

Financial sector development in East Africa: the socio-economic determinants of access and exclusion in Kenya and Uganda¹

DRAFT: NOT FOR CITATION (Please refer to the authors)

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March 2007

1. Introduction

The role of the financial sector as leading contributor to growth has long been accepted and recently the focus has turned to its contribution to poverty reduction (Jalilian and Kirkpatrick 2005). The evidence of direct links to poverty reduction are, however, weak (World Bank 2008) and hence the policy agenda for financial sector development has turned towards ensuring access to finance for all (World Bank 2008). While the scale of informal finance has long been known to be extensive, little national level data and analysis of the actual outreach to individuals of either the formal or informal financial sectors has been available. Moreover in the context of the emphasis in the last decade on the development of the microfinance sector in many developing countries, data on its actual performance in terms of outreach has been lacking. The key dimensions leading to exclusion from access to financial services are generally considered to be factors such as physical distance, cost of services and identity requirements. However, exclusion can be influenced by a range of socio-economic, demographic and geographic dimensions and it is important to understand these in detail if policy is to address barriers to entry.

This paper uses data from nationally representative datasets collected in 2006 by FinAccess Kenya and Finscope Uganda to examine the nature and extent of financial service use across the formal, semi-formal and informal financial sectors. These surveys are among the first of their kind in the region to focus specifically on financial service use by individuals. First, we present profiles of access to savings and loans services across the spectrum of formal to informal financial provision: banks, co-operatives, microfinance institutions, ROSCAs, ASCAs. We use logistic regressions to explore the influence of these characteristics on the use of particular services. Second, the concept of the “financial access strand” ((DFID/Finmark Trust/World Bank 2005) is now being used to provide a summary profile of financial access and we also present logistic regression results for these.

The findings offer a detailed understanding of the relatively low use of formal services, the extensive use of informal services, and demonstrate the extent of exclusion from all services in Kenya and Uganda. The analysis presents patterns of inclusion and exclusion dependent on the key factors of employment, gender, age and education. Poverty proxies in the form of asset indicators also had predictable effects on the extent of use of services.

The main implications of this analysis are two-fold. First, the importance of socio-economic characteristics in determining access suggests that these present underlying barriers to entry for users and suggests the importance of a wider range of factors for policy attention than the strong

¹ The authors acknowledge the support of the Financial Sector Deepening Trust in Kenya and the Financial Sector Deepening Project in Uganda for this research. This paper is based on earlier reports commissioned by these organizations. The authors are grateful to the staff of Steadman Group for answering data queries and also acknowledge technical advice from Cono Ariti in conducting the analysis. The authors are also grateful for comments on earlier drafts from David Ferrand, Dayo Foster and Paul Rippey, Ruth Goodwin-Groen and Markku Malkamaki.

focus on lowering transactions costs alone. Second, by demonstrating the extensive use of semi-formal and informal services it suggests the importance of again considering how policy relates to informal sector provision. Despite the emphasis on utilising the informal sector to make links to the formal sector during the 1990s and in particular the growth of the microfinance sector, as demonstrated here, MFI penetration of the market has overall remained low. More recently policy discussion has now shifted back to the role of formal banks in downscaling to reach poorer clients. While the latter is and must remain an important thrust of policy, this evidence again raises the question of how policy can best work to strengthen the semi-formal and informal sectors as providers of ongoing importance for poorer people.

2. Methodology

Extensive research of financial service use in developing countries over the past 15 years has deepened understanding of the ways poor people in particular use them. This has particularly focused on the range of informal services in use and the complex strategies poor people use to manage their finances using this range of services (see for example (Rutherford 1999)). Data availability at a national level had not however caught up with this perspective. Sections of LSMS surveys for example were usually focussed on asking about use of formal services, and or credit, and rarely probed in sufficient detail into the complexity of savings behaviour and informal services.

Alongside this development has been the expansion of microfinance service provision. While impressive figures have been available regarding growth in coverage which are compiled from the supply side (see eg Microcredit Summit,?), this information also needed to be properly understood from the perspective of users, also given the frequent findings of in depth studies that users may also make multiple use of microfinance institutions services.

Based in South Africa the FinMark Trust pioneered an in-depth survey of financial service use using a market research firm in 2002. The motivation of these surveys was born from the wider debate in the financial service field of the need to understand the dynamics of financial access and to track it over time and in S Africa in particular this was a result of the Financial Services Charter agreed in 2003 (Porteous and Hazelhurst 2004) in which the banking sector committed to significantly extending access to the unserved black population. In S Africa, the banking sector has itself sponsored these studies as a means of obtaining market research data. These surveys have since been replicated in four countries in Southern Africa (Lesotho, Swaziland, Namibia and Botswana), four countries in East Africa – Kenya, Uganda, Tanzania and Zambia, and planning is underway for similar surveys to be undertaken in Ghana, Nigeria and Pakistan (Finmark Trust website, Accessed 29/02/08).

In both Kenya and Uganda the surveys have been supported by a coalition of public and private agencies with the main financial support coming from the UK's Department for International Development and the survey itself was undertaken by the Steadman Group in 2006. In Kenya the FAS comprises a nationally representative sample of 4418 observations of which 4214 were used in the analysis which represents those respondents aged 18+ years old. In Uganda the survey comprises a nationally representative sample of 2959 respondents aged 18+ years. In both cases the sample was provided by the national statistical offices based on their national sampling frame (for details see (FinAccess 2007; FinScope Uganda 2007)). The survey comprised

Logistic regressions were used to investigate the geographic, demographic and socio-economic factors which influence the likelihood of using each type of financial service. The logistic regression model was defined as follows:

$$\log \hat{Z}_i = \log \frac{\text{Pr } ob (serviceuse)}{1 - \text{Pr } ob (serviceuse)} = \beta_1 + \beta_2 X_2 + \dots + \beta_j X_j$$

where X_2, \dots, X_j represent the socio-economic characteristics of financial services users and $\text{Pr } ob (serviceuse)$ represents the likelihood of an individual using a financial service. On the left-hand

side of the regression model, the dependent variable represents the financial service which has been actually used; hence taking a dichotomous form: a value of 1 if a financial service has been used and a value of zero otherwise. On the right-hand side of model, the independent or explanatory variables are those geographic, demographic and socio-economic characteristics taken from the Financial Access Survey and considered as a proxy to people's profiles. As with the dependent variables, the explanatory variables are dichotomous; thus having a value of 1 if a specific socio-economic characteristic corresponds to an individual and a value of zero otherwise. In addition, a best-fit logistic regression model was applied for all savings and credit services, including the access strands, except for bank savings and credit where the "location" variable was replaced by the "proximity" variable.

While the survey sought to collect in-depth information on service use there were nonetheless some challenges in doing this. A particular challenge is the classification of informal groups into different types, such as ROSCAs, ASCAs, welfare clubs, investment groups and so on. Not only does one group often have a number of functions, but the diversity of modes of operation in practice also often make it difficult to identify exactly which type is most appropriate. The precise data on this therefore should be treated with some care. However, the overall orders of magnitude do reflect existing understanding of the nature and scope of these types of groups and their operation in the literature.

A further aspect of the surveys is that they profiled households on the basis of key socio-economic characteristics including poverty indicators of assets rather than expenditure or consumption data. While a single income question was asked in the Uganda survey, its use is limited as it refers to cash income only. The analysis reported here has therefore used the poverty proxies used in the survey.

3. Socio-economic determinants of financial service use in Kenya

This section summarises the analysis of the key socio-economic factors affecting the service which are most used. For each service, the factors are reported in order of influence on the savings side and then we review whether similar factors are important for the credit side. Table 1 summarises the proportions using each service and table 2 gives the logistic regression results for the main savings and credit services.

Table 1: Financial service use – % currently using (weighted)

	Savings	Loans
Bank/building society	13.7	2.1
Post office	5.6	--
SACCO	12.8	4.1
MFI	1.5	0.8
ROSCA	29.3	--
ASCA	5.4	1.7
Local shop	--	22.8
Family or friend	5.7	12.6
Hidden savings	27.9	--
Group of friends	10.9	--
Government	--	1.1
Employer	--	0.9
Buyer	--	0.9
Informal moneylender	--	0.7

Banks: 13.7% use a bank savings account whereas only 2.1% use bank credit. The socio-economic factors which most influence use of a bank savings account are age, employment, education and household assets (see Table 2). Interestingly, geographic factors of location (rural

or urban), region or proximity to a bank do **not** play a significant role in affecting the likelihood that someone uses a bank account.

Age is a particularly important influence. As people get older the likelihood that they use a bank account increases significantly and consistently compared to the youngest age group of 18-24. Being over 55 increases the odds of using a bank account by a factor of 6 compared to the youngest group.

Employment is also a key influence. 64.9% of government employees use a bank account and they are five times more likely than those whose main income is farming and fishing (7.9% of whom have a bank account), making this one of the most important factors in increasing the likelihood someone has a bank account. Those who are in the private sector² are twice as likely to have a bank account, while those employed on domestic chores are ten times less likely and those who are farm employees or who rely on pensions/transfers from others are three times less likely.

Education is also an important influence, 28.3% of those with a secondary education have a bank account and this increases the likelihood of having a bank account fivefold compared to those with no formal education. Having a primary education doubles the likelihood.

9.5% of women compared to 18.2% of men have a bank account and women are 1.3 times less likely to have a bank savings account.

When it comes to taking a loan from a bank, main income source is again a key factor. Being a government employee significantly increases the likelihood and being dependent on pension or transfers from others reduces the likelihood tenfold compared to those whose main income is farming or fishing. Having a car more than doubles the likelihood compared to not owning a car but this may also reflect taking a loan to buy a car. Being a woman lowers the likelihood by a factor of 1.6 and being single lowers the likelihood more than twofold.

SACCOs: Overall 12.8% save with SACCOs and 4.1% borrow from them. Geographic factors are important in determining access to SACCOs. Rural people are twice as likely to save in them and three times as likely to borrow from them as urban residents. Regions are also important: being in Central Region more than doubles the likelihood compared to Nairobi whereas living in Coast Region reduces it fourfold.

The key influences on using SACCOs to save are similar to those for banks – main income source is again a key factor. Being a government employee most increases the likelihood followed by being in the private sector – both compared to having a main income from farming or fishing (of whom 15.5 percent use a SACCO savings account). Being employed on domestic chores; dependent on pension or transfers from others and employed on another's farm all significantly reduce the likelihood of using a SACCO. In contrast to bank use, running your own business significantly reduces the likelihood of using a SACCO compared to farming and fishing - but this is not surprising given that SACCOs in Kenya are primarily either based on common bonds of farming or employment. These results therefore suggest that while being rural increases the likelihood of using a SACCO; employment influences the likelihood more.

Age again increases the likelihood of using SACCO services: being older consistently increases the likelihood. Education is also key – 18.1% of those with secondary education use SACCOs and this raises the likelihood more than twofold compared to no formal education whereas a primary education raises the likelihood almost twofold.

