# Working Paper

### Saving Performance in Individual Development Accounts: Does Marital Status Matter?

Michal Grinstein-Weiss, Min Zhan, and Michael Sherraden

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#### Saving Performance in Individual Development Accounts: Does Marital Status Matter?

Michal Grinstein-Weiss, MSW Center for Social Development, Washington University in St. Louis mgw1@wustl.edu

Min Zhan, Ph.D. School of Social Work University of Illinois at Urbana-Champaign mzhan@uiuc.edu

Michael Sherraden, Ph.D. Center for Social Development, Washington University in St. Louis sherrad@wustl.edu

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Center for Social Development George Warren Brown School of Social Work Washington University One Brookings Drive Campus Box 1196 St. Louis, MO 63130 tel 314-935-7433 fax 314-935-8661 e-mail: csd@wustl.edu http://gwbweb.wustl.edu/csd

#### Abstract

Research indicates that marriage has a large effect on reducing the risk of poverty and is associated with a higher probability of attaining affluence over the life course when compared with nonmarriage. Using data from the American Dream Demonstration (N = 2,364), this study compares savings performances of married and unmarried low income participants in a matched savings program – Individual Development Accounts (IDAs). The results indicate that both married and unmarried low income participants can save in IDA programs; however, unmarried participants are saving less than married participants. We further examine possible factors that are associated with savings performance for these two groups. Implications for policy makers and program administrators to better address the needs of unmarried participants are given.

Marriage has a large effect on reducing the risk of poverty. A number of studies have indicated that unmarried individuals and single-parent families are more likely to live in poverty than their married counterparts (Blank, 1997; Furstenberg, 1990; Garfinkel & McLanahan, 1986; U.S. Bureau of the Census, 2001; White & Rogers, 2000). Compared to married couples, unmarried people also save much lower portions of their income and accumulate fewer assets. For example, several studies have indicated that married-couple households have significantly higher wealth than other types of households (Waite, 1995; Wilmoth & Koso, 2002) and that marriage is associated with a higher probability of attaining affluence over the life course when compared with nonmarriage (Hirschl, Altobelli, & Rank, 2003). The limited accumulation of assets in single-parent families has been increasingly recognized as an important contributing factor to the high poverty rate within this family type. Lack of assets contributes not only to the low economic status of single-parent families but, maybe more important, restricts their economic mobility (Cho, 1999; Rocha, 1997; Sherraden, 1991).

In the last decade, the importance of assets and wealth accumulation as a development strategy is gaining ground in both academic and policy settings (Oliver & Shapiro, 1995; Shapiro & Wolff, 2001; Sherraden, 1991). Theory and evidence indicate that accumulation of assets can promote economic and social development of individuals and families, which include personal wellbeing, economic security, family stability, and civic behavior (Scanlon & Page-Adams, 2001; Sherraden, 1991). Recently, a wide variety of public policies have been developed to promote assets ownership among low-income families. One such policy is the Individual Development Accounts (IDAs). IDAs are saving programs targeted to low-income people and provide incentives and an institutional structure for saving. Account holders receive matching funds as they save for assets that promote long-term well-being and financial self-sufficiency such as a home, post-secondary education, or microenterprise (Sherraden, 1988,1991).

In order to design programs that facilitate savings and asset accumulation for unmarried individuals and single-parent families, it is necessary to examine whether unmarried people can save and under what circumstances. The purpose of this study is to examine and compare savings performance and related factors of married and unmarried participants in IDA programs. We begin by reviewing theoretical frameworks of saving and empirical evidence on the relationship between marital status and saving. After the description of characteristics of IDA participants and bivariate analyses on savings of married and unmarried participants, regression analyses are conducted to examine how different factors are related to savings of married and unmarried people in IDAs. Finally, policy and practice implications are discussed.

#### **Theoretical Frameworks of Savings**

#### **Economic theories of saving**

The two mainstream economic theories of saving are the life-cycle hypothesis (Modigliani & Ando, 1957; Modigliani & Brumberg, 1954) and permanent-income hypothesis (Friedman, 1957). The life-cycle hypothesis assumes that consumption is primarily a function of long-term income, and consumption and saving will represent an individual's age or stage in the life cycle. The permanent-income hypothesis emphasizes that people constantly face random and temporary changes in their income. Household consumption and savings reflect, in part, the differences of the relative share of long-term average income (permanent income) and transitory income.

