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Analyzing the relationship between institutional frameworks and financial inclusion in rural Uganda: A social network perspective

Abstract:

Purpose – The purpose of this paper is to report the findings on the mediating effect of social network in the relationship between institutional frameworks and financial inclusion in rural Uganda.

Design/Methodology/Approach – The study adopts a cross-sectional research design to collect data used to test for mediation under this study. Structural equation model (SEM) through use of Bootstrap in AMOS (analysis of moment structures) was adopted to establish existence and type of mediation by social network in the relationship between institutional frameworks and financial inclusion.

Results – Social network had a partial mediating effect through institutional frameworks on financial inclusion. In addition, institutional frameworks through its regulative, normative, and cultural-cognitive pillars also have a significant direct effect on financial inclusion. Besides, social networks had a significant effect on financial inclusion. This suggests that there exist both a direct effect of institutional frameworks on financial inclusion and an indirect effect of institutional frameworks through social network on financial inclusion.

Research limitations/shortcomings – While the sample for this study was big enough, it limited itself to only poor households in rural Uganda. Besides, the current study adopted cross-sectional design, thus, leaving out longitudinal design to investigate the characteristics in our sample over time.

Originality/Value – The study recommends that social network, which acts as a conduit through which useful information flow and can be shared, play a critical role in mediating in the relationship between institutional frameworks and financial inclusion in rural Uganda. Therefore, our study contributes to existing body of literature by highlighting the mediating influence of social network in the relationship between institutional frameworks and financial inclusion, especially in rural Uganda.

Contribution – The study makes significant empirical contribution and implications to financial inclusion policy makers on evidence of the critical role played by social network in indirectly enhancing the relationship between institutional frameworks and financial inclusion of the poor who are vulnerable to exclusion by main stream financial services providers.

Paper Type – Research paper

Key words: financial inclusion, institutional pillars, network ties, the poor, confirmatory factor analysis, structural equation model

Introduction

The importance of social network cannot be down-played in promoting information diffusion among economic actors in rural communities. Network theorists assert that strong network ties (Bourdieu & Wacquant, 1992) create trust and fore-bearance (Piore & Sabel, 1984) among actors, thus, resulting into access to scarce resources such as information in social structures since all actors are considered beneficiaries (Burt, 2001).

Contextually, Ministry of Finance, Planning & Economic Development (2002) defines a poor person as "an individual who faces the situation of poor health, low

1

level of income and consumption, unemployment, illiteracy, low level of production, physical insecurity, disempowerment, and isolation socially and geographically". Similarly, World Bank (2006) posits that "a person is considered poor if his or her consumption or income level falls below some minimum level necessary to meet basic needs". This minimum level is usually called the "poverty line". Thus, the poor are those persons who live in households whose consumption and income levels fall below some minimum level necessary to meet basic needs. This minimum level is below $US 2 per day.

Conversely, World Bank (2007) argues that these persons labelled "poor" are also consumers of financial services. This is supported by the fact that they also save, borrow, and make payments in their daily lives. Unfortunately, existing evidence in Uganda reveals that access to and use of formal financial services by the poor have remained low (FinScope, 2013; Bank of Uganda, 2014; Kasekende, 2013). Indeed, only 28% of the rural population have access to and use of formal financial services. Besides, Sarma (2010) in a study of index for financial inclusion, ranked Uganda in the 47th position out of 49 countries with Index for Financial Inclusion (IFI) of only 0.021 percent compared to Austria in 1st position with IFI of 95 percent.

Bebbington (1999); Rose (1998) reveals that where formal institutions do not work well, social networks and social ties can provide an informal substitute to enhance people's access to different resources, markets, and opportunities. van Bastelaer (2000) observed that social networks are found to be important elements within most formal and informal programs that provide access to and use of financial services to the poor. According to Durlauf & Fafchamps (2005), social networks and associations that create shared knowledge, mutual trust, social norms, and unwritten rules act as informal institutions engulfing the objectives the poor in social structures. Indeed, social networks among the poor increases information availability and sharing that lower transaction costs and opportunistic behaviour, especially in financial markets (Grootaert & Bastealer, 2002).

Biggs et al., (2002) suggest that in accessing financial services like credit, social networks supply information and mechanism of enforcement (see also Narayan & Prittchet, 1997). Furthermore, Ahlin & Townsend (2007) also notes that social networks among the poor acts as a screening device to determine creditworthiness, thus, expanding the scope of financial inclusion. Thus, the poor with good repayment characters have been able to access credit from formal financial institutions (see e.g. Heikkilä et al., 2009; Karlan, 2007; Fafchamps & Minten, 2002; Okten & Osili, 2004).

Studies by Besley & Coate (1995) indicate that sanction among the poor in group lending can reduce the moral hazard of repayment as well as play important roles in peer monitoring. Floro & Yotopolous (1991) also suggests that social ties and the resulting potential for sanctions between poor household members help mitigate adverse selection and moral hazard problems in joint liability lending contracts due to social leverage that extends beyond the lending contract. Additionally, Aryeetey (2005) also suggests that pressure to repay a loan, which is directly linked to peer monitoring mechanism based on existing social networks, reduces the problem of default and, thus, access to more financial services by the poor.

Whereas theoretical assertions and assumptions indicate that institutional frameworks and social networks exist in literature, empirical evidence investigating the mediating role of social network in the relationship between institutional frameworks and financial inclusion is lacking, especially among the poor in rural Uganda. Thus, the desire to understand the critical role of social networks in the relationship between institutional frameworks and financial inclusion is the

motivation for this study. The result is expected to enlighten scholars and policy makers on the importance of social networks in enhancing information flow and circulation about scarce resources by reducing transaction costs and opportunistic behaviours in order to promote efficient economic activities in the financial market. Therefore, a more detailed discussion of the indirect impact of institutional frameworks through social networks is covered in the following section under this study.

Literature review

Institutional frameworks and financial inclusion: social network as a mediator

Fafchamps & Minten (1998) observe that in a world of imperfect information, relations among individuals increase the flow of information to create opportunities such as access to credit (see also Granovetter, 1973; Burt, 1992). Social networks among actors enhance availability of information about scarce resources such as credit and opportunities within a given society, especially in rural areas.

Scholars like Bebbington (1999); Rose (1998) argued that where formal institutions do not work well, social networks and social ties can provide an informal substitute to enhance people's access to different resources, markets, and opportunities. Social networks are found to be important elements within most formal and informal programs that provide access to credit by the poor (van Bastelaer, 2000).

Biggs et al., (2002) suggest that in accessing financial services like credit, social networks supply information and mechanism of enforcement (see also Narayan & Prittchet, 1997). Furthermore, Ahlin & Townsend (2007) also notes that social networks among the poor acts as a screening device to determine creditworthiness, thus, expanding the scope of financial inclusion. Thus, the poor with good repayment characters have been able to access credit from formal financial institutions (see e.g. Heikkilä et al., 2009; Karlan, 2007; Fafchamps & Minten, 2002; Okten & Osili, 2004).

