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A Comparative Analysis of Rural and Urban Saving Performance in Individual Development Accounts

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Abstract: *The purpose of this study was to examine the predictors of savings outcomes for rural and urban participants in IDA programs. Multivariate analyses by residency were used to explore the experiences of rural and urban participants. A short survey among rural IDA administrators in ADD was used to identify the challenges associated with managing IDAs in these regions. Finally, conclusions and policy implications are presented.*

Keywords: individual development account, rural/urban savings, race, banked/unbanked, financial education

Recently, the need for and the potential of asset accumulation for the poor has started gaining importance. Possessing assets can enable low-income individuals to respond to opportunities, to expand their economic, political, and social position, and to gain control over their lives (World Bank, 2001). Traditionally, social policy in the United States has relied on consumption-based maintenance programs to aid the poor. Nevertheless, social policy proposals in the last decade have witnessed the emergence of more investment-oriented anti-poverty strategies. For example, Sherraden's (1991) work on asset-based welfare theory proposes policy that aids and encourages savings and asset-accumulation among the poor under the assumption that the acquisition and ownership of assets improve financial, psychological, and sociological well-being. One such policy initiative is Individual Development Accounts (IDAs). IDAs are matched savings accounts. Unlike savings accounts such as Individual Retirement Accounts (IRAs) or 401(k) plans, IDAs are targeted at the poor and provide subsidies through matches rather than through tax breaks. Savings are used for specific asset building purposes including home purchase, post-secondary education, and microenterprise.

In addition, most current United States poverty reducing strategies concentrate on broad national programs that do not always take local community factors into consideration. However, different geographical locations yield different economic circumstances for their specific populations. Consequently, when location is examined, observable differences exist between rural and urban communities in regard to the poverty challenges faced in each of these regions (Satterthwaite, 2000). These disparities make it critical to examine the areas separately so that the most appropriate anti-poverty approach may be applied to produce the best outcomes in each community.

The purpose of this study is to examine the unique experiences and outcomes of urban and rural participants in IDA programs. The following questions will be addressed:

1. Is there a difference in savings between rural and urban participants in IDAs?
2. What are the specific and unique experiences of rural and urban participants in IDA programs?
3. What do administrators perceive as important differences between rural and urban IDA programs?

This study will use the 1995 United States Census Bureau definition which defines urban as "comprising all territory, population, and housing units in urbanized areas, and in places of 2,500 or more persons outside urbanized areas…. territory, population, and housing units not classified as urban constitute rural."

Literature Review

Theories Regarding Savings Among Low-income Households

Theorists from a variety of disciplines emphasize lifetime economic resources and individual preferences in explaining savings behavior in the general population. The predominant theories of savings and asset accumulation are the Neo-classical economic theories. The two mainstream economic theories of savings are the life-cycle hypothesis (Modingliani & Ando, 1957) and

permanent-income hypothesis (Friedman, 1957), which argue that consumption is not determined by current income alone, but by long-term considerations. According to these theories, income varies systematically over a person's lifetime, and people use savings as a way to smooth consumption by moving income from those times in life when income is high to other times when income is low.

The downside to these theories is that they are oversimplified and biased toward middle and upper income groups (Beverly, 1997). The U-shape that reflects the age-savings patterns, which are predicted by the life-cycle hypothesis and characterized by higher income households, fail to hold true for low-income households (Deaton, 1991; Ziliak, 1999). Social-psychological and behavioral saving theories (e.g. Duesenberry, 1949; Katona, 1975; Thaler & Shefrin; 1981) offer richer explanations, but still fail to address savings behavior in low-income households. Yet, research suggests that poor households do have the ability and willingness to save given the opportunity (Beverly, 1997; Moore et al., 2001).

Beverly & Sherraden (1999) introduced and later modified (Sherraden, Schreiner, & Beverly, 2003) an institutional savings model that identifies six categories of institutional variables they consider instrumental in individual asset accumulation:

1) Access - people who have access to institutionalized mechanisms are more likely to have higher saving rates than those who lack access.
2) Financial Education – the extent to which people understand the process and rewards of saving is likely to have a positive affect on their motivation to save.
3) Incentives – people are likely to save more when the enticements are more advantageous to them.
4) Facilitation – people who are provided assistance during their saving process are more likely to have higher saving rates than those who are not provided assistance.
5) Expectations – people who have specific savings expectations are more likely to save more than those who don't have savings expectations.
6) Limits - when restrictions and controls are put in place to discourage negative saving, people are less likely to withdrawal their savings.

