

Saving for Dry, not Rainy, Days - Saving and Borrowing Behavior among Agropastoralists in West Pokot County, Kenya

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The motivation

- Access to basic banking services in Sub-Saharan Africa remains limited, and lags far behind even other parts of the developing world.
- There exist some limited research on savings and loan behavior in Kenya, but our data set provides us with a unique opportunity to study poor nomadic pastoralists potential to create a buffer for hard times and to invest.
- We also want to analyze the effect of the extension services provided by Vi Agroforestry.
- Other research, see Bostedt *et al.* (2016), has dealt with the effects of extension services on food diversity.



Background

- Atandi (2013) reports that according to Financial Sector Deepening Kenya (2010), only 19% of adult Kenyans reported having access to a formal, regulated financial institution.
- Over a third (38%) indicated no access to even the most rudimentary form of informal financial service.
- One of the most important savings and credit institutions is the SACCO, which means Savings and Credit Cooperative Organization.
- The primary competition is from banks. However, there is little presence of banks and microfinance institutions beyond the district towns.

The survey

- Since 2001, Vi Agroforestry in Kitale, Kenya, have carried out surveys in the areas where they were active with agroforestry.
- The paper is based on data from the 2007/2008 survey, carried out from May 2007 to July 2008.
- The sample consisted of 296 subsistence farmers, retrieved from lists of farmers from local official administration, from different parts of West Pokot county.
- 164 farmers had received advice from Vi Agroforestry, 127 had not.



Saving and borrowing among poor people

- It is typically argued in economic literature that poor people have a higher rate of time preference since they are preoccupied with immediate survival.
- However, according to Moseley (2001) it has been observed that rural African households often are extremely reluctant to cut down on savings and sell productive assets during a food crisis.
- Concerning availability, access to different savings and credit choices must be combined with human capital, in the form of financial literacy, on behalf of the saver or borrower.
- Few studies have addressed the effect of financial training on economic behavior in developing countries.