Indeed, information flow and sharing among the poor in social networks is important for forging ties within and across communities, which helps in screening, monitoring, and sanctioning in borrowing (Granovertter, 1973). Additionally, Devereux & Fishe (1993); Stiglitz (1990) observed that social networks reduce imperfect information and create good conditions for social sanctions. Here we derive the hypothesis, which state that:

H1: Social network mediates the relationship between institutional frameworks and financial inclusion.

Social network and financial inclusion

van Bastelaer (2000) argues that social networks are found to be important elements through which most financial services' providers extend basic financial services to the poor. Biggs et al., (2002) suggest that in accessing financial services, social network helps the poor by supplying information and it acts as a mechanism of enforcement (see also Narayan & Prittchet, 1997). Indeed, Khanh (2011) observes that social network of relationships are a core issue in access to financial credit, especially for poverty reduction in rural areas. Besides, Karlan (2007) contends that

social networks between group members are an essential tool for screening and recommending loan applications and for ensuring that contracts are enforced since it provides information about everyone within the group.

Thus, existence of wider (denser) social network increases frequency of interaction through which information about existing opportunities flow and are effectively shared based on norms. Therefore, for the poor, social network provides information and opportunity for availability of financial services such as credit for network members and as well acts as a screening mechanism. This will increase access to and use of basic financial services among the poor (Okten & Osili, 2004). Thus, we generate the hypothesis that:

H2: There is a significant relationship between social network and financial inclusion.

Institutional frameworks and social network

World Bank (2002) observes that where more ethnic groups exist in a given economy each with its own set of customs and norms for doing business, the complexity of the coordination problem mush-rooms. As group size grows, information processing command and enforcement within the group becomes difficult. Information flows about business opportunities may be available only to members of a group, with outsiders excluded because of linguistic or cultural barriers (Greif, 1998). Besides, information may also be shared during the process of intra community social occasions, thus, this may make it difficult for outsiders to gain access. Therefore, informal norms may limit trade and access to resources because it may exclude those who are not part of the social sanction.

Thus, without institutional frameworks of formal/regulative institutions for dispute resolution, economic exchange between groups willing to trade or share information about access to resources cannot be enforced. This is supported by Scott (2001) who argues that through complementarity, the relationship between formal rules and informal association affects the actors' interests and activities such as group linkages and participation (North, 1990).

Information flow and sharing among actors like the poor in social network, is important for forging ties within and across communities for economic exchange (Granovertter, 1973). Social network enhances availability of information about scarce resources such as credit and opportunities within a given society, especially in rural areas. Indeed, efficient informal mechanisms for information sharing through informal networks communicate information about business opportunities, barriers, and potential partners to fellow group members.

Fehr & Gächter (2000) observe that in all societies, systems based on social norms or networks (informal institutions) are a central means of facilitating market transactions because opportunistic behaviours are sanctioned. The information network lowers the riskiness of transactions as members gain information about the quality of partners and the business environment (Acemoglu et al., 2000). The medieval Genovese traders is an outstanding example of the use of formal rules in stimulating market activity by supplanting community social norms and networks (for e.g. see Austin, 1993; Banerjee, Besley & Guinnane, 1994). Therefore, here we hypothesize that:

H3: There is a significant relationship between institutional frameworks and social network.

4

Institutional frameworks and financial inclusion

North (1990) conceived institutions as the rules of the game of a society or the humanly devised rules or constraints that structure political, economic and social interaction and their enforcement characteristics. Scott (2001) referred to it as the regulative, normative and cultural–cognitive are central building blocks of institutional structures, which provide elastic fibers that guide behaviour and actions of actors.

According to North (1990), institutions devise and influence the ways in which economic actors get things done in context involving human interaction. Indeed, institutions structure incentives in human exchange (economic) by defining and limiting sets of choices and actions for individuals. In contention, Scott (2001: pp. 49) argued that the regulative, normative, and cultural–cognitive pillars are the central building blocks of institutional structures, which provide elastic fibres that guide behaviour and actions of actors in economic exchange.

Agarwal (2008) argues that in financial markets, information asymmetry arises because of the nature of the market. There is information asymmetry as a bank does not know as much as the poor who are the borrower. Similarly the poor who borrows from the bank may not also know about the prospects of the bank as much as its management.

Thus, institutional frameworks of formal rules and informal norms act to mitigate the uncertainty of the borrower's ability to repay the loan and his propensity to default on the deal. Moreover, institutional frameworks devise the rules of the games and humanly devise constraints to guide economic exchange by promoting information exchange and sharing (North, 1990). This is supported by Fafchamps (1996) who suggests that a formal record of the borrower's credit history decides his creditworthiness, while the lender has recourse to specialized courts of law to enforce the formal loan contract.

Findings by Okello, Ntayi & Munene (2016) reveal that poor households' behaviour and actions largely depend on institutional frameworks that either promote or limit their financial decisions and choices, which determine their inclusion or exclusion from access and use of basic financial services. This is supported by World Bank (2002) statement that "a complex blend of institutions (both formal & informal) promotes and limits market activities by setting mechanisms, which guide behaviours and actions of players such as the poor. Thus, access to and use of basic financial services by poor households in rural Uganda is determined by their behaviors and actions, which either promotes or limits their financial decisions and choices guided by institutional frameworks.

Regulative pillar and financial inclusion

Regulative institutions are referred to as "prescriptions and proscriptions which are written and unwritten rules of the game and the state as rule maker, referee, and enforcer" (North, 1990). Scott (2001) also contends that regulatory processes involve the capacity to establish rules, inspect others conformity to them, and, as necessary, manipulates sanctions rewards and punishments in an attempt to influence future behaviour. According to Kostova (1997), the regulative component of a country's institutional characteristics is those existing laws and rules in a particular national environment that promote certain types of behaviours and restrict others.

As noted by World Bank (2002), markets work if they have rules, which influence future behaviour and actions of participants, especially in poor markets.

Thus, in so doing, they constraints and promote certain behaviour of the poor. Available literature from Uganda reveals that lack of assurance to savers of safety of their member-savings whenever there is collapse of any financial service providers is a major challenge to financial inclusion of the poor (Kasekende, 2011). This is consistent with Mpuga (2008), who argued that in Uganda, the poor generally fall outside formal legal frameworks. The legal system (formal law courts) is largely a preserve of the urban areas because it operates far away from the rural poor, effectively excluding over 80 percent poor households (Akampumuza, 2007).

Normative pillar and financial inclusion

Norms are the informal rules (conventions and code of behaviour) that facilitate, motivate, and govern joint action of members of close-knit groups (North, 1990). The informal constraints (norms) shapes choice set of individuals in various contexts. Similarly, Scott (2005) argued that normative components of institutions define what is appropriate and right for a society's members. As such, when an institution promotes the correct way of behaviour, even in the absence of legal or other sanctions, that institution influences individual actions by normative processes. World Bank (2002) observed that norm-based institutions are, especially critical for the poor, who often lack formal alternatives to guide their behaviours and actions in markets.