Being a woman reduces the likelihood of using a SACCO by a factor of 1.3 compare to men; being single reduces the likelihood by a factor of almost two compared to being married/cohabiting.

² The data set does not enable us to breakdown this employment into formal and informal employment.

Table 2: Use of saving and loan services - logistic regressions, Kenya

18+ years old	Savings services				Loan services				
	Bank	SACCO	MFI	ROSCA	Bank	SACCO	MFI	Local shop	Family or friend
Proximity to a bank									
Near	---	---	---	---	---	---	---	---	---
Not so far	1.36	---	---	---	1.17	---	---	---	---
Far	0.93	---	---	---	0.77	---	---	---	---
Very far	1.10	---	---	---	1.04	---	---	---	---
Location									
Rural	---	2.45***	0.69	1.10	---	2.76***	0.77	0.95	0.78
Urban	---	---	---	---	---	---	---	---	---
Gender									
Men	---	---	---	---	---	---	---	---	---
Women	0.73**	0.78*	1.77*	2.43***	0.62*	0.82	2.10*	1.11	0.86
Marital status									
Single	0.87	0.58**	1.14	0.64***	0.38**	0.45**	1.18	0.82	1.03
Divorced	0.73	0.64	0.48	0.88	---	0.23	---	0.63	1.77*
Widowed	1.28	0.71	1.55	1.22	0.88	0.42	1.31	0.97	1.34
Married/Cohabiting	---	---	---	---	---	---	---	---	---
Age									
18-24	---	---	---	---	---	---	---	---	---
25-34	2.16***	1.58*	1.83	1.25*	2.29	1.50	2.02	1.31*	1.09
35-44	2.73***	2.97***	3.22*	1.33*	2.56	3.09**	3.84*	1.23	1.01
45-54	3.72***	3.91***	3.66*	0.92	2.74	4.00***	2.79	0.99	1.04
55+	6.04***	7.00***	3.63*	0.89	2.45	5.87***	2.21	0.88	0.79
Education									
No formal education	---	---	---	---	---	---	---	---	---
Primary	2.03**	1.95***	0.58	1.18	0.69	1.74	5.17	1.00	0.98
Secondary+	5.00***	2.53***	---	1.12	1.97	2.58	5.70	0.76	0.86
Region									
Nairobi	---	---	---	---	---	---	---	---	---
Central	1.42	2.73***	0.97	1.46*	0.67	0.87	0.87	1.78**	1.67*
Coast	1.12	0.24***	1.85	0.49***	0.71	0.18**	2.54	0.21***	0.36***
Eastern	1.38	1.29	0.82	1.35	0.43	0.76	1.31	1.34	0.58*
North Eastern	---	---	---	0.03***	---	---	---	---	---
Nyanza	1.02	1.36	0.66	1.33	0.87	1.08	1.01	1.41	2.99***
Rift Valley	1.35	1.16	1.67	0.72	1.07	0.91	1.53	2.10***	2.27***
Western	0.59	0.72	1.60	0.90	0.86	0.90	1.43	0.22***	0.25***
Main source of income/money									
Pension/transfer from family or friend	0.37***	0.20***	0.13**	0.54***	0.17*	0.12**	0.11*	0.81	0.68*
Sell produced from farm, livestock & fishing	---	---	---	---	---	---	---	---	---
Employed on people's farm full time/seasonal	0.34**	0.52**	0.28	0.81	---	1.15	---	1.18	0.80
Employed on domestic chores	0.10***	0.19**	0.40	0.53**	---	---	---	0.42***	0.65
Government	5.00***	7.56***	0.38	0.97	6.83***	9.73***	1.06	0.92	1.41
Private sector	1.94***	1.54*	0.48	1.00	1.58	2.42**	0.60	1.29	1.16
Running own business	0.95	0.41***	1.61	1.32**	0.84	0.70	1.54	1.21	1.45
Sub letting of land, house/rooms, earning from investments & others	1.14	0.83	2.64	1.27	1.04	0.70	1.69	1.24	1.18
Dwelling general									

	Savings services				Loan services				
18+ years old	Bank	SACCO	MFI	ROSCA	Bank	SACCO	MFI	Local shop	Family or friend
condition									
Permanent	1.53	1.39	1.17	1.21	2.02	2.88	1.32	1.49*	0.76
Semi-permanent	1.16	1.26	1.16	1.21	1.48	3.24	0.78	1.93***	1.27
Temporary	---	---	---	---	---	---	---	---	---
Traditional	0.43	0.39*	1.08	0.88	---	---	0.50	1.78**	1.02
Main source of lighting									
Electricity, solar & gas	1.43*	0.83	1.48	0.98	1.23	1.72	1.58	0.81	0.99
Kerosene	---	---	---	---	---	---	---	---	---
Firewood, candle & others	0.92	0.50	2.44	0.33***	1.45	---	1.46	0.90	1.53
Main source of water									
Tap	---	---	---	---	---	---	---	---	---
Well	0.88	0.42***	1.02	0.91	0.59	0.65	0.87	0.92	0.92
Surface water	0.83	0.62***	0.98	1.06	0.70	0.60	0.63	0.81*	1.03
Toilet facilities									
Own flush toilet	---	---	---	---	---	---	---	---	---
Shared flush toilet	0.47***	1.26	4.80*	2.05***	0.40	1.74	3.93	1.09	1.07
Latrine	0.76	0.88	4.79*	1.45	0.61	0.92	5.57*	1.04	0.76
Household assets									
Radio	2.22***	1.38	1.99	1.26*	2.41	1.51	0.93	1.10	1.07
Television	1.77***	1.41*	1.18	0.91	1.60	1.18	1.34	0.88	0.92
Bicycle	0.93	0.85	1.03	1.30***	0.63	1.24	1.22	0.98	1.02
Car	2.50***	1.17	1.55	1.04	2.47***	1.17	1.62	0.66	0.81
Frequency of family without enough food to eat									
Often	0.34***	0.33***	1.25	0.90	1.22	0.66	1.53	0.64**	0.65*
Sometimes	0.47***	0.78	0.44*	1.00	0.78	0.52*	0.12**	1.06	1.24
Rarely	0.74*	0.96	0.88	1.04	0.81	0.69	0.67	1.23	1.02
Never	---	---	---	---	---	---	---	---	---
Frequency of family feeling unsafe from crime inside home									
Often	0.99	1.84**	1.00	1.13	0.52	1.21	0.94	1.18	0.68
Sometimes	1.40*	1.16	0.84	0.92	1.38	1.39	0.80	1.04	1.26
Rarely	1.17	1.29	1.33	1.11	1.19	1.24	1.46	0.93	1.01
Never	---	---	---	---	---	---	---	---	---
Mobile phone usage									
Use own mobile phone	2.45***	1.18	2.29*	1.27*	0.88	2.49**	1.89	0.94	0.82
Use somebody else's mobile phone	0.79	0.92	1.67	1.11	0.71	1.51	1.38	1.11	1.03
Do not use at all	---	---	---	---	---	---	---	---	---
Number of obs.	4084	4084	4084	4214	3164	3402	3553	4084	4084
Pseudo R2	0.4144	0.2761	0.1546	0.1051	0.3390	0.3200	0.1838	0.0985	0.1052

*, ** and *** significance at the 0.05, 0.01 and 0.001 level respectively

In terms of taking loans from SACCOs, main source of income is again key - being a government employee is again the factor that most significantly increases the likelihood of getting credit from a SACCO. Again being dependent on pension/transfers significantly reduces the likelihood. The effects of age and marital status are similar to those on the savings side. However, even though those in Central are significantly more likely to have SACCO savings than those in Nairobi, they

are not significantly more likely to have SACCO credit. Those on the Coast are again significantly less likely to have SACCO credit than those in Nairobi. Education and gender are not significant in changing the likelihood of borrowing from a SACCO. Having your own mobile phone significantly increased the likelihood of borrowing from a SACCO compared to not using one at all, although it did not increase the likelihood of savings with a SACCO.

MFIs: The data on microfinance institutions suggests that their outreach is in fact rather limited. Overall 1.5% used MFIs for savings and 0.8% for loans. Geographically, the proportion of urban residents using MFIs (2.2%) is almost twice that of rural residents (1.3%). However this is not reflected in a significantly lower likelihood that a rural resident uses an MFI once the influence of other factors is removed, so that location alone is not influential. Interestingly, region does not significantly affect either saving or borrowing from an MFI, suggesting that at the low level of penetration of these services geographic difference is not overall playing a differentiating role in access.

The factors most important in influencing access to MFI services are prioritised differently to those for banks and SACCOs. First is age. Those over 35 are more than three times more likely than those who are 18-24 to save with an MFI; however of all the age groups only those in the 35-44 age group are significantly more likely to borrow from an MFI than 18-24 year olds.

Toilet facilities come out as an influence and this is obviously acting as a proxy poverty indicator in this instance. Those who share a flush toilet or have a latrine are significantly more likely to have a savings account with an MFI than those who have their own toilet. Only those with a latrine are significantly more likely to borrow from an MFI. This result suggests that MFIs are reasonably successful at targeting loans to exclude the better off as reflected by sanitation facilities.

Owning a mobile phone more than doubles the likelihood of both saving and borrowing from an MFI compared to not using one at all.

Given that many MFI services have been targeted to women we would expect to find that gender is a significant variable and women are indeed almost twice as likely to save with an MFI as men and more than twice as likely to borrow from one.

Source of income is a much less important determinant of access to MFIs than to banks and SACCOs. The only source of income that significantly influences use - lowering it tenfold - is being dependent on pension/transfers from others compared to being in farming and fishing. It is interesting to note that while running your own business raises the odds of using an MFI relative to farming and fishing it does not do this significantly. This is likely to reflect the fact that MFI customers are as likely to be engaged in farming and fishing as those with a business and vice versa, and the fact that for many MFI users business activities represent the means through which livelihoods are diversified rather than substituted.

These results contrast to those for banks and SACCOs and suggest that MFIs do reverse some of the key factors that contribute to exclusion from those services. However, their relatively low overall market penetration to date means that they have some way to go if they are to reverse these influences across the market as a whole.

ROSCAs: Overall ROSCAs are the most used savings (and credit service) with 29.3% of the population using them. Geographically, while rural residents use ROSCAs more than urban residents (30.4% compared to 26.2%) it does not significantly influence the likelihood. Region however is important. Those in Central Region are 1.5 times more likely to use ROSCAs than those in Nairobi, while those in Coast Region are two times less likely and those in North Eastern are 33 times less likely to use them.

Reflecting the long known prevalence of informal groups with women, the data indicates that women are more than twice as likely to use them as men.