This approach posits that savings behavior may be influenced by exogenous factors and that limited opportunities to participate in existing institutional saving mechanisms might help explain low savings and asset accumulation among poor households (Sherraden, Schreiner, & Beverly 2002). This model represents the underlying theory behind policy initiatives such as IDAs.

Poverty Differences Among Rural and Urban Communities

One of the major challenges policymakers face today is the elimination of poverty (Grameen Communications, 1999). Yet, depending on what area a person lives in, rural or urban, the circumstances surrounding his/her poverty experience may be different. The distinctive poverty characteristics of each area have led many researchers to study the challenges of rural and urban poverty separately in order to help policymakers make informed decisions on anti-poverty strategies that reflect the variations. In 2001, rural poverty rates were higher than urban poverty

rates, 14.2 percent compared to 11.1 percent, respectively (United States Bureau of Labor & United States Bureau of the Census, 2001). For racial composition, although there were more poor African Americans in urban areas (26 percent) compared to rural areas (19 percent), the poverty rate for rural African Americans (31 percent) was higher than urban African Americans (21 percent). White poverty rates were 9 percent in urban areas and 12 percent in rural areas (United States Census Bureau, 2001).

When other demographics are assessed, the urban poor seem to rely on public assistance more than rural poor and are less likely to be married (Ohio State University, n.d.). Furthermore, the urban poor are more likely to be educated, but less likely to be employed compared to rural poor, who have a higher percentage of working poor (Brown & Hirschl, 1995). Unemployment in urban areas is more a matter of skills versus job availability (Lakes, 1996), whereas in rural areas it is more of a labor shortage coupled with low wages (Besser, 1996). And because the population and space in rural areas is less dense, infrastructure is not as developed, leaving rural residents with fewer resources and higher costs for services such as health care, social services, licensed day care providers and transportation. Eighty percent of rural areas lack public transportation compared to 2 percent of urban areas.

In addition, empirical evidence also suggests that a difference exists between rural and urban poverty experiences. In a study of the relationship between rural and urban locations, welfare policies, and the employment of single mothers, it was found that rural mothers are more likely to be employed than urban mothers, but the jobs tend to be low-paying or part time (McKernan, Lerman, Pindus, & Valente, 2000). Another study looking at urban and rural differences in the Minnesota Family Investment Program (MFIP), a program that rewards work by allowing working welfare recipients to keep more of their cash assistance checks (Gennetian, Redcross, & Miller, 2000), found that urban participants fared better in the program with regard to higher employment rates and higher earnings. Rural participants had positive results, but they were lower than urban participants and the effects dropped off considerably after two years.

Research Design and Methodology

Data

This study utilized a combination of two data sets, the Downpayments on the American Dream Policy Demonstration (ADD) and the Family Assets for Independence in Minnesota (FAIM) Project. ADD was the first large-scale test of IDAs. Beginning in 1997, the evaluation followed over 2,000 low-income (at 200 percent of the poverty line or less) participants at 14 community-based program sites across the United States for six years. ADD used an extensive multi-method research design to gather as much information as possible concerning the effectiveness of the programs in order to inform IDA policy and program development outside of ADD (Sherraden et al., 2000). Program staff collected data for the evaluation of ADD with the Management Information System for IDAs (MIS IDA). Savings data came from monthly passbook savings account records from depository institutions. This is possibly the best data on savings patterns among low-income families that exists today.

In the 1998 state legislative session, the Minnesota Community Action Agencies Association initiated IDA legislation. The purpose of the FAIM Pilot Project was to help working poor

Minnesotans build wealth and achieve long-term economic self-sufficiency. All participants with an income of 200 % or less of the poverty line were considered working poor (Grinstein-Weiss, Schreiner, Clancy, & Sherraden, 2001).