Scholars such as Acemoglu et al., (2000) observed that since poor households are not detached from social settings where norms are the order of the day, their financial behaviour and actions towards financial inclusion is derived from normative institutions. This is consistent with World Bank (2002) argument that normative institutions play a primary role in determining financial choices of the poor.

Cultural-cognitive and financial inclusion

The cultural-cognitive aspects of institutions are the shared conceptions that constitute the frames through which meaning is made (Scott, 2001). It is characterized by interpretation and conceptions of meaning by actors. The cultural-cognitive institution recognizes that internal interpretive processes are shaped by external cultural frames.

According to Snow & Benford (1992); Snow et al., (1986), meaning is mediated by the use of varying cognitive frames such as metaphors, symbols, and cognitive cues that cast issues in a particular light and suggest possible ways to respond to these issues. This is consistent with Kostova (1999) who observed that cognitive programs such as schemas, frames, inferential sets, and representations affect the way people notice, categorize and interpret their environment.

Markus & Zajonc (1985) argued that the poor's mind registers incoming financial information and then subjects it to a variety of transformations before ordering a response. Procedural (implicit) and declarative (explicit) memories helps the poor to recall and call back financial information that is explicitly stored to make meaning and sense repeatedly. This is supported by Horn & McArdle (2007); McArdle & Woodcock (1998) who elucidate that most of the poor may depend in part on their ability to invoke several dimensions of their memories and cognitive skills to make better financial decisions so as to be financially included. Hence, the following hypotheses are generated:

H4: There is a significant relationship between institutional frameworks and financial inclusion.
*H4a: There is a significant relationship between regulative pillar and financial inclusion.*
H4b: There is a significant relationship between normative pillar and financial inclusion.
H4c: There is a significant relationship between cultural-cognitive and financial inclusion.

Thus, drawing from the above literature review, the hypothesize research model is indicated in figure 1 below.

Figure 1:   Hypothesized Research Model with latent and manifest variables
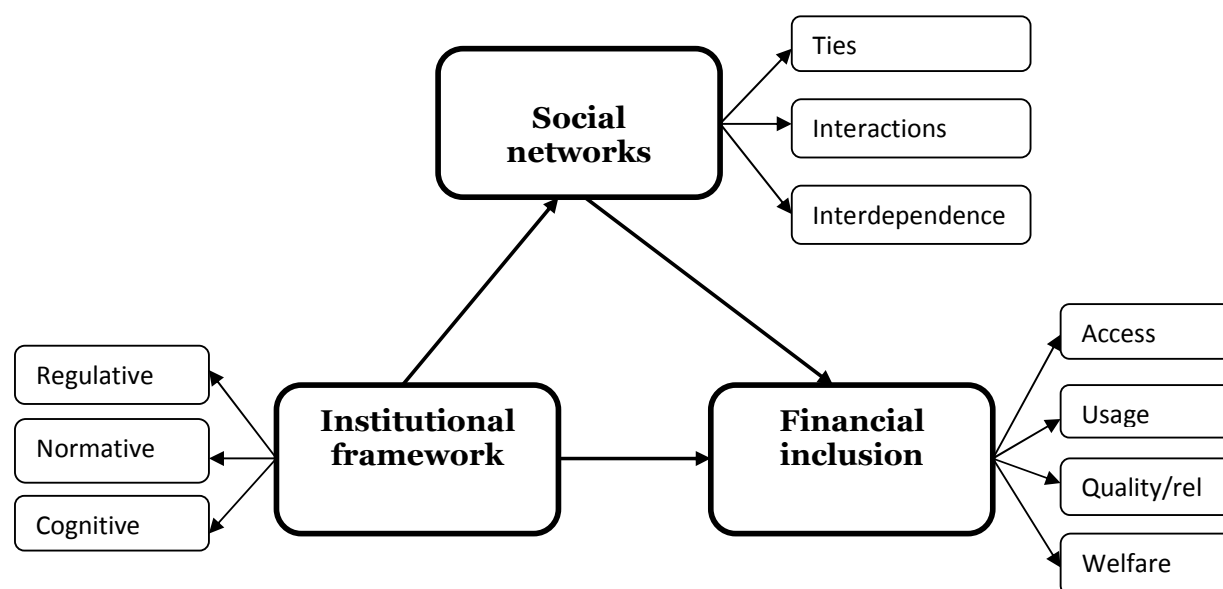
Source: Developed by the authors

Study design and methodology

The study combined both cross-sectional and quantitative designs to address the hypotheses derived under this study. The population for the study comprised of 1,200,000 Million poor households residing in rural Uganda (UBOS, 2012). A total sample of 400 poor households was covered under this study and this was determined through the formulae developed by Yamane (1973) for sample selection. The formula was stipulated as below:

$$n = (N/1+N (e)^2)$$

Where; n = sample size; N = total population; e = tolerable error (0.05 or 95%).
      Furthermore, simple random sampling method was applied in choosing the sample. The picking procedures involved putting pieces of papers labelled with unique numbers and each was picked at a time until a sample size of 400 poor households was achieved. The unit of analysis under this study comprised of poor households with households' heads as the main unit of inquiry/respondents. For the

7

purpose of sufficient sample size as recommended by Pallant (2005) and Hair et al., (2010), 400 households' heads were selected for this study and 375 responses were received back. However, since we had the telephone contacts of all the respondents, 25 questionnaires which were incomplete were sent back to the respondents and they were fully answered. Therefore, we added 375 responses that were originally received back together with 25 questionnaires that were fully answered later after follow-up and a total of 400 responses were achieved in the study. This accounted for 100 percent response rate. The results from the data analysis did not differ much from the previous results with missing responses.

The study used a semi-structured questionnaire, which was developed according to guidelines set by Sekaran (2000) in order to suit the context in which the current study was conducted. In addition, the questionnaire was designed based on recommendations stipulated by Churchill & Iacobucci (2004), which considered; the type of information to be sought, type of questionnaire and methods of administering, content of individual items, form of responses, wording of each question, sequence of questions, physical lay-out and characteristics of the questionnaire, and pre-test of the questionnaire. The semi-structured questionnaire had both open-ended and closed-ended questions to investigate the variables under study in rural Uganda. The open-ended responses provided useful information and insights for purpose of triangulation. The questionnaire was semi-structured to elicit both determined and pre-determined responses from the respondents.

Institutional frameworks were splitted into four constructs of regulative, normative, procedural cognition, and declarative cognition. Recently Okello, Ntayi & Munene (2016) in their study of institutions found that the cultural-cognitive pillar of institutions for poor households in rural Uganda is divided into the procedural and declarative cognition that enables them to make wise financial decisions and choices. Overall, a total of eight items were used in measuring institutional frameworks as stipulated by North (1990) and Scott (2005). Each of the constructs had a maximum of two items. Regulative institutional framework was measured based on compliance and due diligence in financial dealings, while normative institutional framework was measured based on loyalty and honouring financial dealings. Further, the constructs of declarative and procedural cognitive institutional frameworks were measured based on ability to easily handle and make wise financial decisions, and on the criteria of being able to evaluate, memorize, and remember financial information.