Further, the individuals' consumption habits may change only when people are experiencing changes in their permanent income. Both of these theories imply that income is a major determinant of savings (Deaton, 1992). This theoretical summary borrows from Beverly and Sherraden (1999).

From an economic perspective, marriage has several characteristics that may enhance wealth accumulation (Becker, 1981; Lupton & Smith, 2003; Schoeni, 1995; Waite, 1995; Waite & Gallagher, 2000; Wilmoth & Koso, 2002). First, the total product of a married couple is larger than the sum of the outputs of each produced separately. Second, the institution of marriage involves long-term commitment in which a division of labor enables each spouse to specialize in specific skills and duties. This specialization increases the productivity and the efficiency of the household. Third, economies of scale in consumption suggest that a married couple may achieve the same utility with less combined expenditure than the sum of their individual consumption if living apart. Fourth, the requirements and expectations of married (versus single) life may encourage people to buy a house, save for children's education, and acquire cars and other assets. Fifth, there is persistent evidence that married men earn more than unmarried men. Sixth, the institution of marriage expands one's social network and social support, which may result in additional opportunities and benefits that lead to saving. Finally, married individuals may have access to many benefits such as health and life insurance provided by the spouse's employment.

#### Institutional theory of saving

One of the drawbacks of the economic theories of saving is that they are biased toward higher income groups (Beverly, 1997). The institutional model of saving posits that institutional factors other than income and preferences may play an important role in promoting savings (Beverly & Sherraden, 1999; Sherraden, 1991; Sherraden, Schreiner, & Beverly, 2003). A fundamental difference between this perspective and the traditional neoclassical economic theory is in the way savings are being generated. While the traditional economic theory views saving as a result of individual choices, this theory suggests that savings occur in households largely through institutional arrangements. Asset accumulation is structured and often subsidized through institutional arrangements. In the majority of households, unstructured savings, which are left over from income minus consumption, are likely to be smaller than asset accumulation generated by institutional arrangements.

Specifically, Beverly and Sherraden (1999) propose four institutional determinants of savings: institutionalized saving mechanisms (*access*), targeted *financial education*, attractive saving *incentives* (e.g., matched savings), and *facilitation* (e.g., payroll deduction). These four were originally specified by Sherraden, (1999) in the Center for Social Development web pages under "Key Questions in Asset Building Research." Sherraden, Schreiner and Beverly (2003) further suggest that specific savings *expectations* and the relaxation of savings *limits* and restrictions can help people save. From this viewpoint, a major reason that low-income households save less is that they lack the access to incentives or institutions that promote and subsidize asset accumulation (Howard, 1997; Seidman, 2001; Sherraden, 1991, 2001). For example, the nonpoor can save for retirement through institutionalized mechanisms with tax benefits; the poor, on the other hand, are much less likely to have jobs with pension benefits, thus their savings opportunities for retirement are more limited.

Although further empirical evidence is needed, results of a number of studies support the propositions of the institutional view of savings. For example, the role that access plays in promoting saving can be shown in statistical evidence of the inequality in pension coverage and accumulation rates (Orszag & Greenstein, 2000). In terms of financial education, studies find that employee-based financial education increases both participation rates and amount of contribution in retirement plans (Bayer, Bernheim, & Scholz, 1996; Bernheim & Garrett, 1996). Financial education programs also significantly improve financial behaviors of low-income populations (Caskey, 2001). In addition, Anderson, (1998) suggests that lack of knowledge is one of the reasons for the underutilization of public financial services and benefits by the poor.

In support of the institutional perspective of savings, studies also find that individuals save less due to assets restrictions or limits. For example, researchers have documented that the assets limits associated with means-tested welfare programs negatively influence savings of participants and potential participants (Carney & Gale, 2001; Hubbard, Skinner, & Zeldes, 1994, 1995; Hurst & Ziliak, 2001; Powers, 1998; Ziliak, 1999). Governments in many nations provide tax incentives for private pensions to encourage saving, which reflects the belief that in the absence of these incentives, individuals would not initiate and sustain sufficient savings for retirement (Orszag & Greenstein, 2000).