This study includes 2865 IDA participants; 2352 participants are from the 14 ADD programs, and 513 participants are from the FAIM program (see Appendix A for a description of the distribution of participant characteristics).

Limitations of Study

Some limitations of this study are important to note. Participants in IDA programs in ADD and FAIM are not a random sample of people eligible for IDAs. They are both program-selected, because of eligibility criteria, and self-selected, because they volunteer to participate in the program. Moreover, compared to the United States low-income population, participants in ADD and FAIM are better educated, more likely to be employed and more likely to have some form of bank account prior to the program. This is probably due to the fact that the program targets the "working-poor." Participants in ADD and FAIM are more likely to be female and never married. This pattern reflects the population that is served by community programs that offer IDAs (Sherraden et al., 2000). Therefore, our results reflect this segment of the population.

Measures

The main dependent variable in this study was *Average Monthly Net Deposits (AMND)*, and was defined as net deposits divided by months of participation. AMND was the key savings outcome used to measure savings performance in this study because greater AMND implies greater savings and asset accumulation in IDAs. The independent variables used included a wide range of participant demographic, financial, and program characteristics (see Appendix B for a list of variables with definitions).

Analyses

A one-tailed *t*-test for independent groups was performed to test differences between urban and rural AMND. To verify these results a multivariate regression was also run to assess the difference between rural and urban AMND when controlling for other factors. Then, with the aim of exploring the unique experiences of rural and urban participants in IDA programs, two separate regression models were executed by residency, one for rural participants and one for urban participants. The unstandardized regression coefficients estimated by this technique give the estimated changes in AMND (in units of dollars of net deposits per month) given a unit of increase in a given characteristic, holding all other independent variables constant.

In addition, administrators and staff from the three ADD programs that primarily serviced rural participants (62 percent of participants or more) were sent a short survey asking them to identify the advantages and challenges associated with implementing and managing rural IDA programs in comparison to non-rural programs.

Results

The results of the *t*-test revealed that the difference between urban ($26) and rural ($23) AMND was significant [t=2.45, p=0.014]. However, when a regression was run controlling for other factors, the variation between the two outcomes was unimportant [t=-1.237, p=0.185], indicating that no significant difference in the savings amount between the two groups existed. Results from the two individual regressions showed that race, hours of financial education, and the frequency of deposits were associated with AMND. While these three independent variables were the only predictors of AMND among the rural population, the urban population included several additional independent variables that are associated with AMND: education, income, income/poverty ratio, match rate, and having either a savings or checking account.

Table 1. Regression Results

	Rural			Urban		
Independent Variables	Unstandardized Beta	t-value	p-value	Unstandardized Beta	t-value	p-value
General						
Female	-0.02	-0.01	0.99	1.61	1.10	0.27
Age - 40 or under	0.06	0.41	0.69	0.18	1.95	0.05*
Age - over 40	0.05	0.34	0.74	-0.16	-1.35	0.18
Race/Ethnicity						
Caucasian (reference group)						
African American	0.23	0.08	0.94	-2.37	-1.86	0.06
Asian-Amer. or Pacific	-5.70	-0.64	0.52	7.81	2.38	0.02*
Hispanic or Latino	-2.85	-0.61	0.54	3.33	1.72	0.09
Native American	6.48	2.50	0.01**	-4.72	-1.45	0.15
Other Ethnicity	1.65	0.34	0.74	6.81	2.12	0.03*
Education						
Completed 4-year Degree or More (reference group)						
Completed 2-year Degree	-3.18	-0.97	0.33	-8.39	2.12	0.01**
Completed a Degree, Unspec.	1.57	0.48	0.63	-4.88	-2.74	0.04*
Attended College	-1.96	-0.87	0.38	-3.70	-2.07	0.04*
High School Diploma or GED	-0.90	-0.38	0.71	-4.79	-2.43	0.02*
No High School Diploma	-3.46	-1.06	0.29	-4.34	-1.92	0.06
Employment						
Employed Full-time (reference group)						
Employed Part-time	-0.66	-0.38	0.70	-0.37	-0.29	0.78
Unemployed	-2.52	-0.39	0.70	-3.92	-1.58	0.11
Not Working	-0.95	-0.24	0.81	-0.33	-0.13	0.90
Student, not Working	1.29	0.27	0.79	3.00	1.21	0.23
Student, also Working	2.53	0.79	0.43	2.97	1.11	0.27
Marital						
Married (reference group)						
Never Married	-0.54	-0.22	0.83	-0.21	-0.12	0.91
Divorced or Separated	2.06	0.79	0.43	-2.73	-1.44	0.15
Widowed	6.95	1.06	2.90	2.31	0.56	0.58
Household Composition						
Household Size	0.20	0.23	0.82	0.25	0.48	0.63

