

# Savings Performance among Rural Households in Sub-Saharan Africa: The Effect of Gender

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*This article investigates savings performance among participants in a matched-savings program in Uganda, modeled after the Individual Development Accounts (IDAs) in the United States. Comparison of savings behavior by gender, level of education, marital status, and type of work was performed. Findings show that both women and men are saving successfully. However, women are saving better than their male counterparts across levels of education, marital status, and type of work.*

**Keywords:** *sub-Saharan Africa, savings performance, gender, asset accumulation, education, marital status, type of work*

The development literature has increasingly acknowledged the importance of the role of savings in the livelihoods of households in rural sub-Saharan Africa (SSA). Savings are an important way of improving well-being, insuring against times of shocks, and providing a buffer to help people cope in times of crisis (Miracle, Miracle, & Cohen, 1980; Rutherford, 1999; Zeller & Sharma, 2000). Therefore, an understanding of factors that affect the savings performance of households is a necessary step toward theory building in social development research, which in turn leads to the formulation of more effective social development policy.

Prior literature has shown that gender (Fafchamps & Quisumbing, 2005; LeBeau, Ipinge, & Conteh, 2004), education (Esson, 2003; Quisumbing & Hallman, 2003), employment, and marital status (Grinstein-Weiss, Zhan, & Sheraden, 2006; Waite & Gallagher, 2000) are factors that influence savings behavior. However, few studies tie these factors together and help us understand

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the interaction of gender with the other factors. Floro and Seguino (2002) note that literature on gender differences on savings behavior is sparse and concentrates on developed countries. Furthermore, very few studies incorporating these factors have been conducted in rural SSA, which is the target of many social development policies that would benefit from a clear and strong theoretical foundation.

The central premise of this article is that gender has a significant effect on savings performance. The findings of this study provide more evidence on gender differentials that may guide the redefinition of social development policy in SSA. In particular, the article focuses on the following research questions: How significant is gender in explaining savings performance? Is there a gendered pattern of savings at different levels of education, marital status, and type of work?

This research is based on an asset-building project in the rural district of Masindi in Uganda. The project is modeled after Individual Development Accounts in the United States. Quantitative data is collected through MISIDA, a savings monitoring tool. Additional data was collected using a survey questionnaire. The two data sets were merged for this study. The data from MISIDA in particular are used to investigate the savings habits of participants, whereas the survey data give insight into other information such as type of work, educational levels, health, and nutrition.

## **Background**

Several studies have shown that gender has an effect on asset accumulation (Bajtelsmit & Bernasek, 1996; Blumberg, 1988; LeBeau et al., 2004). In SSA, women own fewer assets than men (LeBeau et al., 2004). Quisumbing and Hallman (2003) found that, in Ethiopia and South Africa, differences in asset ownership at time of marriage remained constant over time and favored the husbands despite decreasing husband-wife gaps in age and education. In another study conducted in Ethiopia by Fafchamps and Quisumbing (2005), the mean value of land inherited by husbands was ten times greater than that inherited by wives. In rural SSA, women's ability to accumulate assets is governed by family and community norms, which historically have favored men to the disadvantage of women. In addition, the legal systems at the macro level in different countries determine how much control women can have over assets.

Marital status has also been shown to have an effect on asset accumulation (Grinstein-Weiss et al., 2006; Wilmoth & Koso, 2002). Historically, marriage has been viewed as a source of financial security (Waite & Gallagher, 2000) and continues to be a determining factor for economic well-being, particularly for women. Pooling resources for a married couple may provide a cushion for them to accumulate assets without going under in times of crisis.

Education is another factor that has an effect on asset accumulation (Atanasio, 1993; Avery & Kennickell, 1991; Bernheim & Scholz, 1993; Browning & Lusardi, 1996). Education affects savings performance by influencing the

level of income and the options for asset accumulation available to the individual. Similarly, the type of work determines the regularity of income. Wage employment, self-employment, or casual employment provides a source of income, of which a portion can be saved. Income is identified as a risk factor in precautionary savings theory. This theory predicts that risk depresses consumption and increases the accumulation of wealth (Kennickell & Lusardi, 2003).

### **Project Setting: Demographic and Socioeconomic Background**

Masindi district is located in the western part of Uganda, 130 miles from Kampala, the capital city. The district has a population of approximately 479,865, of which 247,000 (49.1%) are males and 232,000 (50.9%) are females. The district has a 2.41-percent population growth rate per annum (Uganda Bureau of Statistics, 2005). Children (0–14 years) make up 46.1 percent of the population, adults (15–64 years; the adult age group starts at 15, which reflects the shift that government has made in the definition of adults in the recent years) make up 50.9 percent, and the elderly make up 3 percent of the population. The Masindi district development plan (2003) reported that the average household size in Masindi is 6.9 persons, and an average household land holding is 2.5 acres.