#### **Evidence on Marriage and Wealth Accumulation**

A number of studies have indicated that marriage may have a variety of positive effects on the well-being of individuals and families, controlling for other demographic and socioeconomic factors. These effects include better financial well-being, better health, longer life, higher achievement of children, and higher earnings for married men (see a review by Waite, 1995; Waite & Gallagher, 2000). A recent study by Hirschl, Altobelli, and Rank (2003) further indicates that marriage enhanced the lifetime probability of affluence, and Whites and women were more likely to benefit from marriage compared to Blacks and men.

Studies that examine the impact of marital status on savings and family wealth consistently suggest that marriage can enhance wealth accumulation (Hao, 1996; Lupton & Smith, 2003; Seigel, 1993). For example, through the analysis of data from the Health and Retirement Survey and the Panel Study of Income Dynamics, Lupton and Smith (2003) find that married couples save significantly more than other household types, an effect not fully explained by their higher incomes nor the simple aggregation of two individuals' wealth. Similarly, Seigel (1993) reports that currently married older couples have higher median incomes and net worth than older adults who were widowed, divorced, or never married. The study by Hao (1996) also indicates that married families have greater wealth than other types of families, and marriage reinforces the promoting effect of transfers on wealth.

Some of these studies also examine the impact of marital history on wealth accumulation. For example, several studies find that individuals who remain married throughout the life course have significantly higher wealth than those who are not continuously married, and divorce in particular has negative impact on wealth accumulation (Holden & Kuo, 1996; Wilmoth & Koso, 2002). Remarriage offsets the negative effects of a marital dissolution (Wilmoth & Koso, 2002). A number of marriages also has a negative effect on family wealth (Hao, 1996).

One of the limitations of the above studies on the impact of marriage on wealth is that they do not examine possible different factors that may be associated with savings and wealth accumulation of people with different marital status. Another limitation is that current research has not paid much attention to the impact of marital status on savings among the low-income population. Further, previous research has not examined how married and unmarried people save in structured savings programs. Research on these issues may help understand special needs of unmarried low-income people and how they respond to institutional factors designed to stimulate savings.

As mentioned, the purpose of this study is to examine and compare the experiences of married and unmarried participants in IDAs. As the first quantitative assessment of the savings patterns of married and unmarried low-income populations in a structured savings program, the following questions are addressed: (a) Is there a difference in savings outcomes between married and unmarried participants in IDAs? (b) What are the specific predictors that explain savings outcomes among these two groups? (c) What are the policy implications for supporting asset building for these two groups?

#### Methods

#### Data and sample

The data come from the "American Dream Policy Demonstration" (ADD), the first large-scale test of IDAs, designed to study the merits of IDAs as a community development and public policy tool (Sherraden et al., 2000). Beginning in 1997, ADD research followed more than 2,000 participants at 14 community-based program sites across the United States for four years (1997-2001), with research planned through 2005. ADD has a multi-method research design to gather information on many aspects of IDA programs and participants in order to inform assets-based policy outside of ADD. IDA programs in ADD are operating in community-based organizations that are working together with financial institutions. In most cases, participants in ADD are at or below 200% of the federal income-poverty guidelines, and the median participants is at about 100% of the income-poverty guideline. IDA savings are used for specific purposes, usually home purchase, post-secondary education, and microenterprise.

The data set used in this study is from monitoring all savings transactions. Program staff collected both programs' and participants' data with the Management Information System for Individual Development Accounts (MIS IDA). Savings data are from financial institutions and thus are highly accurate. This may be the best available data set on savings patterns among low income families (Sherraden, 2002).