*P Ω 0.05

**P Ω 0.01

Table 1. Continued

	Rural			Urban		
Independent Variables	Unstandardized Beta Coefficient	t-value	p-value	Unstandardized Beta Coefficient	t-value	p-value
Income						
Total Income	-0.48	-1.77	0.08	0.51	4.59	0.00**
Income/Poverty Ratio	5.48	1.81	0.07	-2.47	-2.69	0.01**
Receipt of Public Assistance						
Currently on TANF	-2.13	-0.87	0.38	0.29	0.15	0.88
Never on TANF	-1.50	-0.95	0.34	2.33	1.92	0.06
Assets						
Own Car	-2.28	-1.16	0.25	1.16	0.98	0.33
Own Home	1.76	1.04	0.30	0.43	0.27	0.79
Own Business	1.58	0.72	0.47	0.20	0.11	0.91
Account Structure						
Checking or Savings Account	-0.51	-0.25	0.80	4.94	3.54	0.00**
Direct Deposit	2.97	1.32	0.19	-2.25	-1.13	0.26
Deposit Frequency	32.64	11.39	0.00**	40.01	20.17	0.00**
Financial Education						
No Financial Education	-18.84	-2.35	0.02*	7.07	1.74	0.08
1 to 6 Education Hours	-2.86	-1.87	0.06	1.67	2.27	0.02*
7 to 12 Education Hours	1.80	3.22	0.00**	1.19	3.58	0.00**
13 to 18 Education Hours	-0.78	-1.74	0.08	-1.21	-3.31	0.00**
19 or more Education Hours	5.48	5.56	0.00**	1.13	3.02	0.00**
Match Rate						
1:1	8.88	1.54	0.13	9.00	3.30	0.00**
2:1	2.36	0.41	0.68	7.00	2.75	0.01**
3:1	2.93	0.56	0.58	1.24	0.47	0.64
4:1	1.47	0.25	0.80	4.42	1.15	0.25

*P Ω 0.05

**P Ω 0.01

Race was significantly related to AMND for both rural and urban participants. Among the urban participants, Asian Americans, and the category "other ethnicity" were associated with higher AMND compared to Caucasians. More specifically, Asian American was associated with a $ 7.81 increase in AMND and the category "other ethnicity" was associated with a $6.81 increase in AMND compared to Caucasians. Among the rural population, however, being Native American was associated with a $6.48 increase in AMND.

Hours of financial education attended by participants were also statistically related to AMND in both models. For both urban and rural participants, an AMND increase of $1.19 and $1.80 respectively was linked with each additional hour of financial education within the range of 7 to 12 hours. For 19 hours or more of financial education, urban AMND was linked with a $1.13 increase and rural AMND was linked with a $5.48 increase. For urban participants only, each additional hour was associated with a $1.21 AMND decrease in the range of 13 to 18 hours. For rural participants only, not attending financial education classes was linked with a $18.84 decrease in AMND compared to participants who did attend classes. These results, however, should be interpreted with caution, since the majority of FAIM participants at the time of the study had not yet attended financial education classes. And out of the people who did attend, the majority had between 7 and 12 hours.

Another variable that appeared to be important was deposit frequency. Defined as the number of months with a deposit divided by the number of participation months, deposit frequency ranges between zero (no deposits) and unity (a deposit every month). It is expected that a person who deposits more often will have a higher AMND. The results indicated a statistically significant relationship between deposit frequency and AMND; a unit increase in deposit frequency was associated with a $40 increase in AMND for urban participants, and a $33 increase in AMND for rural participants: however, because the measure for this variable is between zero and one, the effects are only a proportion of the reported unit change. For example, AMND would be about $20 higher for an urban participant with a deposit frequency in the 75th percentile (71 percent) compared to AMND of an urban participant with deposit frequency in the 25th percentile (25 percent). This is still a large effect considering one extra monthly deposit a year would yield approximately a $3.30 increase in AMND.