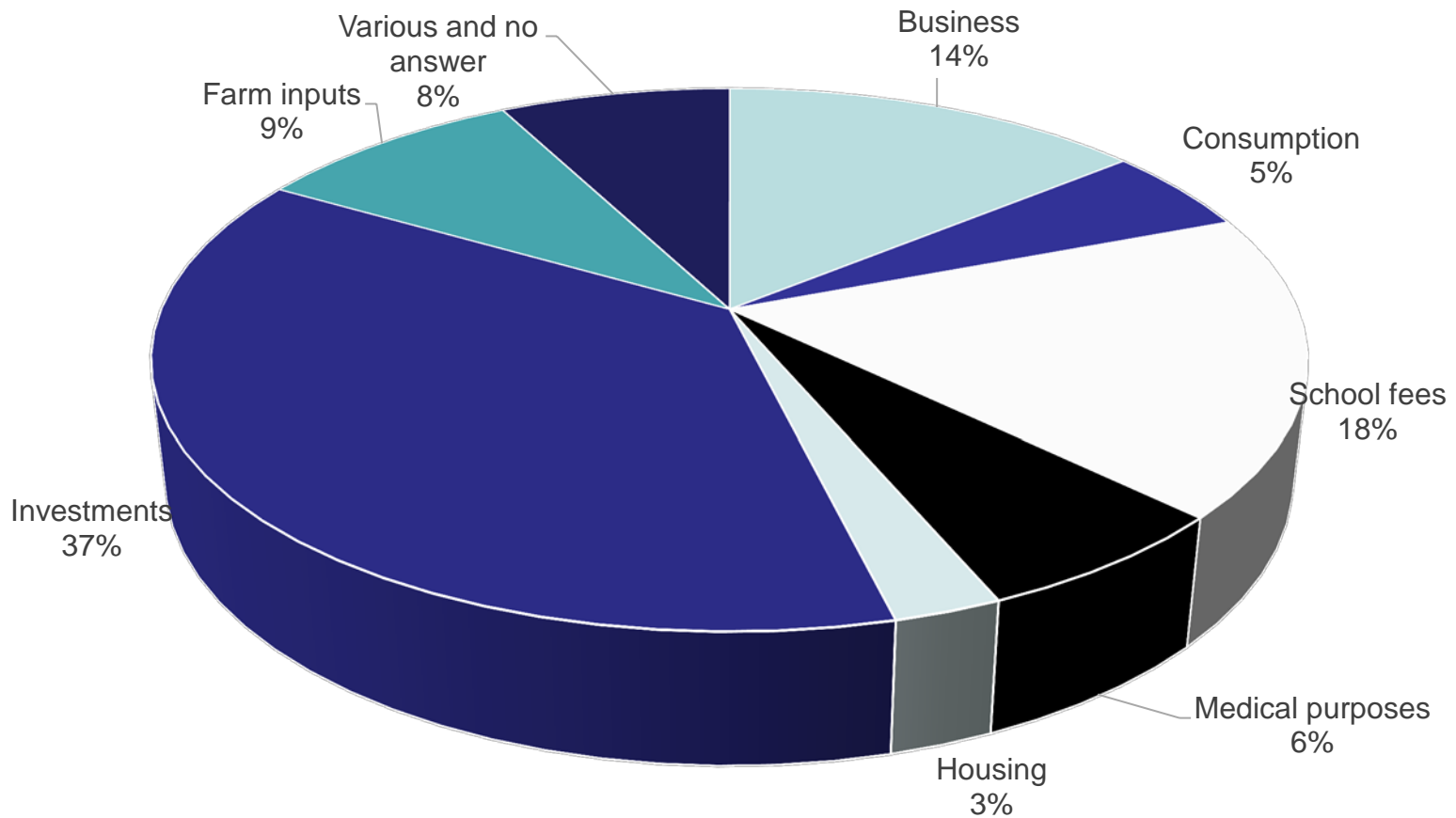
Descriptive statistics: saving

No. of respondents	296				
Had savings	169 (57.1 %)	Did not have any savings	124 (41.9 %)	No answer	3 (1.0 %)
Savers who had received training on financial matters	43 (25.7 %)	Non-savers who had received training on financial matters	3 (2.3 %)	No-answers who had received training on financial matters	0
Savers who had received advice from Vi Agroforestry	105 (62.8 %)	Non-savers who had received advice from Vi Agroforestry	58 (46.0 %)	No-answers who had received advice from Vi Agroforestry	1 (33.3 %)
Types of saving:	At home, “under the mattress” etc				62 (37.1 %)
	Informal system (Merry-go-round, Table banking, VSL, DFS, Hisa etc)				23 (13.8 %)
	SACCO, Village bank, CBO				11 (6.6 %)
	MFI				0
	Bank				30 (17.9 %)
	Investment				39 (23.3 %)
	NGOs				0
	Others, unspecified				2 (1.2 %)

Descriptive statistics: borrowing

No. of respondents	296				
Had savings	169 (57.1 %)	Did not have any savings	124 (41.9 %)	No answer	3 (1.0 %)
Savers who had accessed credit	71 (42.0 %)	Non-savers who had accessed credit	6 (4.8 %)	No-answers who had accessed credit	1 (33.3 %)
Share of creditors who had received training on financial matters	29/78 (37.2 %)	Share of non-creditors who had received training on financial matters	18/208 (8.6 %)	No-answer who had received training on financial matters	0/10 (0 %)
Types of credit:			From family and friends	8 (10.2 %)	
			Informal system (Merry-go-round, Table banking, VSL, DFS, Hisa etc)	18 (23.1 %)	
			Moneylender	6 (7.7 %)	
			SACCO, Village bank, CBO	24 (30.8 %)	
			MFI	8 (10.2 %)	
			Bank	9 (11.5 %)	
			Others, unspecified	5 (6.4 %)	