#### Measures

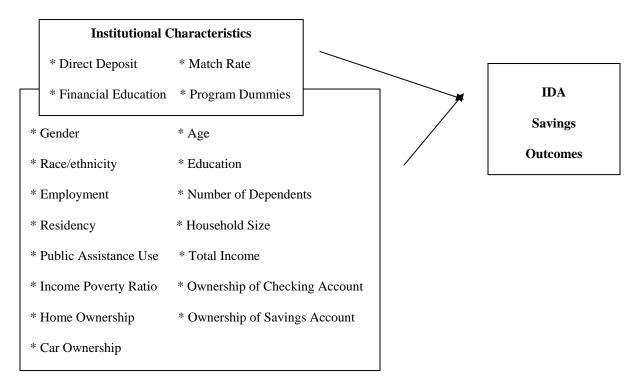
Participants in this analysis include all enrollees, including those who have dropped out of the program without a matched withdrawal. Savings and asset accumulation consist of different elements (Schreiner et al., 2001). Therefore, two dependent variables are being used in order to measure savings in IDA programs, trying to capture the two major aspects of savings: the savings amount and the regularity of the saving. These variables include the average monthly

net deposit (AMND) and the deposit frequency. These variables were constructed and used in previous reports on ADD programs.

Average monthly net deposit (AMND) is defined as net deposits per month and is calculated as deposit plus interest minus unmatched withdrawals, divided by the number of months of participation. Thus, AMND controls for the length of participation in the program. AMND is a key measure of savings outcomes in this study because greater AMND implies greater savings and assets accumulation.

*Deposit frequency* is defined as the number of months with a deposit divided by the number of months of participation. It shows how regularly a participant saves through time.

The independent variables used include a wide range of participant demographic, financial, and program characteristics. Specifically the following individual variables are included: gender, age, residency, household size, number of dependents, race, education, employment status, receipt of public assistance, total income, income poverty ratio, ownership of checking account, ownership of savings account, car and homeownership. In addition the following institutional characteristics are included: direct deposit, hours of financial education, match rate, and program dummies.



#### **Theoretical Framework**

#### Analysis

The effect of marital status on saving outcomes is examined using one-tailed *t*-tests and OLS regression models. The purposes of the analysis are twofold. First, we want to investigate whether there is a difference in saving outcomes between married and unmarried participants in

IDA programs. Based on previous research, we hypothesize that married participants have higher IDA savings and deposit more frequently than unmarried participants. The second purpose of the analysis is to determine if different predictors are associated with saving performance of the married and unmarried groups.

Descriptive statistics are first generated to compare the individual characteristics of the two groups (married vs. unmarried). Next, in order to test differences in saving outcomes between married and unmarried IDA participants, two one-tailed *t*-tests for independent groups are performed. The first *t*-test looks at the difference in AMND between married and unmarried participants, and the second *t*- test looks at the difference in deposit frequency.

Then, with the aim of exploring the unique predictors of saving outcomes among married and unmarried participants in IDA programs, four separate regression models are executed. The first model has AMND as the dependent variable and is executed with only married participants, and the second model has AMND as the dependent variable and is executed with only unmarried participants. The third and fourth models use deposit frequency as the dependent variable and are executed with only married participants.

#### Results

Table 1 shows characteristics of married and unmarried IDA participants. Compared to unmarried participants, married participants have higher levels of full time employment (67% vs. 56%) and part time employment (24% vs. 19%). Married participants also have higher levels of homeownership (30% vs. 12%) and car ownership (81% vs. 60%) and are less likely to be on public assistance currently (3% vs. 12%) or in the past (21% vs. 43%). In addition, married participants are more likely to have a checking account (70% vs. 63%). However, married and unmarried participants have similar rates of having a savings account (49% vs. 51%) and similar patterns of educational attainment. Married participants in ADD are less likely to be female (55% vs. 86%) and non-White (50% vs. 66%) and have fewer dependents. Overall, these descriptive characteristics suggest that unmarried participants in ADD are somewhat more demographically disadvantaged than married participants in ADD.