The remaining variables were significantly related to AMND for urban participants, but not for rural participants. Urban IDA participants who had completed a 4-year college degree had a higher AMND than urban participants with only a high school degree ($4.79), with some college ($3.70), with a 2-year degree ($8.39), and with an unspecified degree ($4.88). Also, for urban participants, higher income was associated with higher AMND. Although, these results imply that urban participants with higher monthly income save more, it is a small effect. A $100 increase in total income is associated with a $0.51 increase in AMND.

Another variable, the income/poverty ratio was also associated with urban AMND. Findings suggested that participants with higher income-to-poverty ratios saved less than those with lower income-to-poverty ratios. A $2.47 decrease in AMND was linked with a unit increase in the income/poverty ratio. However, this is a very small amount when the unit is taken into consideration. For example, an increase in yearly income from 100 percent of the poverty line to 200 percent of the poverty line would show a decrease in AMND of approximately $2.47. These

results imply that even though higher income is associated with higher AMND, once the poverty level is introduced, the effects change, suggesting that unobserved variables might be affecting AMND.

Additionally, according to the regression results, a match rate of 1:1 was associated with a $9 increase in AMND for urban participants. A match rate of 2:1 was associated with about a $7 increase in AMND. The higher match rates of 3:1 and 4:1 were not significantly associated with AMND. These findings indicate that higher match rates do not necessarily produce higher savings amounts. On the contrary, of the two significant associations, 1:1 and 2:1, savings was higher with the lower match rate. Finally, urban participants who had either a checking or savings account (excluding their IDA account) had a $4.94 higher AMND than participants with no accounts. These findings suggest that having a previous relationship with a financial institution may help increase participant's savings amount. Whether the higher savings is due to participants taking greater advantage of IDA incentives or simply reshuffling funds from other accounts is not known (Schreiner et al., 2001).

Turning to the qualitative results, in the survey of IDA program administrators, the strongest theme to emerge for rural communities was trust. In general, an IDA participant's trust in their sponsoring organization is an important issue regardless of program location. The rural programs feel that they have a distinct advantage in this area over urban sites because in smaller communities, most people are familiar with the organization and are often aquatinted with the employees, allowing participants to feel more comfortable and less suspicious of the program.

Along these same lines, community-building seems to be more of an advantage in the rural areas compared to the urban areas. Because rural participants are not from the same neighborhoods and many times come from diverse backgrounds, the economic literacy classes bring them closer as they share and learn from each other's experiences. Urban areas, on the other hand, are better able to recruit participants because the population is not as scattered as in rural areas and information about the programs spread from person to person much quicker.

In terms of program objectives, the transaction costs involved in program participation seem to be more of an issue for certain activities in the rural areas compared to urban. Transaction costs are costs to participants in terms of time, convenience, and money associated with the perceived benefit of a particular action. Traveling to economic literacy classes or other program-sponsored meetings and making a deposit may generate a higher cost for rural participants because of the distance and travel time to get to specific locations. This is not as much of a problem for urban participants' because many times classes are held in establishments in the local neighborhoods. And finally, because of lack of strong economic infrastructure, rural areas tend to have fewer resources available that can provide adequate funding amounts or partner services, limiting program staff, resources and available matching funds.

Discussion

This study examines asset-building programs for low-income families in rural and urban areas. Specifically it asks if there is a difference between the two groups' savings outcomes, what the specific and unique experiences of rural and urban participants in the IDA programs are, and what program administrators identify as important differences between rural and urban IDA programs.

Although the results of this study suggest that there is no significant difference between each group's AMND, their IDA experiences differ from each other. The regression results that controlled for residency indicate that there are three common variables that help explain savings among both rural and urban IDA participants. However, for urban IDA participants only, several additional variables are associated with higher savings.