Descriptive statistics: use of credit funds



Results: Logit regression on savings

Variable	Coefficient	T-value
Constant	1.30	1.92
Age, household head	-.018	-1.48
Size land, ha	.013	.64
Advice Vi Agroforestry (yes =1)	.485	1.73
Dietary diversity score	-.189	-1.58
Financial training(yes =1)	1.919	3.83***
LogL = -165.8216	LogL ₀ = -181.2011	McFadden Pseudo R-squared: .0848
No. of observations: 272		
Elasticities		
Age, household head	-.271	
Size land, ha	.0256	
Advice Vi Agroforestry (yes =1)	.101	
Dietary diversity score	-.283	
Financial training(yes =1)	.0975***	

Multinomial logit on savings choices

Variable	Coefficient	T-value
Save at home, "under the mattress" etc		
Constant	1.383	1.64
Age, household head	-.0117	-.75
Size land, ha	.005	.21
Advice Vi Agroforestry (yes =1)	.086	.24
Dietary diversity score	-.466	-3.14**
Financial training(yes =1)	1.637	2.56*
Informal systems (Merry-go-round, Table banking, VSL, DFS, Hisa)		
Constant	-1.519	-1.18
Age, household head	-.023	-.97
Size land, ha	-.068	-.93
Advice Vi Agroforestry (yes =1)	1.156	1.99*
Dietary diversity score	.009	.044
Financial training(yes =1)	2.462	3.59***
SACCO, Village bank, CBO		
Constant	-1.651	-.98
Age, household head	-.0348	-1.02
Size land, ha	.0434	1.26
Advice Vi Agroforestry (yes =1)	.252	.34
Dietary diversity score	-.122	-.44
Financial training(yes =1)	3.487	4.23***
Bank		
Constant	-4.214	-2.91**
Age, household head	.0378	1.47
Size land, ha	.0254	.85
Advice Vi Agroforestry (yes =1)	1.775	2.88**
Dietary diversity score	-.1835	-.93
Financial training(yes =1)	3.108	4.74***

Multinomial logit on savings choices (cont.)

Investment		
Constant	.149	.15
Age, household head	-.0357	-1.94
Size land, ha	-.0217	-.54
Advice Vi Agroforestry (yes =1)	.516	1.26
Dietary diversity score	-.032	-.18
Financial training(yes =1)	1.297	1.83
Logl = -372.78027	Logl ₀ = -487.35858	Pseudo R-squared: .11466
No. of observations: 272		

Results: Logit regression on credit access

Variable	Coefficient	T-value
Constant	-2.821	-2.95**
Age, household head	-.009	-.56
Size land, ha	-.0269	-1.06
Advice Vi Agroforestry (yes =1)	.099	.25
Dietary diversity score	.107	.72
Financial training (yes =1)	.752	1.78
Saves at home (yes =1)	1.808	3.47***
Saves through informal systems (yes =1)	2.548	4.14***
Saves through SACCO etc. (yes =1)	4.976	4.15***
Saves in bank (yes =1)	3.665	5.58***
Saves through investing (yes =1)	1.458	2.51*
LogL = -112.0424	LogL ₀ = -157.8822	McFadden Pseudo R-squared: .29
No. of observations: 272		
Elasticities		
Age, household head	-.286	
Size land, ha	-.116	
Advice Vi Agroforestry (yes =1)	.043	
Dietary diversity score	.332	
Financial training(yes =1)	.118	
Saves at home (yes =1)	.394***	
Saves through informal systems (yes =1)	.223***	
Saves through SACCO etc. (yes =1)	.150***	
Saves in bank (yes =1)	.351***	
Saves through investing (yes =1)	.203*	