Variables	<b>Married</b> (n=1,831)	Unmarried (n=509)
Continues variables	Mean (std.dev.)	Mean (std.dev.)
Age	36.2 (9.4)	35.5 (10.5)
Number of dependents	2.1 (0.8)	2.4 (1.3)
Household size	4.4 (1.6)	2.9 (1.5)
		(table continu

#### Table 1. Participants Characteristics of Married and Unmarried IDA participants

 Table 1. (continued)

Variables	<b>Married</b> (n=1,831)	Unmarried (n=509)
Categorical variables	Percent	Percent
Gender		
Female	55	86
Residency		
Rural	18	12
Race/ Ethnicity		
Caucasian	50	34
African American	26	52
Asian American or Pacific Islander	3	1
Latino or Hispanic	15	7
Native American	3	2
Other ethnicity	3	2
Education		
Did not completed high school	15	16
Completed high school or GED	28	25
Attended college	34	38
Completed 2-year degree	3	4
Graduated from college	11	11
Completed 4-year degree or more	9	7
Employment		
Employed full-time	67	56
Employed part-time	24	19
Not working	6	4
Unemployed	3	6
Student, not working	3	7
Student, also working	1	3

 Table 1. (continued)

Variables	Married (n=1,831)	Unmarried (n=509)	
Categorical variables	Percent	Percent	
Receipt of public assistance			
Currently on TANF	3	12	
Formally on TANF	21	43	
Asset ownership			
Home ownership	30	12	
Car ownership	81	60	
Banking experience			
Ownership of checking account	70	63	
Ownership of saving account	49	51	

#### Marital status and AMND

Results of the *t*-test indicate that the difference in AMND between married (\$24) and unmarried (\$18) participants is significant [t = 4.83, p = 0.00]. In order to examine how different factors are related to savings for married and non-married participants, an additional two regressions are executed. The first regression model is with only married participants and the second regression model is with only unmarried participants. Results from these two individual regressions indicate that race, hours of financial education, and match rate are associated with AMND for both the married and unmarried groups. However, while these three independent variables are the only predictors of AMND among the married group, several additional variables are associated with AMND for the unmarried group. These variables include level of education, household size, residency (living in a rural vs. urban area), number of dependents, ownership of a checking account, car ownership and home ownership.

Independent Variables	Unmarried		Married	
	Coefficients	p-value	Coefficients	p-value
Financial education	0.62	0.00	1.06	0.00
Direct deposit	4.55	0.04	4.54	0.41
Match rate				
1:1	-5.56	0.06	-8.05	0.22
2:1	-9.36	0.00	-14.71	0.03
3:1	-4.02	0.25	-9.41	0.57
(4:1 to 7:1)				
Gender				
Female	0.49	0.76	0.87	0.78
(Male)				
Age				
Less than 40 years	0.11	0.20	0.18	0.52
40 years or more	0.02	0.84	-0.10	0.75
Residency				
Rural	-4.71	0.05	3.89	0.53
(Urban)				
Household composition				
Household size	1.35	0.02	-2.73	0.26
Number of dependents	-1.49	0.02	1.15	0.79

# Table 2. OLS Models Predicating the Effects of Individual and Institutional Variables onAMND for Married and Unmarried Participants

#### Table 2. (continued)

	Unmar	ried	Married	
Independent Variables	Coefficients	p-value	Coefficients	p-value
Race/ Ethnicity				
African American	-3.64	0.01	-1.35	0.74
Asian American or Pacific Islander	7.33	0.08	18.74	0.01
Latino or Hispanic	2.89	0.23	-0.31	0.95
Native American	-6.71	0.05	-2.12	0.78
Other ethnicity	4.92	0.12	-2.62	0.80
(Caucasian)				
Education				
Completed 2-year degree	0.12	0.97	2.35	0.78
Graduated from college	4.11	0.07	6.13	0.29
Completed high school or GED	0.48	0.78	6.42	0.16
Completed 4-year degree or more	10.04	0.00	11.27	0.06
Completed high school or GED	1.05	0.55	0.81	0.86
(Did not completed high school)				
Employment				
Employed full-time	-0.51	0.83	11.50	0.15
Employed part-time	1.93	0.43	10.67	0.20
Not working	-1.45	0.68	6.39	0.48
Student, not working	5.27	0.09	3.50	0.75
Student, also working	6.05	0.09	25.43	0.07
(Unemployed)				
Receipt of public assistance				
Formally on TANF	-0.28	0.82	-1.32	0.73
Currently on TANF	-2.30	0.25	5.42	0.54