The first variable, deposit frequency, seems to be an important factor for both rural and urban participants. Participants who are more frequent depositors save at a higher rate than those who are less frequent depositors. Schreiner et al. (2001) suggest that high deposit frequencies, or frequent savings, may lead to higher savings because more frequent depositors may develop techniques and habits to put money aside for savings. Transaction costs may also make it more worthwhile for savers to make higher deposits.

Programs can use these findings to help develop guidelines that may encourage participants to make regular deposits. One way in which programs may increase participant deposit rates is by providing institutional mechanisms, such as direct deposit that facilitates savings behavior. The most recent research on IDAs, found that direct deposit is associated with being a "saver" (Schreiner et al., 2002). Savers are defined as those participants who saved a net of $100 or more as of December 31, 2001. Only 7.5 percent rural and 6.2 percent urban participants in this study used direct deposit.

A second important predictor for both settings is financial education. Empirical evidence suggests that when financial education is offered to employees, participation levels as well as contribution levels in some cases are higher in 401(k)s (Bayer, Bernheim, & Sholtz, 1996; Bernheim & Garrett, 1996). Although results differed between the rural and urban groups on various levels of financial education, both areas reported higher savings amounts for participants who attended between 7 and 12 hours of financial education. When the percentage of financial education hours taken is examined, 23 percent of the rural population took no financial education. Furthermore, urban areas reported that 42 percent took 7 to 12 hours of financial education compared to 28.6 percent in rural areas. In addition, the significant findings in the rural group showing higher savings amounts for participants taking financial education compared to those who have not taken any should be considered. Based on these findings, policymakers and program designers could implement financial education as an initial program requirement, offering between 7 to 12 hours of education, with rural participants attending classes as early in the program as possible.

The third common predicting variable is race. In urban areas, Asian and "other ethnicity" save more than Caucasians. In rural areas, Native Americans save more than Caucasians. This could

be an indication that various ethnicities may have distinct IDA experiences that are unique to each region, suggesting that policymakers and program administrators should keep the racial composition for each area under consideration when designing programs in order to better assess their specific needs.

For the urban population, it seems that participants save more if they are "banked", demonstrating that existing relationships with financial institutions may encourage higher saving amounts. According to the Federal Reserve Board's 1995 Survey of Consumer Finances, many low-income individuals have little or no experiences with financial institutions. Furthermore, the "unbanked" are more likely to be racial minorities, female headed-households, low-income individuals and younger people (Woodstock Institute, 2000). In a recent survey, several reasons were cited for being "unbanked" including charges imposed by financial institutions, difficulties of establishing credit, inconvenience due to location, lack of trust in institutions and lack of information regarding options available (Woodstock Institute, 2000). Program administrators, therefore, might concentrate more on the "unbanked" population and try to provide more support staff and financial counseling to facilitate stronger relationships between the "unbanked" and financial intuitions.

For IDAs, match rates are considered incentives. However, research on 401(k)s suggest that match rates beyond 0.25:1 do not seem to encourage saving (Basset, Feming, & Rodrigues, 1998; Bernheim & Scholz, 1993; Kusko, Porterba, & Wilcox, 1994). Furthermore, results from the ADD evaluation on IDAs also indicate that higher match rates are not associated with greater savings (Schreiner et al., 2001). In this study, higher match rates did not predict higher savings for either group; on the contrary, in the urban areas, the 2:1 match rate predicted a lower savings amount than the 1:1 match rate. According to Sherraden, Schreiner, and Beverly (2003), several explanations are probable for this outcome. Some programs may expect their participants to save less regardless of the match rate and, therefore, set higher match rates; again, regardless of match rate, participants may try to use all their match eligibility; and if a particular asset goal is set in the beginning, the higher match rate allows the participant to save less, but still reach his or her goal. Finally, the income/poverty ratio is associated with savings in urban areas. The higher the income/poverty ratio, the lower the savings amount.

When the qualitative results are examined, two important themes emerge from rural programs in particular that might help explain some of the differences in rural and urban savings outcomes. Administrators suggest that transportation issues are a problem for rural participants. These participants find it harder to attend classes because of the distance and time involved in getting to them. Also, as mentioned earlier, because of the lack of public transportation systems in rural areas, participants without reliable transportation are often times isolated. As a result, transportation problems may contribute to the low attendance of financial education classes among rural participants.