Social network was measured on the basis of its characteristics, which creates ties, interactions, and interdependence among actors. It was measured on the basis of friendship, belonging to social groups, closeness, participation in social groups, and being helpful within the groups. These measures were derived from items used by previous scholars such as Okten & Osili (2004), Ahlin & Townsend (2007), Godquin & Quisumbing (2005), which were found to be reliable and valid in studying networks and financial inclusion.

Financial inclusion was measured using the dimensions of access, quality, usage, and welfare as adopted from previous scholarly work such as Čihák, et al., (2012), Claessens (2006), Kempson (2006) and development institutions like World Bank, CGAP, and ACCION & AFI. Therefore, in developing the measurement scales to suit the study context, further reference was made to Ardic et al., (2011); Kendall et al., (2010); Beck et al., (2008) that stipulates financial inclusion pillars and dimensions. Indeed, all the items used to measure the variables under study were anchored onto a 5-point Likert scales ranging between 1-strongly disagree to 5-strongly agree.

8

The questionnaire used for the study was validated through expert views obtained from practitioners and policy working advocates. Fortunately, all variables had content validity index of above 0.88, implying that the items used in the measures had passed content validity tests as recommended by Amin (2005). Further test was carried out to establish the reliability of the items in the instrument. The results revealed that all variables had reliability with Cronbach's alpha coefficient greater than 0.7 as recommended by Nunnally (1978). Institutional frameworks, networks, and financial inclusion had Cronbach's alpha coefficients of 0.879, 0.925, and 0.938 respectively.

Common method bias was address by taking into consideration guidelines stated by Podsakoff et al., (2003). This was necessary in order to reduce type I & type II errors, which is a threat to validity in research. Data were collected from respondents who belonged to different households. According to Podsakoff et al., (2003), it is observed that one alternative means of controlling common method bias is to collect responses on measures of both predictors and outcome variables from different sources in order to avoid biasness. Furthermore, all negatively worded questions were reverse-coded and ambiguous and difficult questions were reworded to suit the final study.

At the initial stage, data brought from the field were entered into SPSS and checked for errors. The data were cleaned and further checks for missing values and outliers were performed. This was done by running frequencies for all the items that were in the questionnaire. Existing problem of missing values was solved by linear interpolation (Field, 2005; Hair et al., 2010). The main aim of cleaning the data was to solve the problem of reduced sample size and inflated means & standard deviation, which results from missing values and outliers.

In addition, test to establish whether the data were normally distributed was carried out. Checks for normality, homogeneity of variance, and multi-collinearity were performed. Normal distribution in our data was tested using Kolmogorov-Smirnov and Shapiro-Wilk tests and scatter plots, while homogeneity of variance was checked using the Levene's test statistics. Multi-collinearity was tested using VIF and tolerance level. All the results were achieved and tenable since the normal p-p plots had all observed values falling along the straight line, and the Levene's test result was non-significant p-value >0.5 (Field, 2005). Besides, both VIF and tolerance were less than 10 and greater than 0.2 respectively as stipulated by Hair et al., (2010).

Testing for mediation using SEM bootstrap approach

Mediation exists when the independent variable has an indirect effect on the dependent variable through the mediator variable. Thus, to test for existence of mediation effect, four conditions as recommended by Baron & Kenny (1986) must be met. Firstly, there must exist a significant relationship between the independent variable and dependent variable; secondly, there must exist a significant relationship between the independent variable and mediator variable; thirdly, there must exist a significant relationship between mediator variable and dependent variable; and fourthly, the independent variable should reduce and become insignificant when the mediator variable is entered into the structural model to show a condition of full mediation. Besides, if the independent variable reduces and remains significant when the mediator is entered into the model, a partial type of mediation is revealed. Additionally, if the independent and the mediator variables remain significant, both will have an effect on the dependent variable.

Therefore, under such a situation, the independent variable will exert both direct and indirect effects on the dependent variable. Thus, the indirect effect means some impact of the independent variable on the dependent variable go through the mediator variable.

Indeed, to establish existence of mediating effect of social network in the relationship between institutional frameworks and financial inclusion, structural equation modelling (SEM) through bootstrap approach was adopted as recommended by Preacher & Hayes (2010) and Hair et al., (2010). The SEM approach was adopted because of not only its ability to test different regression equations simultaneously, but also due to the information it provides on degree of 'fit' for the entire model after controlling for measurement errors (MacKinnon et al., 2002). In addition, use of SEM can assess the contribution of each indicator variable in representing its associated construct and measure and how well the combined set of indicator variables represents the construct (reliability and validity) as stipulated by Hair et al., (2010). Besides, SEM can assess both measurement properties and test key theoretical relationships in one model. Conversely, Preacher & Hayes (2010) suggest that application of SEM through bootstrapping for establishing existence of mediation makes it possible to test more complex path models involving a larger number of variables. The SEM programs provide bootstrapped confidence intervals (CI) and associated statistical significance tests for indirect paths, which are regarded as the best method for testing statistical significance of indirect effects, particularly when assumptions of normality may be violated. Indeed, Preacher & Hayes (2010) stipulates that the p-value should be significant at $p<0.05$ for full mediation, while Hair et al., (2010) advocates for excellent model-fit-indices between the competing models.

Thus, a two-step approach using SEM was applied to assess the mediating role of social networks in the relationship between institutional frameworks and financial inclusion as recommended by Anderson & Gerbing (1988). The first step involved estimation of CFA measurement model, and the second step involved estimation of the structural model. Analysis of Moment Structures (AMOS/20) software was used to construct the measurement and SEM model (see for e.g. Arbuckle, 2009), and absolute values and goodness-fit-indices were used to show that the measurement model and the structural model fit well to the observed data. The Chi-Square (CMIN-minimum value/DF-degree of freedom), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), Relative Fit Index (RFI), Incremental Fit Index (IFI), Normed Fit Index (NFI), and Root Mean Square Error of Approximation (RMSEA) were used in this study. However, Schreiber et al., (2006) recommends that use of TLI, CFI & RMSEA are most preferable indices. Schreiber et al., (2006) observed that the CFI should be ≥0.90, and TLI should be set at ≥0.95, while IFI should be set at ≥0.95, with RMSEA set at ≤0.08 for a good model fit. In addition, they further argue that NFI should be set at ≥0.90 as the recommended cut-off point.