 Table 2. (continued)

	Unmar	Unmarried		Married	
Independent Variables	Coefficients	p-value	Coefficients	p-value	
Income					
Total income	0.19	0.25	0.44	0.30	
Income poverty ratio	-0.24	0.89	-0.84	0.89	
Banking experience					
Saving account	-0.21	0.85	-0.86	0.77	
Checking account	5.41	0.00	2.52	0.43	
Asset ownership					
Car ownership	2.99	0.01	2.59	0.49	
Home ownership	10.81	0.00	4.79	0.19	
n	1,56	1,561		ļ	
$R^2$	0.27	0.27		3	

Race is significantly related to AMND for both married and unmarried participants. Among married participants, AMND of Asian Americans is \$18.7 higher than that of Caucasians. Among unmarried participants, when compared to Caucasians, being Native American is associated with a \$6.71 decrease in AMND, and being African American is associated with \$3.64 decrease in AMND.

Hours of financial education attended by participants is also statistically related to AMND in both models. For married participants each additional hour is associated with an increase in AMND of \$1.06, and for unmarried participants an additional hour is associated with an increase in AMND of \$0.62.

Finally, for both married and unmarried participants, match rate is positively associated with AMND. Specifically, married participants with a match rate of 2:1 save \$15 less compared to those with a match rate between 4:1 to 7:1, and unmarried participants with a match rate of 2:1 save \$9 less when compared to those with a match rate between 4:1 to 7:1.

Several additional variables are associated with unmarried participants only. Among demographic variables, living in a rural area is associated with \$4.71 less in AMND for unmarried participants compared to living in an urban area. Unmarried IDA participants who have completed a 4-year college degree have about \$10 higher in AMND than unmarried participants with less than a high school degree. Household size is positively related to savings; each additional person in the household is associated with \$1.35 more in AMND. However, the

dependency ratio or the number of household members per adult is linked with a decrease in AMND of \$1.49. Families with more dependents may find it harder to save.

Assets ownership such as car ownership, homeownership and having a checking account are all positive predictors of AMND for unmarried participants. Specifically, car ownership is associated with approximately \$3 more in AMND, homeownership is associated with about \$11 more in AMND, and checking account ownership is associated with \$5.41 more in AMND. Owning such assets may suggest that the participant had previous experiences with savings.

Finally, direct deposit is significantly related to AMND. Unmarried participants who had direct deposit are associated with \$4.55 more in AMND than unmarried participants who did not have direct deposit.

#### Marital status and deposit frequency

The results of the *t*-test indicate a significant difference [t = 4.83, p = 0.00] in deposit frequency between married (0.51) and unmarried (0.47) participants.

The regression results indicate that direct deposit and financial education are associated with the deposit frequency for both married and unmarried participants. For the unmarried participants, four additional individual characteristics are also related to deposit frequency: ownership of a checking account, level of education, residency, and home ownership.

	Unmar	Unmarried		Married	
Independent Variables	Coefficients	p-value	Coefficients	p-value	
Financial education	0.01	0.00	0.01	0.00	
Direct deposit	0.22	0.00	0.18	0.00	
Match rate					
1:1	-0.04	0.20	-0.02	0.78	
2:1	-0.05	0.09	-0.05	0.39	
3:1	-0.04	0.27	-0.06	0.67	
(4:1 to 7:1)					
Gender					
Female	-0.01	0.63	0.00	0.97	
(Male)					

## Table 3. OLS Models Predicating the Effects of Individual and Institutional Variables onDeposit Frequency for Married and Unmarried Participants

 Table 3. (continued)