Lastly, rural programs cite funding sources as a problem. Because of the lack of economic infrastructure, the availability of funding organizations as well as partner organizations that presently assist many of the urban programs do not exist in rural areas. What this means is fewer resources and, therefore, fewer benefits to rural participants in terms of the availability, quality

and flexibility of options, services and staff connected with IDAs. The qualitative results may also help explain the low participation in financial education for rural participants.

The results found in this study can be used to help policymakers and program administrators design IDA programs that specifically address the needs of each area and maximize the usefulness of IDAs in both areas. It appears that institutional characteristics play an important part in the savings behavior of all participants, indicating that more research should be done on institutional theory to provide policymakers with a better understanding of the precise role of institutions in the facilitation of saving and asset accumulation among disadvantaged populations who generally do not have access to institutionalized savings mechanisms. Some of the recommendations that arise here involve a trade off between increasing the effectiveness of the programs (by providing more staff support to the less advantaged, increasing the amount of financial education, and implementing direct deposit) and raising the program costs; therefore, the critical challenge here is to find out what is the most efficient and cost-effective program design for each group that will reach the largest amount of people and have the potential of becoming an universal, progressive asset-based policy (Sherraden, 2002).

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Appendix A. Participant Characteristics Rural (n=479) vs. Urban (n=2385)

Demographics		
Gender	**Rural %**	**Urban %**
Female	79.1	80.6
Male	20.9	19.4
Race/Ethnicity		
African American	8.6	47.5
Asian-American or Pacific Islander	0.4	2.6
Caucasian	76.4	35.2
Hispanic	1.9	9.1
Native American	10.9	2.8
Other	1.9	2.7
Age		
13 to 19	6.5	3.0
20s	19.6	26.3
30s	37.8	36.8
40s	28.6	24.5
50s	5.8	7.1
60 to 72	1.6	1.9
Missing	0.2	0.4
Household Composition		
Marital Status	**Rural %**	**Urban %**
Never Married	38.0	50.3
Married	29.2	18.6
Divorced or Separated	29.9	26.0
Widowed	1.5	2.0
Missing	1.5	3.1
Household Type		
One Adult with Children	40.9	47.5
One Adult without Children	10.4	14.7
Two or more Adults with Children	39.0	26.9
Two or more Adults/No Children	7.5	7.0
Missing	2.1	3.9

Education and Employment		
Education	**Rural %**	**Urban %**
No High School Diploma	12.9	14.1
High School Diploma or GED	25.9	24.4
Attended College	34.0	38.9
Completed 2-year Degree	5.4	4.0
Completed 4-year	11.1	9.2
College Degree, Unspecified	9.6	9.0
Missing	1.0	0.4
Employment		
Employed Full-time	53.0	59.0
Employed Part-time	32.8	23.2
Unemployed	2.1	4.7
Not Working	4.2	4.0
Student, not Working	3.3	5.1
Student, also Working	4.4	3.8
Missing	0.2	0.3
Self-Employed		
Yes	21.7	15.8
No	78.3	84.2

Appendix A. Continued

Financial		
Income/Poverty (%)	**Rural %**	**Urban %**
0 to 49	19.4	19.0
50 to 74	16.3	11.5
75 to 99	19	15.3
100 to 124	15	15.0
125 to 149	11.9	13.1
150 to 174	8.4	9.2
175 to 199	2.7	5.8
200 to 327	1.3	8.3
Missing	6.1	2.7
Receipt of AFDC/TANF		
Never	50.3	55.0
Formerly	44.7	41.3
Currently	11.1	10.6
Missing	4.8	2.3
Home Ownership		
Yes	34.0	13.2
No	65.8	86.2
Vehicle Ownership		
Yes	80.2	63.6
No	19.6	34.2
Matchable Uses		
Home Purchase	48.4	55.7
Micro-enterprise	24.6	18.4
Post-secondary Education	18	15.5
Home Repair	7.9	4.8
Job Training	1.5	1.9
Retirement	0.6	4.3