Employment is also important with those running their own business significantly more likely to use a ROSCA compared to being in farming and fishing but the factor is relatively low at 1.3. Again those employed in domestic chores and those dependent on pensions/transfers are two times less likely. In fact what is interesting about ROSCAs is their relatively ubiquitous use across all income sources - even among government and private sector employees who are not significantly less likely to use them as we might expect given their significantly greater use of more formal services.

Owning a radio or bicycle and using your own mobile phone all significantly increase the likelihood of using a ROSCA compared to not having them. While owning a TV reduces this likelihood, this is not a significant result.

Toilet facilities acting as a poverty proxy are again important as an indicator. Sharing a flush toilet raises the likelihood that someone uses a ROSCA compared to someone having their own flush toilet, but use of latrines is not significant.

Age presents an interesting influence on use with those who are 25-44 being more likely to use ROSCAs compared to 18-24 year olds, but older people above 44 are not more likely and this contrasts with the use of banks and SACCOs discussed above.

Education has no significant influence at all and this again contrasts strongly with formal services – not least because we might again expect the better educated to use these services much less.

When it comes to marital status, being single significantly reduces the likelihood of being in a ROSCA by a factor of 1.5.

Local shop credit: While this credit is primarily given in the form of goods provided on credit it is the most used source of credit overall at 22.8%.

Geographically, 24.3% of rural residents use this source and 18.2% of urban residents but location is not a significant factor in determining this. Living in Rift Valley or Central Region significantly increases access to this source while those in Coast Region and Western are five times less likely to use it compared to those in Nairobi.

Employment is also influential - being employed in domestic chores significantly lowers the likelihood of using this source of credit, but no other source of income significantly affects it relative to farming and fishing. This again suggests the relative ubiquity of this source of credit.

Housing conditions appear an influential factor - relative to a temporary dwelling, having a traditional, permanent or semi-permanent dwelling significantly raises the likelihood of using the source and would seem to reflect a degree of stability in a location.

Further food security as subjectively assessed by respondents was also an influential factor, indicating that people whose families 'often' lack food are significantly less likely to borrow from local shops compared to those whose families 'never' lack food.

Borrowing from family or friends: Overall this is the second most used source of credit at 12.6%, while 5.7% reported saving with a family or friend.

Geographically, while there is little difference in the incidence of use between rural and urban areas, region does affect it. The regions where the incidence of this is highest are Nyanza (25.6%), Rift Valley (19.7%) and Central (13.6%) and being in these regions raises the likelihood significantly. On the other hand in North Eastern none reported borrowing from family/friends, the proportions were also low in Western (3.0%), Coast (2.2%) and Eastern (5.5%) and people in these regions were four, three and two times less likely to borrow from this source.

Employment: interestingly it is only being dependent on pension/transfers that significantly affects the likelihood of using this source of credit – lowering it by a factor of 1.5. The data indicates that the source is used similarly across other main income sources again suggesting the relative

ubiquity of use. Similarly ownership of assets such as car, radio, bicycle, TV and even mobile phone do not affect the likelihood of use.

Marital status affects the likelihood of borrowing from friends and family, with being divorced significantly increasing the likelihood of using this source by almost twice compared to being married/cohabiting. Similarly being widowed or single also increases the likelihood and this is likely to reflect the greater difficulty of managing finances alone compared to in a married couple.

4. Kenya: Financial Access Strands

The previous section analysed characteristics of users of a range of different financial services. The concept of the financial access strand is to place each user in one category dependent on the most formal service they use. Hence if someone has a bank account but also uses ROSCAs they will be counted as being a user of formal services and placed in the formal access strand. If they only use a ROSCA they would be placed in the informal access strand.

In Kenya the access strands have been defined as follows:

- Formal: banks, building society, Post Office, insurance company
- Semi-formal: SACCOs, MFI, Government institutions
- Informal: ROSCAs, ASCAs, group of friends, employer, moneylender, hire purchase / shop/ buyer
- Excluded: none of the above financial services

The definition of the informal sector used here only involves use of ROSCAs and ASCAs. These are the two most used forms of informal service and represent intermediation involving more than one other person. The dataset did collect information on a range of other informal services such as local shops as a source of credit, or borrowing from family and friends, “hidden savings”. However, in the financial access strand analysis, people who only use these services are treated as excluded based on the view that their financial activity did not involve interacting with more than one other person³.

Looking at the proportions in each category – see table 3.1: 38.3% are defined as excluded. 35% are included via the informal sector in the form of ROSCAs/ASCAs. The semi-formal sector includes a further 8.1%, but only 3% of these only use semi-formal services, and a further 5.2% also use informal services. 18.5% use formal services, but the majority use a combination of formal services and those of the semi-formal and informal sector so that only 4.9% only use formal services.

³ However, the category “saving with a group of friends” which is 11.1% of the sample was also excluded from the informal access strand.

Table 3: Multiple use of services across access strands

Access strands (weighted)	%	
Formally Included (Bank & Post office)	18.5	
Of whom: Formal only		4.9
Formal & semi-formal		3.2
Formal and informal		5.5
Formal & semi-formal & informal		5.0
Semi-formally included (SACCO & MFI)	8.1	
Of whom: Semi-formal only		3.0
Semi-formal and informal		5.2
Informally included (ASCA & ROSCA)	35.0	
Excluded	38.3	
Total	100	

Given this, we can examine the effect of the geographic, demographic and socio-economic factors on use across the strands to see which ones are most important overall in determining access – see table 4. The analysis is prioritised on the most influential factors and in each case we start by discussing the impact on exclusion then working across the strands to discuss the influence of the factor on inclusion in each strand.

Employment is the factor that has the most influence on exclusion. Government employees are seven times less likely to be completely excluded from financial services compared to someone whose main livelihood is farming and fishing. They are also four times less likely to only use informal services, half as likely to only use semi-formal services and nine times more likely to use formal services.

Private sector employees are two times less likely to be excluded, and more than twice as likely to be formally included. Those employed on domestic chores are more than twice as likely to be totally excluded and this is reflected in significantly lower likelihoods of being formally included. Those dependent on pension/transfers show a similar pattern – they are twice as likely to be excluded as those in farming and fishing and this is matched by being significantly less likely to be formally or semi-formally included. Those employed on people's farm in full time/seasonal work are also more likely to be excluded than those in farming and fishing. They are also significantly less likely to be semi-formally included.

Table 4: Financial Access Strands - Kenya (logistic regressions)

	Formally included	Semi formally included	Informally included	Excluded
Location				
Rural	1.02	1.57*	1.05	0.75**
Urban	---	---	---	---
Gender				
Men	---	---	---	---
Women	0.82	0.87	1.46***	0.77***
Marital status				
Single	0.90	0.75	0.77**	1.74***
Divorced	1.00	0.95	0.79	1.50
Widowed	1.17	0.73	1.28*	0.89
Married/Cohabiting	---	---	---	---
Age				
18-24	---	---	---	---
25-34	2.29***	1.84*	1.00	0.64***
35-44	2.72***	2.90***	0.87	0.57***
45-54	3.53***	3.16***	0.63***	0.65**
55+	6.02***	5.19***	0.50***	0.56***
Education				
No formal education	---	---	---	---
Primary	2.06***	1.88**	1.00	0.67***
Secondary+	4.34***	1.88**	0.68**	0.62***
Region				
Nairobi	---	---	---	---
Central	1.45	2.72**	1.05	0.41***
Coast	0.72	0.17**	0.37***	3.23***
Eastern	1.33	1.32	1.48*	0.49***
North Eastern	---	---	0.01***	69.14***
Nyanza	1.13	1.38	1.66**	0.46***
Rift Valley	1.33	0.88	1.22	0.70
Western	0.88	0.86	0.68	1.40
Main source of income/money				
Pension/transfer from family or friend	0.46***	0.28***	0.92	2.16***
Sell produced from farm, livestock & fishing	---	---	---	---
Employed on people's farm full time/seasonal	0.67	0.48**	1.06	1.32*
Employed on domestic chores	0.19***	0.19	1.11	2.44***
Government	9.68***	0.49*	0.25***	0.13***
Private sector	2.64***	0.91	0.86	0.49***
Running own business	1.46**	0.41***	1.38***	0.76**
Sub letting of land, house/rooms, earning from investments & others	1.59	1.23	0.95	0.60
Dwelling general condition				
Permanent	1.42	1.21	1.11	0.70*
Semi-permanent	1.10	1.34	1.37*	0.62***
Temporary	---	---	---	---
Traditional	0.41*	0.56	1.18	0.90
Main source of lighting				
Electricity, solar & gas	1.24	0.59*	0.95	1.00
Kerosene	---	---	---	---
Firewood, candle & others	0.85	0.75	0.63*	1.52*
Main source of water				
Tap	---	---	---	---
Well	0.78	0.47***	1.22	1.25
Surface water	0.77	0.58***	1.12	1.25*

	Formally included	Semi formally included	Informally included	Excluded
Toilet facilities				
Own flush toilet	---	---	---	---
Shared flush toilet	0.58*	3.97*	1.61	0.97
Latrine	0.73	2.81	1.56*	0.98
Household assets				
Radio	1.58*	1.39	1.15	0.75**
Television	1.75***	0.96	0.73**	0.85
Bicycle	1.18	0.80	1.22*	0.80*
Car	3.11***	0.24*	0.56*	0.50***
Frequency of family without enough food to eat				
Often	0.45***	0.52*	1.17	1.34*
Sometimes	0.53***	1.10	1.20	1.10
Rarely	0.78	1.35	1.19	0.86
Never	---	---	---	---
Frequency of family feeling unsafe from crime inside home				
Often	0.89	1.46	0.80	1.12
Sometimes	1.17	0.99	0.83*	1.14
Rarely	1.07	1.28	0.83*	1.09
Never	---	---	---	---
Mobile phone usage				
Use own mobile phone	2.84***	1.17	0.70**	0.53***
Use somebody else's mobile phone	0.86	1.27	1.13	0.91
Do not use at all	---	---	---	---
Number of observations	4084	4084	4214	4214
Pseudo R2	0.4020	0.1764	0.1310	0.2130

*, ** and *** significance at the 0.05, 0.01 and 0.001 level respectively

Those whose main income is running their own business are less likely to be excluded, but more likely to be informally or formally included and less likely to be semi-formally included. This reflects the fact that SACCOs tend to cater to farmers and employees and that MFIs who are targeting this market have made limited impact so far. On the other hand since those who run their own business span a huge spectrum of formal to informal businesses they are therefore likely to use ROSCAs/ASCAs and formal services.

The effect of age is consistent in terms of its effect on exclusion and its effect on use of other services. Older age groups are much less likely to be excluded than 18-24 year olds. The oldest age groups are much more likely to be formally or semi-formally included and less likely to be only informally included.

This data also demonstrates that for younger people, ROSCAs/ASCAs do not provide services to fill the gap between exclusion and more formal services. This can be understood in relation to the higher levels of mobility and weaker social networks that these groups are likely to have.