	Unmarried		Married	
Independent Variables	Coefficients	p-value	Coefficients	p-value
Age				
Less than 40 years	0.00	0.09	0.00	0.84
40 years or more	0.00	0.10	0.00	0.22
Residency				
Rural	-0.08	0.00	0.02	0.67
(Urban)				
Household composition				
Household Size	0.00	0.90	-0.02	0.46
Number of Dependents	-0.01	0.29	0.00	0.93
Race/ Ethnicity				
African American	-0.02	0.23	-0.06	0.14
Asian American or Pacific Islander	0.03	0.57	0.03	0.64
Latino or Hispanic	-0.02	0.58	-0.02	0.70
Native American	-0.07	0.09	-0.04	0.56
Other ethnicity	0.01	0.86	0.02	0.82
(Caucasian)				
Education				
Completed 2-year degree	-0.01	0.83	0.03	0.69
Graduated from college	0.06	0.02	0.01	0.79
Completed high school or GED	0.01	0.74	0.01	0.82
Completed 4-year degree or more	0.07	0.02	0.00	0.99
Completed high school or GED	0.01	0.55	0.00	0.98
(Did not completed high school)				

 Table 3. (continued)

	Unmar	Unmarried		Married	
Independent Variables	Coefficients	p-value	Coefficients	p-value	
Employment					
Employed full-time	-0.01	0.65	0.04	0.57	
Employed part-time	0.01	0.63	0.04	0.55	
Not working	-0.04	0.29	-0.01	0.93	
Student, not working	-0.01	0.78	-0.03	0.73	
Student, also working	0.04	0.38	-0.04	0.77	
(Unemployed)					
Receipt of public assistance					
Formally on TANF	0.02	0.24	-0.02	0.65	
Currently on TANF	0.01	0.67	-0.03	0.69	
Income					
Total income	0.00	0.46	0.00	0.36	
Income poverty ratio	0.01	0.57	-0.07	0.18	
Banking experience					
Saving account	0.02	0.22	0.05	0.06	
Checking account	0.05	0.00	0.03	0.27	
Asset ownership					
Car ownership	0.01	0.29	-0.02	0.64	
Home ownership	0.08	0.00	0.05	0.16	
n	1,56	1	434		
$R^2$	0.33	0.33		0.34	

Similar to the outcomes on AMND, hours of financial education is positively related to deposit frequency for both married and unmarried participants. Specifically, each additional hour of financial education is associated with 1 percentage point increase in deposit frequency.

Direct deposit is also related to deposit frequency for both married and unmarried participants. Having direct deposit is associated with an increase in deposit frequency of 18 percentage points and 22 percentage points for married and unmarried participants, respectively.

Several participant characteristics are related to deposit frequency for unmarried participants. Unmarried IDA participants who graduated from college (with 4-year degrees or with unspecified degrees) had 7 percentage points higher deposit frequency than those without a high school degree. Being a resident of a rural area is associated with 8 percentage points lower deposit frequency than being a resident of an urban area.

Homeownership and having a checking account are predictors of deposit frequency. Specifically, participants who are homeowners are associated with 8 percentage points higher in deposit frequency compared with participants who were not homeowners. Checking account ownership is associated with 5 percentage points higher in deposit frequency.

#### Discussion

This study examines saving performance of married and unmarried participants in IDAs. The results indicate that both married and unmarried low income participants can save in IDA programs; however, unmarried participants are saving smaller amounts than married participants. It seems that in ADD, unmarried people also have the ability and willingness to save when they are provided structured opportunities to accumulate assets. Based on these results, policy makers should not assume that unmarried participants cannot save.

In order to understand the unique experiences of saving among married vs. unmarried IDA participants, this study further examines possible factors that may be associated with saving performance for these two groups. Results indicate that for both married and unmarried participants, financial education and match rates are positively associated with AMND, and financial education and direct deposit are positively related to deposit frequency. It appears that institutional factors, not merely individual characteristics, are important in saving performance.

IDA programs require financial education, and this study finds that participants who receive more hours of financial education save more money and save more frequently. This result is consistent with other studies reporting that financial management programs can improve financial knowledge and behaviors of the low-income population (Caskey, 2001; Clancy, Grinstein-Weiss, & Schreiner, 2001; Jacob, Hudson, & Bush, 2000). The association between financial education and AMND is stronger for married participants than for unmarried ones. This may suggest that married and unmarried participants have different knowledge deficiencies. Further studies on the content of financial education may help specify these differences in the future. Second, an institutional theory of saving suggests that match rate is a possible incentive for the low-income population to save (Sherraden et al., 2003). Participants in IDAs with match rates of 2:1 saved less than those who had match rates ranging from 4:1 to 7:1. This indicates that higher match rates may encourage people to save. Similar to the impact of financial education, the association between match rates and saving is stronger for married participants.