Results

The results from the study revealed that from a target sample of 400 poor households, 100 percent response rate was achieved since 25 questionnaires which were initially incomplete were sent back to the respondents and they were fully answered. Besides, the results indicated that 64 percent of the poor households were headed by male compared to 36 percent headed by female household heads. Further, the results also showed that 37 percent of the respondents were in the 26-33 age bracket, while 26 percent were in the 34-41 age bracket. In addition, analysis of the

10

results revealed that 23 percent were in the 42-49 age bracket, and 9 percent were in 18-25 age bracket with only 5 percent in 50+ age bracket. The results also indicated that 57 percent of the households had 6-10 members, while 29 percent had 5 or less members, and 14 percent had more than 10 members. Further analysis of the results showed that 60 percent of the household heads were able to read and write, while only 40 percent could neither read nor write. More so, the results revealed that 47 percent of the poor households use paraffin lantern source of lighting, while 27 percent use small kerosene lamp, and 26 percent use other sources such as solar. However, only 1 percent of the poor households use firewood as source of lighting. Besides, the results indicated that 54 percent of the poor households use firewood for cooking, while 45 percent use charcoal. In addition, only 1 percent uses both paraffin and other sources like biogas as cooking fuel. Further, the results showed that 32 percent of the poor households use piped water as their primary source of water, and 28 percent use boreholes. Besides, 7 percent use private well as their primary source of water, and 6 percent use river/streams. These results are indicated in table 1 below.

Principle components analysis was performed to reduce the data into a manageable level. Guided by the Kaiser Criterion (Kaiser, 1960) components with Eigen values above 1 were extracted and a cut-off value of 0.5 was set (Field, 2005). The results of the analysis produced four factors of institutional framework, with cognitive framework being splitted into procedural and declarative cognitive institutions, thus accounting for 94 percent total variance explained. For social networks, three factors accounting for 85 percent of total variance explained were generated, while four other factors were produced for financial inclusion with a total variance of 88 percent.

Similarly, confirmatory factor analysis (CFA) was also adopted to examine how and the extent to which the observed variables are linked to their underlying latent factors based on a sound theoretical foundation (Hair et al., 2010). CFA was adopted to test for convergent/discriminant validity between the manifest and latent variables. The discriminant validity, composite reliability (CR), and average variances explained (AVE) are indicated in tables 2 and 3 below.

The findings confirmed convergent validity of the manifest and latent for institutional frameworks with excellent model fit statistics between the model and the observed data. The chi-square (x^2) = 4.528 (degrees of freedom = 14, probability level = .991), and the incremental fit index (IFI) = 1.067 further above the recommended 0.95, while the Tucker Lewis index (TLI) = 1.148 way above the recommended 0.95. The comparative fit index (CFI) = 1.000 further above the recommended 0.90 with Root Mean Square error of Approximation (RMSEA) = .000.

Besides, the CFA model for social network fitted well to the observed data with excellent fit indices of chi-square (x^2) = 13.353 (degrees of freedom = 24, probability level = .960), incremental fit index (IFI) = 1.059, Tucker Lewis index (TLI) = 1.095, comparative fit index (CFI) = 1.000, and the Root Mean Square error of Approximation (RMSEA) = .000.

Finally, the results of the CFA on financial inclusion also indicated an excellent model fit statistics for the construct measures. The chi-square (x^2) = 27.741 with degrees of freedom = 29, and probability level = .532. The incremental fit index (IFI) = 1.006 further above the recommended .95, while the Tucker Lewis index (TLI) = 1.011 further above the threshold cut-off points of .95, and the comparative fit index (CFI) = 1.000 further over the recommended .90 with the Root Mean Square error of Approximation (RMSEA) = .000.

Table 1:   Showing demographic characteristics for poor households

	Frequency	%	Cumulative %
Gender			
Male	254	63.5	63.5
Female	146	36.5	100
Total	400	100	
Age			
18-25 years	38	9.5	9.5
26-33 years	147	36.8	46.3
34-41 years	102	25.5	71.8
42-49 years	92	23.0	94.8
50+ years	21	5.3	100
Total	400	100	
Members in household			
5 or less	117	29.3	29.3
6-10	229	57.3	86.5
More than 10	54	13.5	100
Total	400	100	
Ability to read and write			
Yes	241	60.3	60.3
No	159	39.7	100
Total	400	100	
Type of lighting source			
Paraffin lantern	187	46.8	46.8
Small kerosene lamp	108	27.0	73.8
Firewood	3	0.8	74.5
Others (solar)	102	25.5	100
Total	400	100	
Cooking fuel			
Firewood	216	54.0	54.0
Charcoal	181	45.3	99.3
Paraffin	1	0.3	99.5
Others (biogas)	2	0.5	100
Total	400	100	
Primary source of water			
Piped water	129	32.3	32.3
Private well	26	6.5	38.8
Public well	107	26.8	65.5
Borehole	113	28.3	93.8
River/stream	23	5.8	99.5
Spring	2	0.5	100
Total	400	100	

12

Table 2:   Discriminant validity for the variables under study

Variables	1	2	3	4	5	6	7	8	9	10
Cognitive (1)	**.827****									
Normative (2)	.253**	**.820****								
Regulative (3)	.243**	.298**	**.862****							
Ties (4)	.143*	.226**	.213*	**.787****						
Interdependence (5)	.228*	.203*	.141*	.222**	**.836****					
Interactions (6)	.259**	.304**	.260*	.423**	.337**	**.697****				
Access (7)	.270*	.242*	.248*	.262*	.097*	.260*	**.809****			
Quality (8)	.296*	.221**	.103**	.298*	.238*	.196*	.320**	**.828****		
Usage (9)	.222*	.276*	.213**	.219*	.121*	.053*	.307**	.260**	**.797****	
Welfare (10)	.097**	.196**	.121**	.053*	.238**	.103*	.219**	.263**	.109**	**.830****

n = 400; significance level: **p<.01; *p<.05

Table 3:   Composite reliability and average variance explained for the variables under study

Variables	Composite reliability (CR)	Average variance explained (AVE)
Cognitive	0.812	0.684
Normative	0.860	0.672
Regulative	0.852	0.743
Ties	0.759	0.619
Interdependence	0.823	0.700
Interactions	0.738	0.500
Access	0.791	0.654
Quality	0.814	0.686
Usage	0.776	0.635
Welfare	0.815	0.688

n = 400

Testing for mediation through SEM bootstrap approach

Structural equation modelling (SEM) through the bootstrap approach was adopted to test for the mediating role of social network in the relationship between institutional frameworks and financial inclusion. A SEM model combining predictor, mediator, and outcome variables was constructed with direct paths from predictor to mediator, and outcome variables as indicated in appendix 2 in the appendix section.

The total, direct, and indirect effect of institutional frameworks on financial inclusion was established as shown in table 5 below (Preacher & Hayes, 2010).

Besides, two models (competing models) with direct path from institutional frameworks to financial inclusion and indirect path from institutional frameworks through social network to financial inclusion were generated to test the hypothesis that social network mediates in the relationship between institutional frameworks and financial inclusion as shown in table 4 below (Hair et al., 2006).