Financial - Continued		
Direct Deposit to IDA	**Rural %**	**Urban %**
Yes	7.5	6.2
No	67.6	83.9
Missing	24.8	9.9
Bank Account		
Passbook Savings	47.6	52.3
Checking	68.9	67.1
Both	35.5	40.2
Either	81.0	79.2
Hours of General Financial Education		
Zero	23	14.5
1 to 6	10.2	19.8
7 to 12	28.6	42.0
13 to 18	24.2	12.6
19 or More	7.3	1.4
Missing	6.7	9.6

Appendix B. Independent Variables

Gender. A nominal dichotomous variable that indicates whether a participant is female or male. Females constitute 80 percent while males constitute 20 percent of this data set.

Age. Age is a ratio variable describing the age of each participant. For this analysis the variable is split into a spline with one joint at age 40: *age40* are those participants who are 40 years of age and younger; and *age_41* are those participants who are 41 years of age or older. In regression analysis, dividing the age variable into a spline allows the effect on the expected value of the dependent variable to be more specific to a particular age range (in this case, age40 and age_41) instead of assuming the same linear effect across the whole age range.

Race/ethnicity. A nominal level polychotomous variable that asks the participant to identify his/her race/ethnicity. The options are African American, Caucasian, Latino or Hispanic, Asian American or Pacific Islander, Native American and "other" category. For this analysis, each category was set up as a dummy variable creating six new individual variables.

Education. A nominal level polychotomous variable asking participants for their highest grade completed. Options are "do not have a high school diploma," "have a high-school diploma or equivalent," "some college but no degree," "2-year college degree," "unspecified college degree," and "4-year college degree or more," For this analysis, each category was set up as a dummy variable creating five individual variables.

Employment. Another nominal level polychotomous variable, employment describes the employment status of participants. They include "employed full-time (35-40 hours)," "part-time (up to 35 hours)," "unemployed (current looking for work)", "not working, (not seeking work)," "student, not employed," and "student, employed." For this analysis, each category was set up as a dummy variable creating six new individual variables.

Marital status. A nominal level polychotomous variable that describes the marital status of each participant. Categories include married, never married, separated or divorced, and widowed. For this analysis, each category was set up as a dummy variable creating four new individual variables.

Household size. A ratio variable calculated by adding together the number of adults (18 years of age or older) and children (17 years or younger) living in a household.

Dependency ratio. A ratio level variable, the dependency ratio is calculated by dividing the household size by the number of adults in the household.

Income total. This ratio level variable is the sum of each participant's reported monthly household income. These earnings could come from a variety of sources including formal employment, self-employment, government assistance, investments, retirement plans, and friends and family.

Appendix B. Continued

Income/poverty level. This ratio level variable is derived by multiplying the participant's monthly income by 12 and then dividing it by the official family-size-adjusted poverty guideline.

Receipt of TANF/AFDC. This category is measured using two different variables; both are nominal and dichotomous. *Tanf_now* asks whether a participant is currently on TANF or not; and *tanfnvr*, asks whether a participant has never received TANF.

Car ownership. A nominal dichotomous variable that indicates whether a participant owns a car. Sixty-five percent of participants own a car. Three cases are missing.

Home ownership. A nominal dichotomous variable that indicates whether a participant owns a home.

Business ownership. A nominal dichotomous variable that indicates whether a participant owns a business.

Passbook savings or checking account. This is a nominal dichotomous variable. It determines if participants have either a checking or savings account ("banked" or "unbanked").

Direct deposit. A is a nominal dichotomous variable that asks whether a participant participates in direct deposit.

Hours of financial education. This is a ratio level variable that depicts the number of financial education hours a participant has taken. For the same reason a spline was created for the age variable, one is created for hours of financial education as well. However, this spline is divided into 4 segments at 6 hours (*finged6*), 12 hours (*finged12*), 18 hours (*finged18*) and hours after 18 (*fined99*). For those participants who have had no financial education (*finged0*), a dummy-coded variable was created.

Match rate. This ratio level variable describes the match rates for participant's accumulated savings. They are 1:1, 2:1, 3:1, and 4:1.