Masindi district is ethnically rich, with more than fifty-six distinct ethnic groupings, the most dominant tribe being Banyoro/Bagungu (59.9 percent) followed by the Luo-speaking tribes. The rest consists of Alur, Lugbara, Baruri, Banyankole, and Rwandans. The district is also home to immigrants who include Sudanese, Kenyans, Somalis, and Congolese. It is made up of four counties of Buruuli, Kibanda, Bujeje, and Bulisa. Muzora, Kyasiimire, Bimbona, Bogere, Wegosasa, and Kisakye (2002) conducted a study in Masindi and found that from a gender/cultural perspective, women own insignificant resources such as pans, cups, brooms, and hoes, while men own more productive resources such as ox ploughs, big boats, nets, land, and livestock.

In the same study, land was considered to be the most important asset. Livestock ranked second and included cattle, goats, pigs, and poultry. Across the ethnic groups interviewed in the district, assets were owned and controlled by men and boys (Muzora et al., 2002). Subsistent agriculture is the main source of livelihood and involves 94.5 percent of Masindi's population. The area has a number of small-scale artisans mainly involved in metal fabrication, woodwork, brick making, pottery, and other clay works. Retail shop dealers are mainly engaged in imported manufactured goods for home use. This accounts for more than 70 percent of the trade in the district.

Through the Universal Primary Education Program (UPEP), a policy developed by the government to offer universal primary education by supporting up to four children per family, access to primary education in Masindi has improved in the last five years. The overall literacy rate is 52.2 percent, with 67.4 percent for males and 38.3 percent for females. There are 97,350 UPEP children in

schools, and the overall drop-out rate for the district is 2.5 percent. Within the district there are 176 functional primary schools, 19 secondary schools, and 6 colleges.

### **Data and Methodology**

The data in this study come from a pilot project in Uganda that is part of the AssetsAfrica program, a demonstration and research initiative designed to test asset-building innovations in Africa. The project will run for five years. Participants could enroll in the program from 2004 to 2005. The research will continue until 2008.

The Uganda pilot project is modeled on matched-savings programs (like Individual Development Accounts) pioneered in the United States but has several unique features. Because of the absence of banks in the villages and the distance to the bank at the business district of Masindi, Stanbic Bank (an international bank headquartered in South Africa) has established a mobile bank that visits the village every week to collect savings.

The project has incorporated local community institutions, called village committees, to coordinate the deposits for the participants. These village committees are mandated to select project participants and the coordination of bank transactions between the bank visits. Participants who want to make direct deposits with the bank must either travel to the Masindi business district or wait for the weekly mobile bank visit. The establishment of the option of conducting business locally with village committees offers local access to the participants. Therefore, community trust in the committees is an important component of the pilot.

Participants save for a minimum of six months, and an incentive is provided in the form of match funds at a 1:1 rate. After successfully reaching the savings goal and being matched in the program, participants have to purchase productive assets that can be used to generate income.

### **Measurement**

The sample size for the analysis is 145. Average Monthly Net Deposit (AMND) was used as the dependent variable in the analysis. This variable is used to measure the savings performance of participants and includes several aspects of savings (Schreiner et al., 2001). The AMND is calculated by adding total deposits plus interest (net of fees) minus total unmatched withdrawals, divided by the number of months of participation. AMND is a measure for net deposits that takes into account the length of time a participant has saved. (AMND is reported in US dollars in this paper except where Uganda shillings are explicitly being discussed.)

Four independent variables were used in this study: gender, education, marital status, and type of work. Education was measured by five categories: none

(no formal schooling at all), primary (equivalent to primary to middle school levels or first to seventh grades), secondary (equivalent to middle to high school levels or eighth to twelfth grades), college (equivalent to three years of university), and university (equivalent to the traditional four-year university). Marital status was measured as single/never married, married, and other. Finally, type of work was measured using the following categories: trading, farming, teaching, and other. Gender is used as a moderating variable as well.

Types of assets purchased were grouped into six groups. The group "not yet" indicates that the participants had not yet purchased an asset. The other groups were bigger livestock (including bulls and cows), smaller livestock (including pigs, goats, and chickens), land, motorcycle, house, and microenterprise. The descriptive data of the participants presented are based on this variable.