The non-mediated SEM model 1 was constructed based on assumption that social network does not mediates in the relationship between institutional frameworks and financial inclusion (H4).

The mediated SEM model 2 was constructed on assumption that social network mediates in the relationship between institutional frameworks and financial inclusion. This indicated a condition of indirect effect of institutional frameworks on financial inclusion through social network (H1).

Therefore, under this study, the non-mediated SEM model 1 (direct model) estimated the direct effect of institutional frameworks on financial inclusion with no path leading to social network from institutional frameworks, and no path from social network to financial inclusion.

The mediated SEM model 2 (mediated model) with both direct and indirect path was drawn from institutional frameworks through social network to financial inclusion, and from institutional frameworks to financial inclusion to establish the indirect effect of institutional frameworks on financial inclusion.

The results from the SEM models revealed that model 2 was better than model 1 as indicated by good-fit-indices. The findings indicate that when the indirect path was added into the SEM model, the results revealed improved and perfect good-fit-indices as indicated in table 4 below.

Thus, this implied that institutional frameworks had both significant direct and indirect effect on financial inclusion. This is in line with hypotheses (H1) and (H4) stated under this study. Furthermore, social network had a significant and positive effect on financial inclusion. This is consistent with hypothesis (H2) of the study.

Accordingly, the findings revealed that social network mediates in the relationship between institutional frameworks and financial inclusion. In reference to SEM model 1, institutional frameworks (β = .297, $p<0.001$) is significantly related with financial inclusion, thus, confirming a partial nature of mediating effects.

Finally, the SEM model 2 also indicated that institutional frameworks and social network as exogenous variables predicted 30 percent of the variation in endogenous variable of financial inclusion with bootstrap results (β = .078; $p<0.05$) as indicated in table 5 below. Thus, we can conclude that institutional frameworks through social network explain 7.8 percent variation in financial inclusion.

Table 4:   Showing SEM competing models for non-mediated and mediated model

			Non-mediated model	Mediated model
Networks	←	Inst. Frameworks	not estimated	.194***
Fin. inclusion	←	Inst. Frameworks	.297***	.375***
Fin. inclusion	←	Networks	.404**	.404**
CMIN			62.671	84.978
Degrees of freedom (Df)			51	63
Probability (P)			.032	.117
Goodness of fit index (GFI)			.933	
Incremental fit index (IFI)			.718	.982
Tucker-Lewis index (TLI)			.732	.971
Comparative fit index (CFI)			.711	.995
Normed fit index (NFI)			.709	.966
Root mean square error of approximation (RMSEA)			.041	.033
Squared multiple correlations				
Fin. inclusion			.213	.298
Networks			-	.138

*n = 400; significance level: *** p<.0001; **p<.01; *p<.05*

Furthermore, to establish the relationship between institutional frameworks and social network, a path was drawn from institutional frameworks and social network. The results indicated that there was a significant relationship between the predictor variable and the mediator variable. Thus, there was evidence for existence of mediation for the intervening effects.

Based on Morgan & Hunt (1994), four different criteria were examined in SEM model comparison. These include: overall model fit as measured by CFI, percentage of hypothesized significant paths, amount of variance explained as measured by squared multiple correlations and parsimony (model simplicity) assessed by Normed Fit Index (NFI).

The comparison of results based on non-mediated (direct) and mediated (direct & indirect) models revealed that the mediated model had better representation of model fit based on good-fit-indices and squared multiple correlations as indicated in table 4 above.

Table 5:   Showing total, direct and indirect effects in a structural equation mediated model

Standardized total effects	Inst. frameworks	Networks		
Networks	.194***	.000		
Financial inclusion	.375***	.404*		

Standardized direct effects	Inst. frameworks	Networks		
Networks	.194***	.000		
Financial inclusion	.297***	.404*		

Standardized indirect effects	Inst. frameworks	Networks		
Networks	.000	.000		
Financial inclusion	.078***	.000		

Bootstrap mediation results	Point estimates	SE	Lower bounds	Upper bounds	P
Institutional framing ← Fin.incl	.414	.068	.306	.532	.010
Networks ← Fin.incl	.287	.064	.167	.392	.005

*n = 400; significance level: *** p<.0001; **p<.01; *p<.05*

Additionally, the study also investigated the effect of institutional frameworks of regulative, normative, and cultural-cognitive pillars on financial inclusion of the poor in rural Uganda as indicated in table 6 below. The findings revealed that there was a significant and positive impact of regulative pillar on financial inclusion (β = 0.320, $p<0.01$). This implies that a change in regulative pillar of institutional frameworks influence financial inclusion. Similarly, the normative pillar also had a significant and positive influence on financial inclusion (β = 0.155, $p<0.01$). This means that a change in normative pillar of institutional frameworks lead to a variation in financial inclusion. Besides, there was a significant and positive relationship between cultural-cognitive pillar and financial inclusion, therefore, meaning that a change in cultural-cognitive pillar of institutional frameworks affect financial inclusion of the poor in rural Uganda (β = 0.128, $p<0.05$).

Table 6:   Showing hierarchical regression of institutional pillars on financial inclusion in rural Uganda

Predictor	model1	model2	model3	model4	VIF
	Dependent variable: financial inclusion				
	β	β	β	β	
Constant	31.077	23.019	20.977	19.203	
Gender	-.035	-.033	-.190	-.124	
Age	.447	-.066	-.034	-.012	
Types of dwelling units	.110	.150	-.016	-.212	
Toilet facility	-.924	-.376	-.300	-.370	
Regulative pillar		.320**	.250**	.221**	1.411
Normative pillar			.155**	.140*	1.313
Cultural-cognitive pillar				.128*	1.182
R	.166**	.349**	.374**	.393**	
R^2	.028**	.122**	.140**	.154*	
Adj. R^2	.008	.101	.118	.130	
ΔR^2	.028	.094	.019	.014	
ΔF	1.391**	41.673**	8.434**	6.392**	
Durbin Watson	1.569				

Notes: $n = 400$; $**p<0.01$, $*p<0.05$

Discussion and conclusion

The study examined and tested the mediating effect of social network in the relationship between institutional frameworks and financial inclusion of the poor in rural Uganda. The results indicated that there was a partial mediating effect of social networks in the relationship between institutional frameworks and financial inclusion. This portrays the importance of social network as a conduit for information circulation and sharing among the poor in economic and social exchange.

Accordingly, the findings indicated that social network significantly and positively mediates in the relationship between institutional frameworks and financial inclusion. This supports our hypothesis (*H1*) of the study, which states that social network mediates the relationship between institutional frameworks and financial inclusion. The finding is consistent with van Bastelaer (2000) who reveals that social network increases the capacity for accessing market information and reduces the search cost hence enhancing the linkage among the poor and creating tie networks among members in groups. Social network acts as a conduit through which vital information passes to reach and circulate among network members. Indeed, social networks are found to be important elements within most formal and informal programs that provide access to credit by the poor as stipulated by Karlan (2007). Biggs et al., (2002) also observes that in accessing financial services, social networks help supply information and mechanism of enforcement (see e.g. Narayan & Prittchet, 1997). Besides, Fafchamps & Minten (1998) further suggests that in a world of imperfect information, relations among individuals in social networks increase flow of information to create opportunities such as access to credit (see also Granovetter, 1973; Burt, 1992). Ahlin & Townsend (2007) also notes that social networks among poor households act as screening device to determine the creditworthiness of the borrowers, thus expanding the scope of financial inclusion.