Given the proportion of the population in this younger category (21% unweighted) this suggests a policy priority is to consider the means through which the younger age groups – in particular 18-24 year olds, but also 25-34 year olds can gain improved access to services.

Province: The influence of location in terms of Province demonstrates a considerable influence on the likelihood of exclusion. Since this analysis holds other factors constant – in particular the various wealth and poverty proxies used – this is not simply picking up the relative poverty of different Provinces.

Those living in North-Eastern Province are 69 times more likely to be excluded compared to those living in Nairobi. This exclusion is not moderated by the informal sector in this province as people are also 100 times less likely to use informal services. Levels of access to formal and semi-formal services were zero so the regression could not produce results.

Those living in Coast Province are three times as likely to be excluded as those in Nairobi. This is mainly explained by the deficit of informal and semi-formal services, since while they are not significantly less likely to have a bank account they are almost three times less likely to be informally included and nearly six times less likely to be semi-formally included.

While those in Rift Valley and Western are less likely to be excluded than those in Nairobi, this is not significant and they do not appear to differ significantly in profile from those in Nairobi for any strand.

On the other hand, those in Nyanza and Eastern are more than twice less likely to be excluded and more likely to be informally included –the informal sector is helping fill the gap. Although they are more likely to be formally or semi-formally included than those in Nairobi, this is not a significant result.

Those in Central Province are more than two times less likely to be excluded - ie this is where inclusion is highest by comparison to Nairobi. However, it appears that in comparison to Nairobi the sector that primarily fills the gap is the semi-formal sector, with people being nearly three times more likely to be included through this sector.

It is important to note that formal inclusion is not significantly affected by Province. This suggests that for those who are able to access them the regional factor is not important and hence that there is no obvious bias in formal inclusion once other factors are controlled for.

This analysis therefore gives us a very strong regional picture of the strength of coverage and the way in which the informal sector reduces that exclusion, especially in Nyanza and Eastern, while the semi-formal sector makes a significant impact on exclusion in Central (relative to Nairobi) - and according to the service by service analysis this is most likely to be contributed through the role of the SACCOs rather than the MFIs, which is understandable from the prevalence of rural SACCOs related to coffee and dairy in that Province.

This suggests that policy priorities for financial service development – especially in the semi-formal and informal sectors - could be more Province specific. The nature of capacity building needed to expand the semi-formal and informal sectors where they currently exist will be different to that needed to start to develop these sectors where they currently have very limited presence.

Education also presents a relatively clear influence on the spectrum of access. Educated people are significantly less likely to be excluded than those without formal education. Those with secondary education are significantly less likely to be only included through the informal sector. Being educated at primary or secondary level significantly raises the likelihood of being semi-formally included. Having a primary education doubles the likelihood of formal inclusion and having a secondary education increases it by a factor of four.

These results demonstrate the importance of education for financial service access, again holding other factors constant. They underline the importance of Universal Primary Education policies for improving financial service access over the long run. However, given that almost half of the sample (46%) of over 18 year old only had primary education (and 26% had only 'some primary'), it suggests an important need to tackle what might be understood to be constraints of communication and accessible information in both formal and semi-formal services. There is also important scope for considering how financial literacy and numeracy skills could be developed in the educational environment and this may work in tandem with the need to consider how to improve access for younger people.

Gender: Being a woman significantly lowers the likelihood of exclusion from financial services, and this is reflected in the fact that it significantly raises the likelihood of inclusion through informal services (see figure 3.5). It lowers access to formal and semi-formal services but not significantly. However, the services by service analysis shows that gender is significant in affecting access to different types of service: the analysis of bank services on their own does indicate that women are significantly less likely to have a bank account, while this is not the case for the Post Office – combining these in the access strand of formal inclusion therefore ameliorates the gender effect of bank access. This happens similarly in the semi-formal access strand: SACCO and MFI services independently showed that women were significantly less likely to use SACCOs but significantly more likely to use MFIs. Given therefore that in each of these access strands banks and SACCOs are the more important services overall than the Post office and MFIs, it is still important to consider how women's access to banks and SACCOs can be improved, or whether MFIs in particular are the only route to greater inclusion.

This result confirms the understanding that women use ROSCAs/ASCAs more than men. Relative to men it is therefore a factor that ameliorates their total exclusion from services. There is potential for groups to work better for men where the arrangements can be more formalised and some evidence from the survey (see section 5 below) that men seek to do this where they are involved in groups. However, promotion of groups is perhaps unlikely to adequately cater to men's demands for financial services. Men's demand for financial services tends to be lumpier than women and is more likely to occur at the same time eg. to fund school fees, agricultural inputs and this makes ROSCAs unable to cater to these needs.

Given that informal group services are however important and that some 30% of the population overall use them, strategies to ensure their effective and improved ability to provide services are important.

Asset ownership: The analysis looked at the influence of four particular assets: car, TV, radio, bicycle and mobile phone, which also act as poverty proxies in the analysis. They present a fairly consistent and expected pattern of influence on use. Owning a car is the most influential asset indicator in reducing exclusion and increasing formal inclusion. Owning a TV does not significantly reduce the likelihood of exclusion but significantly increases the likelihood of being included via formal services. Owning a radio reduces the likelihood of exclusion and significantly increases the likelihood of formal inclusion. Owning a bicycle significantly reduces the likelihood of exclusion but this is matched by it significantly increasing the likelihood of only being included in the informal sector.

Mobile phone ownership demonstrates a similar influence on inclusion to that of cars. Owning your own means you are twice less likely to be excluded but more than two times more likely to be formally included, while not affecting use of informal and semi-formal services. Using somebody else's mobile phone compared to not using one at all has no influence on use.

Food security as an indicator also had an understandable pattern. Those who 'often' go without enough food are more likely to be excluded and significantly less likely to be included in the semi-formal and formal sectors. On the other hand, only 'sometimes' going without enough food significantly reduces the likelihood of formal inclusion but does not significantly increase the likelihood of exclusion. It is interesting to note that the food security indicator is not as important in explaining use as might be expected. This is likely to be because it is a subjective assessment and therefore the relative assessment of 'rarely', 'sometimes' or 'often' for those who experience food insecurity may differ between areas.

5. Socio-economic influences on financial service use in Uganda

This section summarises the key factors affecting the use of key services. The factors are reported in order of importance on the savings side and then we review whether similar factors are important for the credit side. Table 5 summarises the proportions using each service.

Table 5: Financial service use – % currently using (weighted)

	Savings	Loans
Bank/credit institutions	14.1	2.4
SACCO	2.7	1.3
MFI (MDIs and other MFIs)*	3.7	2.4
NGOs	0.7	0.2
ASCA	4.3	1.6
Savings Club	3.6	0.7
ROSCA	8.4	---
Welfare Fund	3.2	0.3
Investment Club	2.1	0.2
Family or friend	12.7	8.4
Shops	0.7	18
Employer	0.2	0.2
Hidden savings	68.4	---
Informal moneylender	0.1	0.5

* See discussion of MFI definition in text.

The Central Bank of Uganda has developed a categorisation of MFIs in different Tiers of the system depending on their nature and degree of regulation. Tier 1 institutions are fully regulated banks, and Tier 2 institutions are other regulated financial institutions. Tier 3 refers to the Microdeposit taking institutions (MDIs) registered under the 2003 Act. Tier 4 refers to all other MFIs and informal groups.

In terms of the categorisations used here, the Bank/Credit institutions category in Table 2 above refers to Tier 1 and 2 institutions and the MFI category refers to the MDIs and 'other MFIs' i.e. Tiers 3 and 4. However, the Tier 4 institutions here do not include the informal groups as these are dealt with separately.

An alternative categorisation of microfinance by the Ministry of Finance includes particular institutions from the Tier 1 and 2 categories with MFIs as a whole. These are Centenary Bank from Tier 1 and Commercial Microfinance Ltd and Post Bank Uganda from Tier 2. Re-calculating the figures in Table 2.1 to allow for this categorisation (and therefore removing the Tier 1 and 2 institutions from the Bank/Credit institutions category) gives the figures in Table 2.2 for what we call "MFI overall".

Table 6: Financial service use – % currently using (weighted)

	Savings	Loans
Bank/credit institutions (revised)	12.8	1.5
MFI 'overall'	9.1	3.2
Of which:		
MDI	2.0	1.4
Other MFI	1.8	1.0

This recalculation reduces the proportion of the population using bank/credit institutions for savings from 14.1% to 12.8% a fall of 1.3% and increases the proportion using MFIs for savings from 3.7% to 9.1%. This is a big jump of 5.4% and represents the large contribution of Centenary Bank, in particular, on the savings side. However, the fact that the Bank/CIs figure has not fallen by as

much suggests that a high proportion of these people also have accounts with other bank/credit institutions. On the loans side the impact is a fall in the proportion of the population taking loans by 0.9%, from 2.4% to 1.5%, while rising by 0.8% from 2.4% to 3.2%, suggesting that loan use is not multiple across institutions in the same way.

Banks: As indicated in Table 2.1, 14.1% use a bank savings account whereas 2.4% use bank credit. The logistic regressions are reported in Table 7.

Education is a very strong factor influencing bank use - having a secondary education increases the likelihood that someone will have a bank savings account by ten times compared to someone who has no formal education, while having a primary education more than doubles it.

Employment is also a key influence. 62.4% of those employed in formal sector⁴ employment have a bank savings account and they are twice as likely to use one as those who run their own businesses. 18.2% of those who run their own businesses (the base group) have bank savings accounts, while 22.5% of those who work for an individual in a private business do but this does not make this group more likely to hold one. On the other hand, farmers are significantly less likely than those who run their own business to hold one, as are those who rely on pensions/transfers or those who are employed on other people's farms or in domestic chores.

Age is also influential. Compared to the 18-24 age group, those aged 25-44 and over 55 are more likely to use a bank savings account. This is not the case for the age group 45-54 however, so the effect of age tends to be stronger as people get older but this does not apply entirely consistently.

9.8% of women have a bank savings account compared to 18.9% of men and this also gives a result that they are two times less likely to do so when all other factors are held constant.

The effect of income level is significant for the highest two income categories⁵ (see figure 2.3) – i.e. those who reported incomes of over Ushs300,000 per year compared to those who reported an income of under Ushs90,000. People in the top income category of incomes over Ushs850,000 (i.e.11.6% of the sample) were three times more likely as those with under Ushs90,000 to have a bank savings account, while those with incomes between Ushs300,000 and Ushs850,000 were two times as likely.

With respect to assets, those with a mobile phone are more likely to use a bank account by a factor of three, while those with TVs were twice as likely and those with bicycles 1.5 times more likely. However, perhaps surprisingly, car ownerships did not give a significant result.

Further poverty proxies that were significant were clothing and cooking fuel. Where all members of the household had two sets of clothes, the likelihood of having a bank account was double. Cooking with paraffin or charcoal significantly increased the likelihood of using a bank account compared to cooking with firewood. However perhaps surprisingly cooking with electricity did not significantly increase the likelihood but this may be due to the very low overall proportion using this fuel (0.9%).