Multinomial logit on credit choices

Variable	Coefficient	T-value
From family and friends		
Constant	-3.481	-.05
Age, household head	-.0209	-.34
Size land, ha	-1.424	-1.75
Advice Vi Agroforestry (yes =1)	-9.896	-.22
Dietary diversity score	-1.945	-2.07*
Financial training(yes =1)	-11.366	-.02
Saves at home (yes =1)	11.541	.16
Saves through informal systems (yes =1)	-7.431	.00
Saves through SACCO etc. (yes =1)	29.609	.00
Saves in bank (yes =1)	-81.651	.00
Saves through investing (yes =1)	-.648	-.01
Informal system (Merry-go-round, Table banking, VSL, DFS, Hisa etc)		
Constant	-7.852	-3.82***
Age, household head	.033	1.13
Size land, ha	-.059	-.80
Advice Vi Agroforestry (yes =1)	1.147	1.55
Dietary diversity score	.334	1.16
Financial training(yes =1)	.482	.68
Saves at home (yes =1)	2.418	2.13*
Saves through informal systems (yes =1)	4.314	3.76***
Saves through SACCO etc. (yes =1)	4.319	2.43*
Saves in bank (yes =1)	-73.209	.00
Saves through investing (yes =1)	1.968	1.56
Moneylender		
Constant	-5.071	-1.93
Age, household head	-.009	-.22
Size land, ha	-.334	-1.36
Advice Vi Agroforestry (yes =1)	1.051	.88
Dietary diversity score	.288	.66
Financial training(yes =1)	.081	.06
Saves at home (yes =1)	.973	.67
Saves through informal systems (yes =1)	-10.120	-.021

Multinomial logit on credit choices (cont.)

Saves through SACCO etc. (yes =1)	-36.853	.00
Saves in bank (yes =1)	3.901	2.60**
Saves through investing (yes =1)	1.803	1.42
SACCO, Village bank, CBO		
Constant	-5.066	-2.81**
Age, household head	-.027	-.77
Size land, ha	-.162	1.63
Advice Vi Agroforestry (yes =1)	-.562	-.73
Dietary diversity score	.683	2.24*
Financial training(yes =1)	1.099	1.47
Saves at home (yes =1)	.114	.09
Saves through informal systems (yes =1)	1.320	1.02
Saves through SACCO etc. (yes =1)	5.842	4.29***
Saves in bank (yes =1)	4.837	4.31***
Saves through investing (yes =1)	1.163	1.11
MFI		
Constant	-16.988	-.076
Age, household head	-.055	-.96
Size land, ha	-.020	-.34
Advice Vi Agroforestry (yes =1)	11.514	.052
Dietary diversity score	.476	1.27
Financial training(yes =1)	4.055	3.32***
Saves at home (yes =1)	-6.401	-.31
Saves through informal systems (yes =1)	2.189	1.36
Saves through SACCO etc. (yes =1)	-37.390	.00
Saves in bank (yes =1)	1.946	1.07
Saves through investing (yes =1)	1.487	1.01
Bank		
Constant	-18.842	-.21
Age, household head	.078	.71
Size land, ha	-.019	-.36
Advice Vi Agroforestry (yes =1)	-3.227	-1.72
Dietary diversity score	.564	.91

Multinomial logit on credit choices (cont.)

Financial training(yes =1)	-1.890	-1.21
Saves at home (yes =1)	-33.759	.00
Saves through informal systems (yes =1)	-17.886	.00
Saves through SACCO etc. (yes =1)	-13.636	.00
Saves in bank (yes =1)	16.588	.18
Saves through investing (yes =1)	-19.336	.00
Others, unspecified		
Constant	-24.714	-.23
Age, household head	-.112	-1.14
Size land, ha	-.166	-.51
Advice Vi Agroforestry (yes =1)	8.639	.10
Dietary diversity score	.361	.64
Financial training(yes =1)	8.995	.46
Saves at home (yes =1)	-8.337	-.01
Saves through informal systems (yes =1)	10.496	.16
Saves through SACCO etc. (yes =1)	-40.030	.00
Saves in bank (yes =1)	10.663	.16
Saves through investing (yes =1)	-5.650	-.01
LogL = -141.9168	LogL ₀ = - 281.942 3	McFadden Pseudo R-squared: .49
No. of observations: 272		

Conclusion

- Financial training increases the motivation to save.
- Households that eat a more balanced diet are less likely to choose the saving form “*Save at home*” .
- The variable “*Advice Vi Agroforestry*” has a significant and positive effect on the choices “*Informal systems*” and “*Bank*”, suggesting that agroforestry counselling have influenced household into choosing these forms of saving.
- Respondents with a low dietary diversity score were significantly more likely to choose the credit option “*From family and friends*” - the poorest households have few other credit options than to rely on relatives and neighbors.