## Analysis

Descriptive statistics were first generated to present participant characteristics across age, type of asset purchased, gender, marital status, education, and type of work. Univariate analysis of variance (ANOVA) was conducted to compare means of savings performance (AMND) across gender, education, marital status, and type of work. In addition, ANOVA was used to test for interaction effects between gender and each of the other three independent variables.

## Findings

Table 1 summarizes assets purchased in the program across gender, age group, education, marital status, and type of work. The participants who purchased the bigger livestock were mainly in the age group twenty to twenty-nine years (49.1%) and forty to forty-nine years (48.1%). About 44.6 percent of the female participants bought bigger livestock compared with 38.3 percent of the male participants. Participants with married (42.1%) status and other marital status (43.5%) bought a higher percentage of bigger livestock compared with single participants. Not surprisingly, 52.3 percent of farmers bought bigger livestock. Around 8.6 percent of the teachers bought motorcycles, while 4.7 percent of the farmers bought motorcycles. None of the other categories of type of work bought any motorcycle. Participants with a primary education and a secondary education (50%) bought bigger livestock.

Table 2 provides a snapshot of AMND differences by gender according to the different levels of education, marital status, and type of work.

Single women, who composed 4.8 percent of the total sample, had the highest AMND (\$11.09) among the marital status groups. Single men had a slightly higher AMND than married women. Married men, who composed 37.9 percent of the total sample size, had the lowest AMND (\$2.01).

University-trained women had the highest AMND (\$17.74), while the primary school-level educated men had the lowest AMND (\$1.28). The women

**Table 1** Participant characteristics and the types of assets purchased from the Asset Building Accounts

Variables	Not yet	Bigger livestock	Smaller livestock	Land	Motorcycle	House	Microenterprise
Age group							
20–29	34.5 (19)	49.1 (27)	3.6 (2)	5.5 (3)	3.6 (2)	1.8 (1)	1.8 (1)
30–39	39.6 (19)	35.4 (17)	2.1 (1)	2.1 (1)	6.3 (3)	2.1 (1)	12.5 (6)
40–49	25.9 (7)	48.1 (13)	11.1 (3)	0	3.7 (1)	7.4 (2)	3.7 (1)
50–59	57.1 (4)	14.3 (1)	0	0	14.3 (1)	14.3 (1)	0
60–70	33.3 (2)	33.3 (2)	33.3 (2)	0	0	0	0
Gender							
Male	46.7 (28)	38.3 (23)	0	5.0 (3)	6.7 (4)	0	3.3 (2)
Female	27.7 (23)	44.6 (37)	9.6 (8)	1.2 (1)	3.6 (3)	6.0 (5)	4.2 (6)
Marital status							
Single	53.8 (7)	38.5 (5)	0	0	0	7.7 (1)	0
Married	35.5 (38)	42.1 (45)	4.7 (5)	3.7 (4)	5.6 (6)	1.9 (2)	6.5 (7)
Other	26.1 (6)	43.5 (10)	13 (3)	0	4.3 (1)	8.7 (2)	4.3 (1)
Educational level							
None	28.6 (4)	21.4 (3)	14.3 (2)	0	7.1 (1)	7.1 (1)	21.4 (3)
Primary	30.4 (14)	50.0 (23)	8.7 (4)	4.3 (2)	2.2 (1)	2.2 (1)	2.2 (1)
Secondary	25 (10)	50 (20)	5 (2)	5 (2)	7.5 (3)	5 (2)	2.5 (1)
College	52.8 (19)	33.3 (12)	0	0	2.8 (1)	2.8 (1)	8.3 (3)
University	66.7 (4)	16.7 (1)	0	0	16.7 (1)	0	0
Type of work							
Trading	56.1 (9)	25 (4)	0	6.3 (1)	0	6.3 (1)	6.3 (1)
Farming	24.4 (21)	52.3 (45)	9.3 (8)	2.3 (2)	4.7 (4)	2.3 (2)	4.7 (4)
Teaching	54.3 (19)	22.9 (8)	0	2.9 (1)	8.6 (3)	2.9 (1)	8.6 (3)
Other	33.3 (2)	50 (3)	0	0	0	16.7 (1)	0

Note: Reported in percentages. Frequencies are in parentheses.

who reported that they had no formal education had a higher AMND (\$3.81) compared to primary school-educated men and secondary school-educated men (\$2.46). The secondary school-educated women had higher AMNDs (\$7.17) than college-educated men (\$4.10), college-educated women (\$3.02), and university-educated men (\$4.08).