⁴ The questionnaire used two categories of employment which are not clearly and completely distinct: "working for an individual in a private business" and "employed in the formal sector like in an office (public or private)". This approach is seeking to establish a formal and informal employment sector divide but the delineation may not be entirely robust.

⁵ Income level was analysed into the following categories: Not reported; Ushs<90,000 (US\$50); Ushs90,000-300,000 (US\$175); Ushs300,000-850,000 (US\$500) and over Ushs850,000. These groups represented 34%; 14%; 23%; 16%; 13% of the sample respectively.

Table 7: Use of Savings and credit services – logistic regressions, Uganda

	Savings						Credit						
	Bank/Credit Institutions	SACCOs	MFI Overall	ASCAs	ROSCAs	Family & friends	Banks/Credit Institutions	SACCOs	MFI overall	ASCAs	ROSCAs	Family & friends	Shops
Location													
Rural	1.07	1.36	0.98	0.90	0.78	1.13	2.99*	0.95	1.57	0.84	0.76	1.38	0.81
Urban	---	---	---	---	---	---	---	---	---	---	---	---	---
Gender													
Men	---	---	---	---	---	---	---	---	---	---	---	---	---
Women	0.53***	0.99	0.95	1.32	1.58**	1.15	0.41**	0.57	1.31	2.23*	1.37	1.01	0.92
Marital status													
Married	---	---	---	---	---	---	---	---	---	---	---	---	---
Divorced	1.02	0.45	0.95	0.59	0.81	1.07	1.13	0.41	2.10	0.36	0.30	1.33	1.10
Widowed	1.49	0.36	0.93	0.49	1.07	1.04	0.63	1.28	0.46	0.31	0.66	1.31	1.31
Single	1.35	0.42	0.74	0.50	0.69	1.17	0.74	0.47	0.74	0.51	1.13	1.27	0.85
Marital RTA	1.37	0.87	1.07	0.93	0.77	1.52	0.91	0.85	0.94	0.77	2.18	1.10	0.89
Age													
18-24	---	---	---	---	---	---	---	---	---	---	---	---	---
25-34	1.80**	1.66	1.31	0.94	0.76	0.62**	3.46*	1.16	2.00	0.79	0.88	0.79	1.03
35-44	2.11***	2.96*	1.77*	1.09	0.93	0.69*	4.99*	2.25	3.60**	1.54	0.70	0.87	0.87
45-54	1.52	2.25	1.63	1.86	1.03	0.65	7.59**	2.24	2.36	4.47**	1.82	0.61	0.83
55+	2.40**	3.09	1.89	1.36	0.43*	0.69	1.10	4.52*	1.76	1.12	0.77	0.58	0.96
Refused	1.30	2.82	1.05	1.54	0.58	0.46**	2.16	1.87	0.50	0.89	0.26	1.08	1.06
Education													
No formal education	---	---	---	---	---	---	---	---	---	---	---	---	---
Primary	2.46*	4.29*	2.11*	0.89	1.19	0.89	2.98	0.88	1.81	0.90	0.80	1.32	1.11
Secondary+	9.94***	4.33*	4.57***	1.12	1.00	1.05	10.17*	---	1.88	1.32	0.38	1.40	1.15
Education RTA	6.95*	---	1.73	2.64	0.49	0.69	23.03*	---	4.84	10.48	2.16	0.46	1.34
Region													
Central Kampala	---	---	---	---	---	---	---	---	---	---	---	---	---
Other Central Regions	0.49**	0.99	1.15	1.31	0.75	0.52**	0.58	0.38	1.43	---	0.20*	0.52*	1.07
Eastern	1.28	0.59	1.71	4.65	0.69	0.38***	3.41*	0.17	4.02**	3.04	0.37	0.23***	0.93
Northern	1.87*	2.06	2.19*	4.54	1.14	0.56*	9.99***	2.71	4.73**	4.39*	0.79	0.37***	0.26***
Western	1.78*	4.14*	1.99*	8.18**	1.27	0.33***	6.25**	2.40	3.51*	3.89*	0.37	0.33***	0.47***
Main source of income/money													
Pension/transfer from family or friend	0.28***	---	0.19***	---	0.32***	0.67	0.73	---	0.11*	0.37	0.64	0.41***	0.57**
Sell produced from farm, livestock & fishing	0.44***	0.51	0.41***	0.90	0.69	0.85	0.13**	0.37*	0.15***	0.47	0.64	0.68*	1.21
Trading agricultural, livestock & fish products	0.82	0.97	1.40	1.09	1.17	1.12	0.41	0.72	1.39	1.75	2.17	0.86	0.93
Working on people's farm/domestic chores	0.27**	0.35	0.23**	0.26	0.78	0.93	---	0.39	0.15	---	0.50	0.49*	0.92
Working for an individual in a priv. business	1.02	0.31	0.72	0.54	0.97	0.96	0.21	---	0.38	---	2.79	0.86	0.87
Employed in the formal sector	2.25***	0.48	0.81	1.50	0.66	0.73	0.91	0.45	0.55	0.82	1.23	0.86	0.93
Running own business	---	---	---	---	---	---	---	---	---	---	---	---	---
Sub letting of land, house/rooms, earning from investments & others	0.95	0.41	0.55	0.79	0.57	0.97	0.87	0.66	0.37	1.65	0.69	0.76	0.93
Income													
None	1.31	1.53	1.35	0.89	0.96	1.32	0.30	0.30	0.66	0.40	0.35	1.08	1.20
1-90,000	---	---	---	---	---	---	---	---	---	---	---	---	---
90,000-300,000	1.31	1.96	1.45	1.72	1.06	1.52	0.81	---	0.86	0.82	1.42	0.89	0.90
300,000 –	2.04*	1.99	1.85	1.63	1.35	1.68*	1.04	1.25	0.99	0.95	1.86	1.01	1.28

	Savings						Credit							
	Bank/Credit Institutions	SACCOs	MFIs Overall ¹	ASCAs	ROSCAs	Family & friends	Banks/Credit Institutions	SACCOs	MFI overall	ASCAs	ROSCAs	Family & friends	Shops	
850,000														
850,000+	2.93***	1.85	2.38*	2.22	0.68	1.64	1.08	1.72	1.40	2.02	1.05	1.04	0.90	
Dwelling general condition														
Permanent	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Semi-permanent	0.91	0.49*	1.10	1.28	1.72**	0.97	0.73	0.67	1.00	0.84	2.12*	0.73	0.74*	
Temporary	0.62	0.86	0.60	0.81	1.38	1.22	0.55	1.59	0.65	0.92	2.36	1.08	1.02	
Main source of lighting														
Electricity, solar, generator, battery & gas	0.99	0.54	1.14	0.47	0.82	0.87	1.15	1.36	1.05	0.44	0.44	1.00	0.77	
Paraffin (Lantern & Tadooba)	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Firewood, candle & grass	0.59	0.68	0.47	0.94	1.58	0.94	1.35	0.55	0.76	1.38	1.69	1.35	0.83	
Main source of cooking fuel														
Electricity, gas	1.60	2.96	0.85	3.00	0.34	0.82	---	2.74	0.54	---	1.47	0.25	0.21*	
Paraffin, grass	3.78***	0.89	1.72	1.57	1.41	1.51	---	2.53	---	2.29	1.48	0.85	1.01	
Charcoal	1.96***	1.55	1.66*	0.64	1.14	0.96	2.31	0.85	1.36	0.47	1.11	0.86	1.03	
Firewood	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Main source of water														
Tap/pipe water	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Well, springs & bore hole	0.84	1.94	1.22	1.21	1.79**	1.04	1.48	3.20	2.37*	2.02	2.13	0.86	0.68*	
Rain water, surface water & vendors	0.65**	1.49	1.19	0.92	1.75**	1.28	0.99	3.43*	2.89**	0.91	2.20*	1.01	0.72**	
Household assets														
Motorcycle	1.05	0.73	0.96	0.56	0.72	0.99	0.99	0.25	0.91	0.36	2.68	0.70	1.03	
Car	1.41	1.46	0.90	1.26	0.97	0.90	1.32	2.38	1.93	1.17	1.72	0.86	0.83	
Bicycle	1.42*	0.81	1.25	1.22	1.20	1.26	1.03	0.77	0.87	2.26	2.10*	1.16	1.28*	
Television	2.49***	0.44	1.33	2.15*	0.82	1.11	3.42*	0.06*	1.04	2.10	0.84	0.90	0.84	
Radio	0.99	2.12	1.30	0.91	1.15	1.04	1.33	3.78	1.61	1.03	1.45	1.17	1.07	
Mobile phone	3.10***	2.52**	1.89***	1.18	1.54*	1.23	2.70*	2.63*	2.59**	1.46	1.27	1.12	1.41*	
Every HH member has two sets of clothes	2.24***	0.54	1.57	1.32	1.17	0.68**	0.54	0.79	0.52*	1.07	0.86	0.93	0.94	
HH meat/fish meals in the last 7 days														
5 to 7 days a week	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3 to 4 days a week	0.81	3.19	0.68	1.33	0.74	1.04	2.10	1.19	0.68	2.60	0.62	1.31	0.97	
1 to 2 days a week	0.77	3.72	0.73	0.89	0.77	1.17	1.10	1.41	0.53	1.62	1.49	1.23	1.37	
Not at all	0.86	7.23	0.55	1.14	0.64	0.67	4.75	3.23	0.39	3.34	1.19	0.91	1.49	
Number of observations	2959	2650	2959	2673	2959	2959	2616	1753	2878	2297	2959	2959	2959	
Pseudo R2	0.4082	0.1808	0.2022	0.1051	0.0762	0.0447	0.3728	0.2440	0.2199	0.1626	0.1545	0.0553	0.0670	

*, ** and *** significance at the 0.05, 0.01 and 0.001 level respectively

¹MDI + Other MFIs

Finally, the effect of Region was mildly significant and those in Northern and Western Regions were almost twice as likely to use one as those in Kampala, while those in Central Regions (excluding Kampala)⁶ were half as likely. This result is not intuitively explicable but also carries through into the access strand analysis – see below.

When it comes to taking a loan from a bank, the analysis suggests that one of the strongest influences is Region. Those in Northern were ten times more likely to have a loan, compared to those in Central Kampala, those in Western six times more likely and those in Eastern three times more likely. Again this is not an intuitive result and requires further investigation. Perhaps surprisingly rural people were mildly more likely to have a loan than those in the urban area.

The second most influential factor was age, with those in the 45-54 age category more than seven times more likely to have a loan than those aged 18-24, while the age categories from 25-44 were also mildly significantly more likely to do so.