17

Thus, social network increases availability of information that lowers transaction costs and opportunistic behaviour among poor households in rural Uganda.

Furthermore, the results also revealed that social network significantly and positively affects financial inclusion. This finding suggests that existence of wider (denser) social network increases frequency of interaction through which information about existing opportunities flow and it's effectively shared based on norms. This supports hypothesis (H2), which states that there is a significant relationship between social network and financial inclusion. Scholars such as Biggs, Raturi & Srivastava (2002) argues that in accessing financial services, social network helps the poor by supplying information and it acts as a mechanism of enforcement (see also Narayan & Prittchet, 1997). Khanh (2011) also suggests that social network of relationships are a core issue in access to financial credit, especially for poverty reduction in rural areas. Furthermore, Karlan (2007) also contends that social network between group members are an essential tool for screening and recommending loan applications and for ensuring that contracts are enforced since it provides information about everyone within the group. Thus, for the poor, social networks provide information and opportunity for available sources of financial services for network members and also act as a screening mechanism, therefore increasing access and use of basic financial services. This is supported by Besley & Coate (1995) who notes that sanction in group lending can reduce the moral hazard of repayment and also play important roles in peer monitoring. Social ties and the resulting potential for sanctions between members help mitigate adverse selection and moral hazard problems in joint liability lending contracts when borrowers enjoy a social leverage with one another that extends beyond the lending contract (Floro & Yotopolous, 1991).

Furthermore, the findings also showed that institutional frameworks and social network are significantly and positively related. This lends supports to hypothesis (H3), which states that there is a significant relationship between institutional frameworks and networks. This result is supported by the argument that formal rules stimulate market activities by supplanting community social norms and networks (for e.g. see Austin, 1993; Banerjee, Besley & Guinnane, 1994). Scott (2001) argues that through complementarity, the relationship between formal rules and informal association affects the actors' interests and activities such as group linkages and participation (North, 1990). In addition, Durlauf & Fafchamps (2005) also suggests that social network and associations that create shared knowledge, mutual trust, social norms, and unwritten rules, act as informal institutions engulfing the objectives of the actors in the social structure. Studies by Bebbington (1999); Rose (1998) reveals that where formal institutions do not work well, social network and social ties can provide an informal substitute to enhance people's access to different resources, markets, and opportunities.

Finally, the results also suggested that institutional frameworks have significant impact on financial inclusion in rural Uganda. This is consistent with our hypothesis (H4), which states that there is a significant relationship between institutional frameworks and financial inclusion. World Bank (2002) argues that a complex blend of institutions (formal & informal) promotes and limits market activities by setting mechanisms, which guide behaviours, and promote or/and limit actions of players. From the theory of institutions by North (1990) & Scott (2005), institutional frameworks of regulative (formal rules), normative (informal rules), and cultural cognitive structures the way how poor households think about financial choices and alternative courses of actions that they might use to attain desired

financial goals. Indeed, institutional frameworks help the poor to make wise financial decisions and choices in daily lives, thereby being financially included.

Implication for managers and researchers

Based on the fact that strong network ties (Bourdieu & Wacquant, 1992) create trust and fore-bearance (Piore & Sabel, 1984), which results into access to scarce resources like credit/loan, managers of financial institutions should encourage peer group formation between its borrowers in addition to existence of institutional framework so as to achieve peer group screening and monitoring in order to reduce adverse selection and moral hazards problems in the financial markets.

Besides, policy makers should consider combining the regulative, normative, and cultural-cognitive pillars with social network in order to promote financial inclusion in rural Uganda. The regulative, normative, and cultural-cognitive pillars of institutions act as avenues for recourse and assurance to the poor while dealing with financial institutions since they set the *"rules of the games"* in the financial market. This will guarantee the poor safety in case of collapse of banks or microfinance institutions.

In addition, since social network is found to be a mediator in the relationship between institutional frameworks and financial inclusion, mangers of financial institution should re-enforce agents of social networks such as clients' group ties, interaction, and independence since most financial services are provided to the poor through group-based mechanisms (group liability mechanism).

Furthermore, managers of financial institutions need to encourage poor households in rural Uganda to involve themselves in activities of diverse community groups so as to widen their social network. This is advantageous because social network provide information about existing sources of financial services among the poor communities as guided by the institutional frameworks.

For researchers, the study is an indication that third variables seems to always have impact in a relationship between the predictor and outcome variables in social science research. Thus, it is always important to uncover existence of spurious factors while carrying out a study on certain variables. Scholars and researchers are cautioned not to under rate the importance of networks in promoting the relationship between institutional frameworks and financial inclusion, especially among the poor in rural Uganda.

Limitations of the study

The current study adopted cross-sectional study design, thus, leaving out a longitudinal study to investigate characteristics in the sample over time. Besides, although the sample was big enough, it limited itself to only poor households in rural Uganda. Further studies could focus on other equally important vulnerable groups in the community such as the disabled persons and middle income groups. In addition, this study used only quantitative data and ignored qualitative data. Future studies could adopt the use of interviews or mixed method in investigating the hypotheses set under this study.

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22

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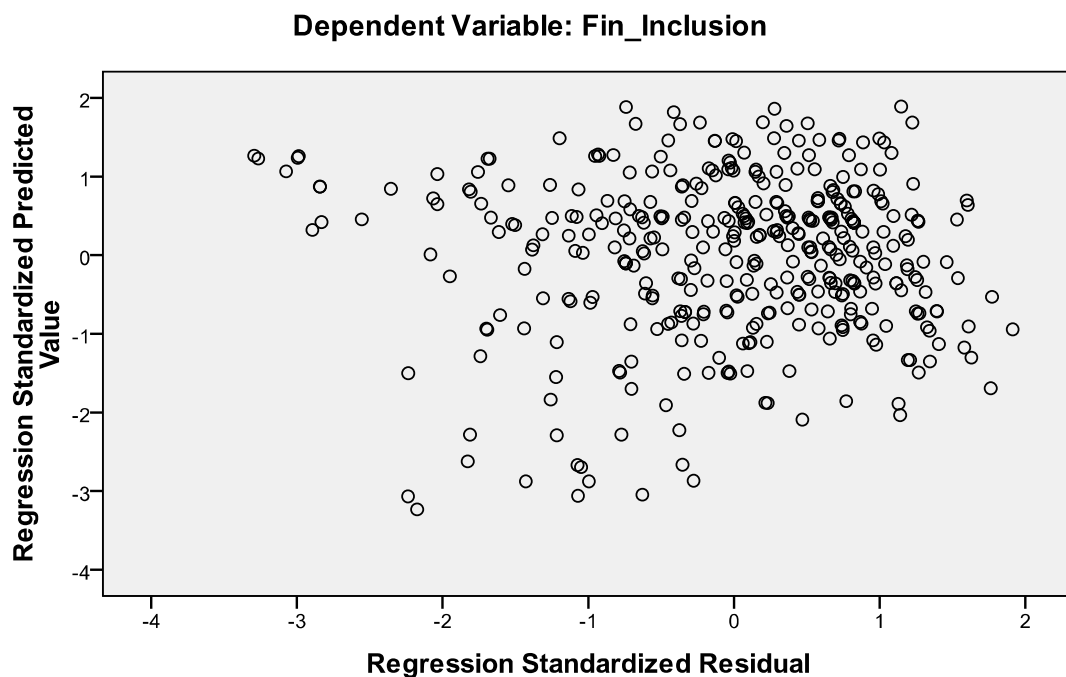# Appendix