Third, based on an institutional view of saving, direct deposit is a simple and efficient method of facilitation (Beverly & Sherraden, 1999). In moving money directly from one account to another, the chance that an individual will use the money for consumption is decreased. Our study finds that direct deposit is positively associated with AMND for unmarried participants and with deposit frequency for both groups. These results are congruent with the view that individuals who receive facilitation that makes saving more manageable and convenient increase their saving (Beverly & Sherraden, 1999). This is not surprising, but public policy has, to date, mostly ignored saving facilitation for the poor.

In addition to the above three program factors, race is also a common predictor of savings for both groups, but its effect is different for married and unmarried participants. After controlling for other factors, the AMND of married Caucasian participants was lower than married Asian participants, but not different from other groups. For unmarried groups, African Americans and Native Americans saved less than their Caucasian counterparts. Unmarried African Americans and Native Americans may face greater difficulties in attempting to save. This singles out an important issue in asset-based policy. Further studies that examine race/ethnicity and savings among unmarried individuals are warranted.

Turning to the factors that are related to saving performance of married and unmarried participants, several findings are worth mentioning. First, direct deposit is associated with AMND of unmarried participants only. Unmarried persons may have more barriers (such as more limited resources) to manage their savings, and strategies to facilitate saving, such as direct deposit, may matter more for these participants.

Second, regression results indicate that participant characteristics, with the exception of race/ethnicity, had little impact on savings performance of married participants. For unmarried participants, however, several additional individual characteristics are associated with savings. These factors include education, residency, household size, number of dependents, and asset ownership. It seems that, as research suggests, marriage may provide institutionalized benefits that facilitate saving (Becker, 1981; Lupton & Smith, 2003; Schoeni, 1995; Waite, 1995; Waite & Gallagher, 2000; Wilmoth & Koso, 2002). For example, it could be that some married participants have a spouse that has access to work-related benefits such as child care, and as a result the number of dependents is not a barrier to making a savings deposit. It is also possible that car ownership does not matter for married people because the spouse may have a car. Another explanation may be that the marriage improves expectations and future orientation, factors that may encourage saving. From ADD data we are unable to say; further research is needed on these issues.

Some limitations of this study are important to note. First, participants in IDA programs in ADD are both program-selected, because of eligibility criteria and self-selected, because they

volunteer to participate in the program (Schreiner et al., 2001). Therefore, ADD participants are different in some aspects when compared with the U.S. general low-income population. Therefore, the results generated in this study may not represent how the low income population outside ADD would perform in IDAs. Second, the assumption in this paper is that deposits in IDAs come from new savings. However, it may be possible that participants in IDAs are transferring money from other assets they have (Schreiner et al., 2001). Finally, because we cannot compare savings performance of ADD participants to non-ADD participants, it is not possible to attribute saving outcomes to participating in IDAs. An experimental design in ADD may shed more light on this in the future.

Despite these limitations, this study suggests that both married and unmarried low-income participants in ADD can save. Therefore, IDAs may be an effective tool to help low-income people to save and accumulate assets. Therefore, public policies that aim to help low income individuals save and build assets need to be expanded. Currently, IDA programs only reach a small portion of low-income people, including unmarried low-income households. In order to make a significant impact on the lives of low-income people, IDAs and other subsidized saving programs need to go to scale.

This study found that match rate and financial education positively affected savings. In order to implement IDA programs more effectively, match rates could be raised for some IDA participants, and the quality of financial education needs to be ensured. This study also indicates that additional individual factors were related to the savings of unmarried participants. For example, unmarried participants living in rural areas and with more children save less. This may suggest that some unmarried people may have special needs that must be met in order to save more successfully in IDA programs. Additional strategies may need to be adopted to help these more disadvantaged groups to save in IDAs.

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