Main income or employment is influential to the extent that those in farming were significantly less likely to report borrowing and this reduces the likelihood tenfold compared to those who run their own business, but no other employment group was significantly affected. This underlines the continuing difficulty of obtaining loans in the agriculture, livestock and fishing sectors and is not entirely consistent with the slightly higher likelihood of getting a loan in the rural area mentioned above.

A further factor was again education, with those educated to secondary level being ten times more likely to borrow than those with no education. Interestingly those who refused to answer the education question were also more likely to borrow - again as above suggesting that this group are probably reasonably well educated.

Gender also has an effect with women being more than two times less likely to borrow from a bank than men and directly reflecting the result on savings given above.

Those owning a TV or mobile phone were also mildly more likely to borrow from a bank, and this is consistent with the above results of their likelihood to save in them more, but is not as strongly significant.

SACCOs: Overall 2.7% save with SACCOs and 1.3% borrow from them. The influences on using them are not very distinct. The most significant is owning a mobile phone and those with them are twice as likely to have a SACCO savings account as those without. .

All the other factors are only mildly significant so should not be over-emphasised. Having primary or secondary education increasing the likelihood by a factor of four compared to having no education. Living in Western Region increases the likelihood by a similar factor compared to Kampala. Those aged 35-44 are also mildly significantly more likely to save in a SACCO compared to those aged 18-24.

Finally those whose dwelling is semi-permanent compared to those whose is permanent are half as likely to use one. Other poverty proxies, including income level, clothing, types of cooking fuel etc were not significant in the analysis.

Examining the influences on borrowing from a SACCO, again the results are only very mildly significant and they are also not entirely consistent with the savings side, which would be expected since it is necessary to save in a SACCO before borrowing from one so that it is to be anticipated that similar factors would be important. There appears to be some positive influence from being over 55 compared to age 18-24; owning a mobile phone; or rather surprisingly having surface

⁶ Central Regions excluding Kampala are referred to in the charts as “Other Central”

water as your main water source rather than piped water. Owning a TV was likely to significantly reduce the likelihood of SACCO borrowing.

MFIs: Table 2 indicates that 3.7% use MFIs for savings and 2.4% for loans. This is using the definition of MFIs as including MDIs and 'other' MFIs.

The two strongest influences on saving with an MFI are education and employment. Having a secondary education makes it four times more likely that someone saves with an MFI than those with no formal education, and those with a primary education are twice as likely to. While this effect is not quite as strong as for banks it is similarly the most important factor. Given that 34% of the population have a secondary education and less than half the proportion are actually banked, it is not surprising that the MFI sector is attractive to well-educated people.

A second influential factor is main employment or source of income. It is important to recall that in this analysis those who run their own business are the base category and represent some 31% of the population – 6.2% of these use an MFI for saving. Compared to these people, the groups who are significantly less likely to use MFIs are those who are engaged in farming, livestock and fishing - who are less than twice as likely to use MFIs; and those who are dependent on pension/transfers or work in others farms or homes, who are five times less likely to use them.

In terms of asset ownership, owning a mobile phone significantly increased the likelihood of using an MFI - almost doubling it. However, in terms of income levels, while the highest income category (>Ushs850,000) increased the likelihood of using one, it was only mildly significant.

Living in the Northern and Western region also produced a mildly significant result in increasing the likelihood of MFI use for savings.

Age was not a strongly significant factor on the savings side, although those aged 35-44 were mildly more likely to save with an MFI compared to the 18-24 year olds.

On the other hand, in terms of taking credit from an MFI, education did not come out as significant, although main employment in farming, livestock and fishing still significantly reduced the likelihood by a factor of eight (see figure 2.5). Owning a mobile phone still meant an increased likelihood, as did living in Northern and Western regions – interestingly also now joined by Eastern region - again all compared to living in Kampala. This may of course represent the efforts MFIs have made to move the more remote parts of the country.

Those aged 35-44 were significantly more likely to borrow from an MFI than the 18-24 age group, but no other age group appeared to be significant. This underlines what is generally known about the profile of MFI borrowers being in this age category.

Poverty proxies that were significant were that those who used water sources that were not piped were significantly more likely to borrow from an MFI whereas those households where all members had two sets of clothes were half as likely to borrow from this source.

Informal groups: ROSCAs, ASCAs, savings clubs, investment clubs and welfare funds. The survey asked people whether they saved in variety of types of informal groups: ROSCAs, ASCAs, savings clubs, investment clubs and welfare funds. Respondents therefore classified according to their own views of the groups category and there is clearly scope for groups to be defined in a mixture of ways. ROSCAs were reported to be the most used form, the other four types all occurred with frequencies of between 2 and 4%. Since these are all included in the categorisation of the informal access strand we will discuss the overall coverage of the informal sector further in the next section of the report and only discuss particular findings of interest to these other group types here.

8.4% of the population save in ROSCAs - and these are the most used type of informal group service (excluding hidden savings). 9.8% of women use them compared to 6.9% of men and they are significantly more likely to use them than men.

Those who are dependent on pensions and transfers as their main income source were much less likely to use them, but interestingly no other income source was significant.

The poverty proxy of water source was also significant, in that those who did not use a source of piped water were significantly more likely to use them than those using piped water. Living in a semi-permanent dwelling compared to a permanent one also raised the likelihood. Interestingly however, their use is not biased towards the rural areas, with no impact of being rural or urban on their use.

Perhaps surprisingly, owning a mobile phone was associated with mildly increased the likelihood of using a ROSCA.

According to the analysis, education has no influence on whether or not people use ROSCAs, although for those who were over 55 they were mildly significantly less likely to use them than 18-24 year olds.

For ASCAs, only one factor was significantly associated with increasing the likelihood of using them for savings which was region – being in Western region significantly increased the likelihood by a factor of eight compared to living in Central Kampala. This was reflected in the fact that 7.5% of the sample in Western used them compared to the overall average of 4.3%. Borrowing from ASCAs on the other hand was significantly more likely for the 45-54 age group compared to 18-24 year olds, and being in Western and Northern regions increased the likelihood but was only mildly significant.

For savings clubs, influences were only mildly significant - these were those not using piped water sources being more than twice as likely to use them as those with piped water; those widowed being twice as likely to use them as married people; those in Eastern region being three times less likely to use them than those in Central Kampala; and those dependent on pensions and transfers being 10 times less likely to use them than those running their own businesses.

Investment clubs were significantly more likely to be used by people in households where all members had two sets of clothes, but this wealth effect was not picked up in other poverty proxies or in the income level.

Welfare funds were again significantly more likely to be used by those not using piped water sources compared to those who have piped water. Other factors were only mildly significant, this included an increased likelihood of using them in Eastern region compared to central Kampala; and an increased likelihood of using them amongst those aged 55 and over compared to 18-24 year olds. Those depending on pensions and transfers were five times less likely to use them and those whose lighting source was electricity compared to paraffin.

Overall, the patterns of use in the analysis for these informal group mechanisms are not very strong. There is no influence of education suggesting that those in all educated categories make use of them, age is also not a strong factor. Income source is important in that being depending on pensions and transfers reduces the likelihood of using them, but income level did not come out as important. The consistent factor across these was the higher likelihood of those not using piped water to use these group mechanisms. There is also a slight regional influence in that people in Western appear more likely to use ASCAs while those in Eastern are more likely to use welfare funds.

Local shops as a source of credit: While this credit is primarily given in the form of goods provided on credit it is the most used source of credit overall at 18%.

The most significant factor affecting use is region with those in Northern and Western much less likely to use this source of credit than those in Central Kampala. This is interesting because it contrasts to the fact that people in these regions were more likely to use bank credit than those in Central Kampala.

Using water sources other than piped water reduced the likelihood of using this credit source. This is a little surprising, as this variable seemed to be picking up some bias of the informal sector towards those who did not have piped water above, so it is curious that this is reversed on the credit side.

Being dependent on pensions and transfers again significantly reduced the likelihood of using shop credit compared to those running their own business, but no other employment group was affected.

Living in a semi-permanent dwelling was associated with a mildly reduced likelihood of using this as a source of credit compared to those with a permanent dwelling but the effect of living in a temporary dwelling was not significant. Having a mobile phone on the other hand was associated with a mildly significant increase in the likelihood of using this source.

Savings and borrowing from family or friends: Overall this is the second most used place to save at 12.7% and the second most used source of loans at 8.4%.

The factors most strongly influencing saving with family and friends are region, age, and clothing. Those in Western and Eastern are three times less likely to use family and friends as a place to save as those in Central Kampala, and those in central regions (excluding Kampala) are half as likely to use them while those in Northern are mildly less likely to do so. This suggests that those living in Central Kampala are making much greater use of this service, and suggests that this may be because there is a shortage of other accessible and appropriate alternatives underlying the overall high levels of the unserved found in this study.

It is also apparent that those in the 25-44 age categories are significantly less likely to save with their family and friends than those of 18-24, and underlining the difficulty for young people of even being able to save in this way.

The poverty proxy of having two sets of clothes for all members of the household served to show that those who have these are less likely to save with family and friends.

The two most influential factors on borrowing from family and friends are region and main income source. Compared to living in Central Kampala, people in all other regions are less likely to borrow from family and friends, and this is by a factor of three to four times. Again this would seem to reflect high demand in Kampala for funds and a shortage of appropriate services.

Apart from this, those dependent on pensions and transfers were significantly less likely to borrow from family and friends as might be expected. Working in others farms or homes (domestic chores) and those whose main income sources were farming, livestock and fishing were mildly less likely to use this source of credit.

6. Uganda: Financial Access Strands

The previous section analysed characteristics of users of a range of different financial services. The financial access strand is an alternative means of analysing the market by placing each user in only one category dependent on the most formal service they use. Hence if someone has a bank account but also uses ROSCAs they will be counted as being a user of formal services and placed in the formal access strand. If they only use a ROSCA they would be placed in the informal access strand.

In Uganda the access strands have been defined as follows:

- Formal: banks, credit institutions and MDIs
- Semi-formal: other MFIs and SACCOs
- Informal: ROSCAs, ASCAs, NGOs, savings clubs, welfare funds, investment clubs and moneylenders
- Unserved (excluded): none of the above financial services (ie hidden savings, saving and borrowing with family and friends).

In this definition, MDIs have been included in the formal sector because they are now fully regulated by the Central Bank and, in terms of quality, therefore do not differ from Banks and credit institutions. In this case the 'other MFIs' are classified with SACCOs in the semi-formal access strand. Since the analysis in the previous section separated out MDIs and other MFIs from banks and credit institutions, this gives an opportunity to look at the influence that including MDIs into the formal access strand has on the influences on using the formal sector.

The definition of the informal sector used here involves use of a range of informal group types and moneylenders. Those who saved or borrowed from family and friends; borrowed from employers, shops or other suppliers (eg agrovet); and used hidden savings are classified as unserved.