Among the types of work categories, women who composed 8.3 percent of the sample and whose type of primary work was trading had the highest AMND (\$10.84). Male teachers, who composed 13.8 percent of the sample, had the lowest AMND (\$1.6). Women whose primary type of work was farming had a higher AMND (\$8.66) than both men and women in any of the other categories except women whose primary work was trading.

Table 3 summarizes results from the univariate ANOVA. Main effect results revealed that saving performance was significantly different between men and women. Savings performance was also significantly different for married and unmarried participants, and for the different levels of education represented. No significant difference in savings performance was revealed based on the type of work engaged in by participants.

Bonferoni's post hoc test was conducted to determine which groups were

**Table 2 Savings performance (AMND) across different participant characteristics of project participants**

Variable	Male			Female			Totals
	<i>n</i>	%	Mean AMND	<i>N</i>	%	Mean AMND	
Marital status							
Single	6	4.1	7,169.62 (3.94)	7	4.8	20,152.16 (11.09)	13
Married	55	37.9	3,662.00 (2.01)	53	36.6	7,027.76 (3.87)	108
Other	0	0	0	24	16.6	12,732.33 (7)	24
Education level							
None	0	0	0	14	9.7	6,926.92 (3.81)	14
Primary	14	9.7	2,328.05 (1.28)	34	23.6	8,830.80 (4.86)	48
Secondary	19	13.2	4,463.06 (2.46)	21	14.6	13,035.20 (7.17)	40
College	24	16.7	7,456.50 (4.10)	12	8.3	5,492.70 (3.02)	36
University	4	2.8	7,415.63 (4.08)	2	1.4	32,234.81 (17.74)	6
Type of work							
Trading	5	3.4	5,074.27 (2.80)	12	8.3	19,709.04 (10.84)	17
Farming	33	22.8	6,093.21 (3.35)	54	37.2	15,741.81 (8.66)	87
Teaching	20	13.8	2,911.24 (1.6)	15	10.3	13,844.23 (7.62)	35
Other	3	2.1	7,584.51 (4.17)	3	2.1	3,921.26 (2.16)	5
Sample totals	61	100	5,415.81	84	100	13,304.08	145

Note: 1 US Dollar (USD) = 1,817.48 Uganda Shilling (UGS). USDs are in parentheses.

**Table 3 Effects of gender, marital status, education level, and type of work on savings performance**

Source	SS	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i> -value	$\eta^2p$
Gender	484424172.94	1	484424172.94	4.280	0.041	0.33
Marital status	705480289.09	2	352740144.55	3.117	0.048	0.47
Education level	1156571596.66	4	289142899.16	2.555	0.042	0.75
Type of work	232916752.01	3	77638917.33	0.686	0.562	0.16
Gender * Marital status	203907000.69	1	203907000.69	1.802	0.182	0.14
Gender * Education level	831907977.57	3	277302659.19	2.450	0.067	0.55
Gender * Type of work	277952538.60	3	92650846.20	0.819	0.486	0.19

*p* < 0.05.

Note:  $R^2 = .222$  (Adjusted  $R^2 = .117$ ).

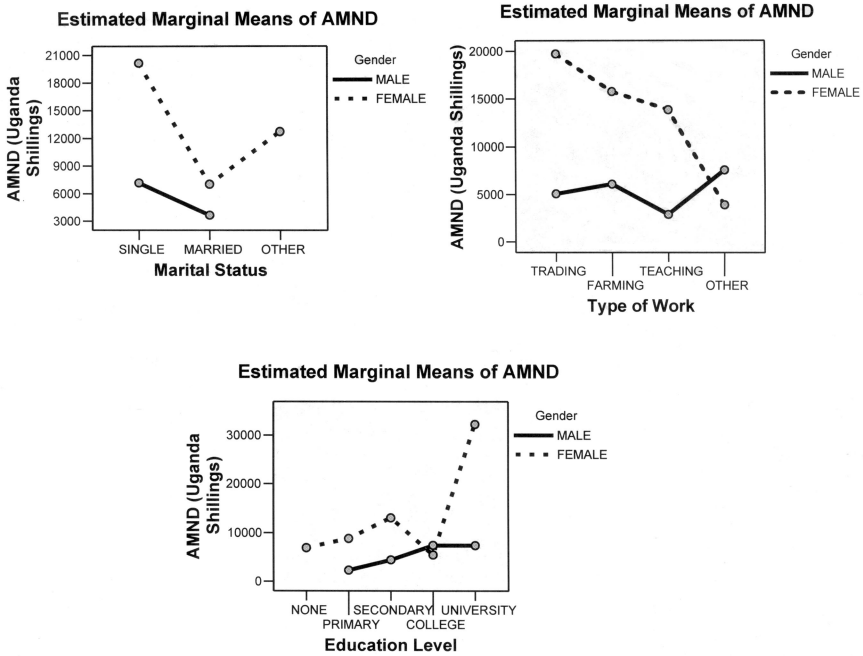


Figure 1. Interaction effects of gender and marital status, education, and type of work

