and avoids a potential bias.

7. For employment status, participants are asked to choose from a list of choices that include the following: employed more than full-time (overtime, or working more than one job); employed full-time (35–40 hours per week); employed part-time (up to 35 hours per week); 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; and unknown. These groups are later condensed into four main groups: employed full-time (>35 hours per week), employed part-time (<35 hours per week), unemployed or not working, and student. For receipt of welfare, the variable includes receipt of either Aid to Families with Dependent Children (AFDC) or its successor, Temporary Assistance for Needy Families (TANF).

8. The match rates reported here were obtained from MIS IDA, and they were cross-checked and confirmed with the program survey conducted across the 14 ADD programs.

9. Participants working part-time, the unemployed or not working, and students do not differ from participants employed full-time to a statistically significant degree on savings. Those who are employed full-time compose the reference group.

10. In order to avoid a multicollinearity problem with other variables in the regression, program dummies (unobserved factors linked with programs) are used only in the hierarchical regression testing for the increment in the variance explained. They are excluded when analyzing the influence of each independent variable. If not addressed, multicollinearity may affect the precision of estimation (although not necessarily its correctness).