Looking at the proportions in each category – see table 3.1: 18.1% are included via the formal sector with 15.9% being covered by the banks, and 1.9% by the MDIs and only 0.3% by the credit institutions. The regulated MDIs are therefore a net contributor to overall inclusion in the formal financial sector of 1.9% of the population. The semi-formal sector contributes 3.1% of which 1% is provided by the 'other MFIs' and 2.1% by the SACCOs. A further 16.6% are included via the informal sector only, leaving 62.2% unserved by any of these services.

Table 8: Access strands (weighted % of population currently using)

Access strands	%	
Formally Included:	18.1	
Banks		15.9
Credit institutions		0.3
MDIs		1.9
Semi-formally included:	3.1	
Other MFIs		1.0
SACCOs		2.1
Informally included	16.6	
Unserved	62.2	
Total	100	

In order to see to what extent people actually use services across the three access strands we can look at multiple - see Table 3.2. This shows that of the 18.1% of the population using formal services, the majority - 11.8% - use these only, while 4.3% combine them with the use of informal services, and a further 2% are combining them with semi-formal services. On the other hand only a minority of those using the semi-formal sector are combining their use with informal services (0.4%).

Table 9: Multiple use of services across access strands (weighted)

Access strands (weighted)	%	
Formally Included	18.1	
Of whom: Formal only		11.8
Formal & Semiformal		1.6

	Formal & Informal	4.3
	Formal & Semiformal &	
Informal		0.4
Semiformal	3.1	
Of whom: Semiformal only		2.4
	Semiformal & Informal	0.6
Informally included	16.6	
Unserved	62.2	
Total	100	

Given this, we can examine the effect of the geographic, demographic and socio-economic factors on use across the strands to see which ones are most important overall in determining access – see table 10. The analysis is prioritised on the most influential factors affecting inclusion or exclusion.

Table 10: Use of financial services by access strand (logistic regressions) , Uganda

	Formal	Semi-Formal	Informal	Unservd
Location				
Rural	1.02	1.20	1.03	0.95
Urban	---	---	---	---
Gender				
Men	---	---	---	---
Women	0.69**	0.94	1.26*	1.06
Marital status				
Married	---	---	---	---
Divorced	1.18	0.49	0.82	1.18
Widowed	1.42	0.56	0.90	0.98
Single	1.19	0.35*	0.70*	1.34*
Marital RTA	1.26	0.47	0.89	1.14
Age				
18-24	---	---	---	---
25-34	1.75***	1.17	0.96	0.71**
35-44	2.22***	1.91	0.95	0.61***
45-54	1.70	1.36	1.09	0.65*
55+	1.75	1.61	0.51**	1.10
Refused	1.08	1.76	1.01	0.92
Education				
No formal education	---	---	---	---
Primary	2.49**	2.55	1.06	0.75*
Secondary+	8.59***	2.85	0.65*	0.44***
Education RTA	6.52***	---	1.16	0.56
Region				
Central Kampala	---	---	---	---
Other Central Regions	0.58*	1.34	0.44**	1.86***
Eastern	1.61	0.45	0.62	0.94
Northern	1.93*	1.85	0.61	0.76
Western	1.75*	3.90**	0.73	0.61*
Main source of income/money				
Pension/transfer from family or friend	0.31***	---	0.27***	5.24***
Sell produced from farm, livestock & fishing	0.37***	0.64	0.80	1.80***
Trading agricultural, livestock & fish products	0.87	1.26	1.00	1.10
Working on people's farm/domestic chores	0.21***	0.47	0.66	2.38***
Working for an individual in a priv. business	0.88	0.64	0.97	1.22
Employed in the formal sector	2.30***	0.69	0.55	0.48***
Running own business	---	---	---	---
Sub letting of land, house/rooms, earning from investments & others	0.85	0.33	0.62	1.60*
Income				
None	1.11	1.36	0.82	1.16
1-90,000	---	---	---	---
90,000-300,000	1.20	1.90	1.06	0.91
300,000 – 850,000	1.84*	1.41	1.32	0.63**
850,000+	2.80***	1.33	0.97	0.52***
Dwelling general condition				
Permanent	---	---	---	---
Semi-permanent	0.89	0.66	1.48**	0.84
Temporary	0.56	0.80	1.01	1.14
Main source of lighting				
Electricity, solar, generator, battery & gas	1.16	0.67	0.75	1.03
Paraffin (Lantern & Tadooba)	---	---	---	---
Firewood, candle & grass	0.43*	1.24	0.92	1.42
Main source of cooking fuel				
Electricity, gas	1.48	1.84	0.73	0.91
Paraffin, grass	2.87***	1.26	1.06	0.53**
Charcoal	1.73***	1.51	0.62*	0.91
Firewood	---	---	---	---
Main source of water				
Tap/pipe water	---	---	---	---
Well, springs & bore hole	0.83	1.97	1.75***	0.70*
Rain water, surface water & vendors	0.81	1.45	1.42**	0.81
Household assets				
Motorcycle	1.30	0.27	0.81	1.16
Car	1.30	0.94	0.71	1.01
Bicycle	1.21	0.72	1.21	0.87
Television	2.06***	0.98	0.64	0.58***
Radio	1.24	2.60*	1.05	0.83

Mobile phone	2.70***	1.01	0.95	0.48***
Every HH member has two sets of clothes	1.65*	0.56*	1.41*	0.71**
HH meat/fish meals in the last 7 days				
5 to 7 days a week	---	---	---	---
3 to 4 days a week	0.90	1.10	0.93	1.01
1 to 2 days a week	0.65	1.16	1.09	1.19
Not at all	0.73	1.42	0.93	1.19
Number of observations	2959	2650	2959	2959
Pseudo R2	0.3854	0.1307	0.0818	0.1933

*, ** and *** significance at the 0.05, 0.01 and 0.001 level respectively

Employment: A person's employment or main income source is the factor that has the most influence on exclusion. Those who are dependent on pensions and transfers from others are five times more likely to be excluded than those who run their own businesses. Those who work on other people's farms or undertake domestic chores are more than twice as likely to be excluded and farmers and those whose income is from sub-letting and investments are almost twice as likely to be excluded. On the other hand those who are employed in the formal sector are two times less likely to be excluded as those running their own business.

Inclusion via the informal sector is only significantly affected by having a main income source of pensions or transfers and this significantly reduces the likelihood by a factor of three compared to running your own business.

Inclusion via the semi-formal sector on the other hand is not significantly affected by any particular income source.

The likelihood of inclusion via the formal sector is significantly increased by being a private sector employee compared to running your own business, while it is five times lower for those working on people's farms or on domestic chores; three times lower for those in receipt of pensions or transfers and three times lower for farmers.

Education: As might be expected, having a secondary education is one of the strongest positive factors associated with use of formal sector services, and those having it are eight times more likely to use them compared to those having no education. Whereas having a primary education only doubles this likelihood.

Therefore level of education also has a significant effect on being excluded. Those with secondary education are half as likely to be excluded as those with no education. Having a primary education also reduces the likelihood of being excluded.

Age: The effect of age on formal inclusion is that those in the 25-34 and 35-44 age groups are significantly more likely to be formally included than the 18-24 years category, but this is not significantly the case for age categories over 45. This formal inclusion is also reflected in the fact that the 25-44 year olds are significantly less likely to be unserved, the 45-54 age group was also significantly less likely to be unserved than 18-24 year olds. Being 35-44 also significantly increases the likelihood of inclusion through SACCOs. People in the over 55 category were also significantly less likely to be included through the informal sector.

This is an interesting pattern and may be explained by the fact that banking services have expanded in the last 20 years since the civil war ended and younger age groups have learnt to use them while older people did not have access to and learn banking practices during the unstable years of the 1970s and early 1980s.

Region: According to this data region does have an influence on inclusion. Compared to Central Kampala, those in Northern and Western regions are almost twice as likely to be included via the formal sector. However, this is not a finding that is intuitively compelling and may therefore be a curiosity of the data.

People in Central Regions (excluding Kampala)⁷ are half as likely to be included via the formal sector and almost twice as likely to be unserved as those in Central Kampala. They are also twice less likely as those in Central Kampala to be informally included, suggesting that the informal sector is less strong there than in other regions as a means of inclusion.

A further significant result is that those in Western Region are 4 times more likely than those in Central Kampala to be included via the semi-formal sector and this is due to a higher prevalence of SACCOs in that region with 5% of the population using them.

While the results for the formal sector in Northern and Western are surprising, the data indicates a reduced role for the informal sector in 'other central regions' compared to Kampala and an slightly stronger role for the semi-formal sector in Western region.

Gender: Women were significantly less likely to be included via the formal sector compared than men. They are also less likely to be included via the semi-formal sector but not significantly so. They are significantly more likely to be included via the informal sector. On the other hand when the effect of the MDIs is split out from the banks, we see that the MDIs do significantly reverse the bias of banks in excluding women. This is not surprising given that a number of these MDIs started out with largely women-focussed programmes. However, interestingly the semi-formal MFIs do not appear to have a similar bias towards women.

The service by service analysis in Section 2 indicates that women are more likely to use ROSCAs than men and this is the main factor that is driving women's greater likelihood of inclusion via the informal sector. However, overall there is no significant gender bias in the likelihood of being unserved.

Income: The income variable was split into five categories and has a straightforward effect. Those who reported their annual incomes to be over Ushs300,000 are significantly more likely to be formally included compared to those with incomes up to Ushs90,000 and significantly less likely to be unserved. Those with incomes between Ushs300,000 and Ushs850,000 were almost twice as likely to be formally included as those with less than Ushs90,000 while those with incomes over Ushs850,000 were almost three times more likely to be formally included.

Asset ownership and poverty proxies: The analysis looked at the influence of a number of assets and poverty proxies. Those who owned either of two assets were significantly associated with increased likelihood of formal inclusion and reduced likelihood of being unserved – these were those having a TV or mobile phone. Having a TV also significantly increased the likelihood of using a semi-formal MFI. Owning a car or bicycle had no significant effect on inclusion in any particular sector.

Cooking fuel is another poverty proxy and has a slightly surprising influence on formal inclusion. Those who cooked on paraffin or charcoal were significantly more likely to be formally included than those cooking with firewood, but those who cooked with electricity were not significantly more likely, but this is likely to be due to the very low overall use of electricity as a cooking fuel.

⁷ Referred to in the charts as 'other central'.

7. Discussion

The analysis above demonstrates that extending access is a huge challenge for the financial sectors in Kenya and Uganda. There are two main issues that arise from the analysis. First, is the role of the informal sector and semi-formal sectors. Formal sector provision is extremely important and is much of the emphasis of current policy and efforts to encourage banks to move downmarket with their products and services must be maintained, these findings suggest that the informal and semi-formal sectors also require careful consideration for their role in providing access and the policy implications of this. Second, the analysis has demonstrated that access is influenced by key underlying factors of employment, education, age and gender. These features act as underlying barriers to entry on the demand side and have strong implications for policies for extending access. These policies have tended to focus on reducing transactions costs but these must be reviewed if these underlying barriers to market entry are to be addressed.