significantly different in savings performance based on education level and marital status. Results reveal that university-educated participants differed from all the other groups. Similarly, married participants differed significantly from the other groups in their savings performance.

### Discussion

This study examines the gendered patterns of savings behavior among participants in the asset-building project in Uganda. The results indicate that both male and female participants are saving in the project. However, women are saving more than their male counterparts across education, employment, and type of work. These results attest to Sherraden’s (1991) theory that “people think and behave differently when they are accumulating assets” (p. 148), because assets have psychological, political, economic, and social effects. The women exhibited significantly different savings behavior from the men. A possible explanation for this may be due to the differences in the reasons for saving among men and women. Women’s and men’s savings behavior may differ because of the differences in the degree of economic vulnerability they face, and because gender roles and norms cause their economic interests to diverge.



Women may be motivated to accumulate assets for the household as insurance or security because they are the primary managers of the household. Although they do not own or control assets, they are expected to manage the affairs of the household ranging from food, health, and education for the children. Therefore, they are more likely to engage in precautionary savings behavior.

Moreover, although women are faced with societal norms that disadvantage them in terms of controlling and owning assets, the opportunity to accumulate assets that was provided by the asset-building project might have been embraced as an avenue for them to accumulate assets that they can have control over. Further research needs to be done to investigate if indeed the project was seen as an opportunity for the women to have control over assets. The findings could be used to develop policies that would encourage asset-building vehicles that target women and empower them to own assets. This would in turn be used to improve the well-being of the whole household.

According to the results of the descriptive statistics, the most sought-after assets were the bigger assets—the bulls and the cows. Across marital status, type of work, age, gender, and educational level, the livestock assets had the highest frequencies. This reflects the importance of livestock in SSA and also confirms findings from previous studies that were done in the district of Masindi mentioned earlier in this article. Livestock, especially bulls, are used for cultivating the fields, making this tedious job easier. In addition, it is also a source of income as those who do not have bulls must pay for their land to be cultivated. Interestingly, women had the higher frequencies for both the bigger and smaller livestock. However, men bought the bigger livestock but none bought the smaller livestock. The married women, however, had a very high frequency of buying bigger livestock compared to the single women.

The ANOVA indicated no significant interaction effects between gender and the other three factors. This may be due to the low sample size and low association among the variables. However, figure 1 suggests that there may be interaction between gender and education, and gender and marital status. This means that the relationship between education and savings behavior differs for men and women, and similarly the relationship between marital status and savings behavior differs for men and women. For example, while males with college degrees have better savings performance than males with secondary education, the same is not true for the females. Therefore, both factors have to be taken into account to explain the effects on savings performance.

Marital status and education have direct effects on savings behavior whereas work type does not. Both married men and married women had lower AMNDs compared to their single counterparts. The precautionary savings theory may provide an explanation for this behavior. The single participants are exposed to greater risk, which enhances their precautionary motive of savings (Kennickell & Lusardi, 2003), leading to lower consumption and an increase in asset accumulation. Education had inconsistent patterns of savings behavior among the participants. Interestingly, women without formal education had higher sav-

ings performance than their primary- and secondary-educated male counterparts as well as college-educated female counterparts. The savings performance of participants across type of work was not significantly different.

## Conclusion

The results of this study should be interpreted with the following limitations in mind. First, as the study is still ongoing, the full picture of participants' savings performance has not yet emerged. Second, the results of the ANOVA may have been affected by the small number of participants in some of the categories. The results of this study have shown that women save better than men when they have the opportunity. These preliminary findings offer additional evidence for the role of gender in savings performance. The matched-asset building accounts provide a model that can encourage savings among the poor in SSA. The model is simple and has proved to be easy to use across all the participant characteristics.

More research is needed to investigate what the perceptions of the participants are with regard to the asset-building accounts and their participation. Such findings will provide further understanding of the factors that encourage savings in the project.

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