7.1 The role of the informal sector in extending access

The analysis has clearly demonstrated the importance of the informal financial service sector in the form of ROSCAs and ASCAs in overall access to financial services in Kenya and Uganda. In Kenya it is the single largest sector through which inclusion takes place (35%) and in Uganda is only marginally behind the formal sector at (17%). The analysis clearly demonstrates how its use improves access in Kenya in some regions of the country compared to others, and for women in both countries.

The importance of these group-based informal systems has long been known in East Africa and more widely (Alila 1992; Ardener and Burman 1995; Kimuyu 1999) but data has not previously been available to clearly demonstrate the extent of their use. The strengths and weaknesses of these systems have also been well-researched and are again evidenced in this survey. First, women tend to use them more than men (Ardener and Burman 1995) and providing access to financial services to women is important in any country, but perhaps particularly so in Uganda with its high proportion of women-headed households (27%) (Uganda Bureau of Statistics 2006). This reflects the fact that these groups have strong social functions of bringing women together and this is also rooted to different degrees in underlying cultural traditions prevalent in different areas – especially clear in the case of Kenya. Second, this gender bias also reflects patterns of demand by gender. Since men often require larger lump-sums of credit than these can provide and may also need these amounts at the same time as other men in the group since many activities for which funds are required are seasonal, for example, to purchase agricultural inputs, or pay school fees. This concentration of demand at a particular time means that not all the members of the group can meet their needs through such mechanisms. This characteristic of demand is often different for women who may require small lump sums on a periodic basis but not all at the same time (Johnson 2004).

The strengths of informal groups are their flexibility, poor people need to be able to access small lump sums of credit in response to their needs, and the evidence from this survey (see (Johnson and Nino-Zarazua 2007a; Johnson and Nino-Zarazua 2007b) and elsewhere further confirms the importance of being able to access funds when they are needed – especially in response to emergencies. People also value groups because they also offer social support at times of crisis, and hence it is not solely financial support that they access through them (Johnson 2004). The fact that over half of those who use formal sector services also use informal groups demonstrates that they clearly have added-value even to those who have formal access.

Of course, it is these strengths that are also the root of their weaknesses, since social dynamics within groups can be problematic and mean that some individuals are able to access funds more easily than others, while some individuals cannot - or will not - repay and members can therefore

lose their money (Bouman 1995; Johnson and Sharma 2007). It is generally found that groups that are exclusively male often perform poorly, whereas women are more able to manage these dynamics (Johnson 2004).

It is important to consider therefore what the implications for policy in seeking to extend and improve access to financial services are. First, given their importance in overall access and the evidence that while mobilising large amounts of money, ROSCAs are the least well organised (Johnson and Nino-Zarazua 2007a), it is appropriate to consider how their services might be improved. Experience has shown that injecting funds into informal groups rarely leads to their expansion and growth. Rather it is usually seen by members as a one-off injection of funds that does not need to be repaid, and rarely revolves around the group or is sustained as a long-term resource. Indeed, the experience of microfinance institutions themselves with these groups was poor and it is partly because of this that stricter group methodologies were developed by them along with strong management systems to ensure repayment through persistent follow up (Jain 1996).

Alternative approaches involve working to develop the capacity of the groups to manage their own operations independently and more effectively based on their own savings pool. Projects such as the Decentralised Financial Services Project in Kenya have been developing participatory tools to work with groups to achieve this. Moreover, approaches such as the Village Savings and Credit Associations⁸ devise a very simple model based on member's own savings which can be easily replicated and demonstrates strong evidence of sustainability (Anyango, Esipisu et al. 2007). Research is being undertaken into the success of these approaches in improving the viability of groups and means to provide ongoing training and support to groups that is also done on a fee for service basis that can enable ongoing commercial provision of the service. Policy should therefore consider how to further expand or support the development of these approaches.

Given that the outreach of informal groups, most of which are spontaneously formed, is much greater than that of SACCOs and MFIs, which have received extensive donor support, and given that the survey shows that people have been more likely to lose money in SACCOs and MFIs than in informal groups (FinScope Uganda 2007), the case could be made for government policy measures that would support the expansion of informal groups. Some local and international NGOs are actively promoting the formation of VSLAs, which are purported to be safer and more flexible than other informal groups.

7.2 The role of the semi-formal sector

The analysis also demonstrated the importance of the semi-formal sector comprised of SACCOs and MFIs in improving access. However, the situation differs between Uganda and Kenya as it is mainly SACCOs that produced this effect in Kenya where their overall coverage is 12% compared to MFI coverage which is still low (1.8%). This contribution to inclusion is particularly clear in Provinces where rural SACCOs based on cash-crop production have long been present, in particular Central Province where 25% use them, but also Eastern, Nyanza and Rift Valley (where 11-12% use them). While people in rural areas are more likely to use SACCOs than those in urban areas, MFIs have not clearly succeeded in overcoming the barriers to rural outreach. However, MFIs have succeeded in overcoming the bias of banks and SACCOs towards men as women are significantly more likely to use them. For this reason alone there is a case for continuing the expansion of MFI provision as a means of overcoming the gender barrier to inclusion.

However, since the SACCOs are a significant player in Kenya, policy should also therefore consider how best to support the sector in extending its service delivery. This might include capacity building of systems to deliver services more efficiently and at lower cost, and to find methodologies to reach further into rural areas and to support a wider range of agriculturally-based livelihoods. Finding means of their working with informal groups is also an option which would

⁸ These were initiated by CARE in Mali in the MMD programme and are variously known as Village Savings and Loan Associations (VSLAs), SLAs, Savings and Credit Associations (SCAs).

overcome gender barriers, but also requires innovation regarding the nature of services to be offered. The DFS Project, IFAD, CIDR and others are also experimenting to identify and develop such approaches. Issues of product design are discussed further below.

By contrast, in Uganda the contribution of the semi-formal sector to overall access is only 3%. While some might see this as a reason to invest more to support this sector, an equally persuasive case could be made that the semi-formal sector simply is not as well adapted to the needs of the rural populations as it sometimes purports to be, and support should be directed elsewhere. The FinScope Uganda study was not designed to look closely at the reasons for the disappointing outreach of SACCOs and MFIs, although other recent studies⁹ provide some suggestions about the causes.

7.3 The role of the formal sector

Policy has generally emphasised the importance of the formal sector in extending access. This evidence underlines the huge challenge that it faces in both countries. While the cost of services is not a factor that this analysis has been able to directly investigate, it must of course be considered as an important factor in any discussion of extending access. Finding ways to lower transactions costs of delivery and provide cheaper products will inevitably be important however we question in the light of these findings whether these alone will be enough, rather we consider the role of product design and financial literacy as two further factors that are of key importance and we address these further below.

7.4 Tackling underlying barriers to access

The analysis has demonstrated key barriers that need to be addressed in the form of socio-demographic factors of age, education and gender.

First, the findings demonstrate that age is a key factor in both countries although the influence differs. In Kenya, the youngest age groups are the most excluded. While this is in part due to life-cycle effects as young people may be at different stages of financial and economic independence, it raises the question of what can be done to improve young people's understanding of services and hence the transition they make into willingness and ability to use them. By contrast, in Uganda, the younger age groups 25-44 are more likely to use formal services. This contrast may be explained by the influence of the insecurity and instability of the 1970s and 1980s in Uganda by comparison with Kenya. As a result older people in Kenya are more likely at some point in their working life to have had reason to open a bank account and for this reason may still retain one, whereas in Uganda the instability of the 1970s and 1980s meant that those who are now older are less likely to have had this experience. However, with the overall youthful profile of Uganda's population this needs to be built on. Technology is likely to be more easily learnt by the young than the old and hence more adoptable – however it may similarly result in more concerns about access for older people.

Second, the findings show that - as expected - the least educated are the most excluded in both countries. In terms of policy, clearly UPE is an important contributor to improving this in the long run but raises the question of what else can be done to overcome these barriers to access. Together these results suggest the importance of both product design and financial literacy.

Financial literacy could be developed in school curricula as a part of and both numeracy skills and general life skills development. Children could also be introduced at a young age to the design of different savings and loan products in banks and other institutions, ways interest and fees are

⁹ Notably *The Effects of Wholesale Lending to SACCOs in Uganda*, by Alexandra Fiorillo, September 2006, published by FSDU; and, *Status of Missing SACCOs and MFIs from the 2005/200 Census of Tier 4 Institutions*, by Friends Consult, published by AMFIU, February 2007.

calculated and so on. This could go alongside encouraging experiments with ROSCAs and ASCAs in which students practice these skills for themselves. This may help address the barriers to access for young people who go through school, but there are a high proportion of the adult population for whom education will still be a barrier – the almost 20% of the population in both countries (18% in Kenya and 19% in Uganda) who have ‘no’ formal education and significant groups (some 25% in Kenya) with only a few years education. The Transparency, Negotiation and Trust consumer education campaign carried out by in Uganda by FSDU, AMFIU, the Rural Business Culture programme, and local contractors is one of the very rare financial consumer education programmes in the developing world, perhaps one of only two on the African continent (the other being in South Africa).

This may help address the barriers to access for young people who go through school, but there are a significant proportion of the adult population for whom education will still be a barrier – 18% of the sample had ‘no’ education and 26% had only ‘some primary’. This suggests a critical need to find simple and accessible ways to communicate information about services offered by a range of providers.

Product design is also important since very simply designed products that can be easily understood will also reduce barriers to using products. Drawing from features of the informal sector that people understand in product design may also help. In particular, easy and simple access to loans in the event of emergencies is a key feature of informal group systems that poor people value.

Gender was also identified as a barrier to access by the analysis. Women are less likely to use formal or semi-formal services than men. While MFIs do reverse this pattern, their overall coverage is extremely low. On the other hand, women are significantly more likely to be included via the informal groups sector. Significant efforts therefore still need to be made to improve women’s access to Banks and SACCOs in Kenya as a major provider. This may also be facilitated through simple product design. However, there are often features of product design whose gender bias may not be clear and products should be carefully considered for their gender biases through market research into the design, terms and conditions and delivery systems to understand their implications for both genders. Moreover, these barriers to access also arise from wider norms in society and especially in the household about who owns bank/SACCO accounts, assets and so on. While legally women may have the same rights as men in property ownership, practice is rarely in fully in line with policy so that policy-makers need to consider also how to promote good role models and examples of women using financial services and systematically identify and tackle the norms that are constraining this.

On the other hand, men are much less likely to use informal groups and this is a constraint to their access. In strengthening informal groups through methodologies that make them more transparent and easier to operate, this is also likely to have the effect of making them more useful to men, as they will be prepared to work together to mediate larger volumes of funds. While this may not fully address the seasonality of much demand for finance, especially in rural areas, it can assist in closing the gap of provision.

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