Appendix 1:   Test for assumption of parametric data

Assumption 1: Normality

Kolmogorov-Smirnov and Shapiro-Wilk results showing normality in pilot data

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Inst. framework	.270	400	.732	.837	400	.683
Social networks	.264	400	.921	.867	400	.539
Financial inclusion	.369	400	.528	.743	400	.401

a. Lilliefors Significance Correction

Scatterplot

Dependent Variable: Fin_Inclusion

Homogeneity of variances results showing normality in pilot data

Variables	Levene's Statistic	df1	df2	Sig.
Inst. framework	.119	1	398	.731
Social networks	1.029	1	398	.312
Financial inclusion	.181	1	398	.671

Appendix 2: SEM mediated model
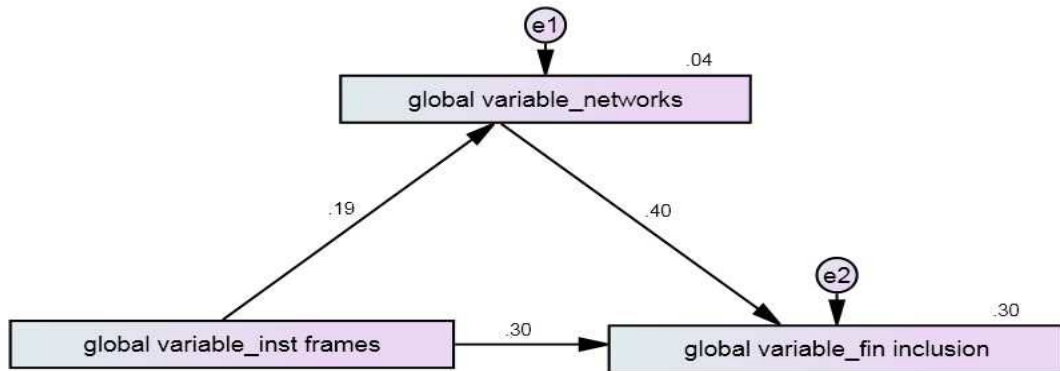
Appendix 4: Survey Questionnaire

Section 1:   **Background information**

Please kindly tick appropriately
1.   Gender   1) Male   _____   2) Female _____
2.   Age Group
            1) 18 – 25 _____   2) 26 – 33 _____   3) 34 – 41 _____
            4) 42– 49 _____   5) 50+ _____
3.   Number of people in your household
            1)   5 or less _____   2) 6 – 10 _____   3) More than 10 _____
4.   Type of dwelling unit for this household
            1) Temporary Building Materials _____   2) Semi-permanent Building Materials _____
            3) Permanent Building Materials _____
5.   Number of years lived in this community
            1) 5 years or less _____   2) 6 – 10 years _____   3) 11 – 15 years _____
            4) More than 15 years_____
6.   What is the primary source of water for this household?
            1) Piped water system _____   2) Private well _____   3) Public well _____
            4) Borehole _____   5) River or stream _____
            6) Other (specify) _____
7.   What type of toilet facility does this household use?
            1) Community pit latrine _____   2) Individual pit latrine _____   3) Bush _____
            4) Other (specify) _____
8.   What type of lighting does this household use?
            1) Paraffin lantern _____ 2) Small kerosene lamp _____   3) Firewood _____
            4) Other (specify) _____
9.   What type of cooking fuel does this household use?
            1) Firewood _____   2) Charcoal _____   3) Paraffin _____
            4 Other (specify) _____
10.   Are you able to read and write?
            1) Yes _____   2) No _____

Section 2:   **Institutional frameworks**
Please circle the most appropriate option for each of the questions below;
Strongly agree (5), agree (4), not sure (3), disagree (2) strongly agree (1)

            Regulative pillar
FR1   We in this household do voluntarily comply with existing rules in all our financial dealings
FR2   We in this household feel our rights are always protected when dealing with a financial institution
FR3   We as members of this household always understand rules while dealing with a financial institution
FR4   We as members of this household always fulfil our obligations in all financial dealings
FR5   My household members always observe high standard of ethics in all financial dealings
FR6   My household members always show due diligence when dealing with a financial institution
FR7   We as members of this household are always confident while dealing with a financial institution
FR8   In this household, members can always get financial redress if they encounter problems with a financial institution
FR9   We in this household always conform to procedures and policies in all financial dealings
FR10   In this household, we are always obedient to the terms and conditions in all financial dealings
FR11   In this household, members always respect the terms and conditions of financial transactions
            Normative pillar
INF1   We as members of this household always approve others when it comes to financial dealings
INF2   In this household, we always exhibit high level of integrity in all financial dealings
INF3   My household members are always trusted in all their financial dealings with others
INF4   Members of this household are always friendly when it comes to financial dealings with others
INF5   In this household, members always share financial matters with others
INF6   In this household, we always honour all financial dealings
INF7   In this household, we always exhibit loyalty in all financial dealings
INF8   Members of this household always exhibit high level of honesty in all financial dealings
INF9   In this household, members have self-discipline in all financial dealings
INF10   In this household, members are always responsible in all financial dealings
INF11   In this household, members always have respect in all financial dealings
INF12   In this household, members have self-control in all financial dealings
INF13   In this household, members exhibit commitment in their financial dealings
INF14   In this household, members always conform to expected behaviour in financial transactions
INF15   In this household, members are always obedient to expected behaviours in financial transactions
            Cultural-cognitive pillar
COG1   Members of my household can easily make financial predictions
COG2   Members of my household can easily interpret financial information
COG3   Members of my household can easily determine the benefits of financial products and services
COG4   In this household, members can easily elaborate financial issues
COG5   In this household, members can easily evaluate content of financial information
COG6   In this household, members are always excited in learning new financial matters
COG7   In this household, members always appreciate their financial decisions
COG8   In this household, members can easily express themselves on financial matters
COG9   In this household, members can easily forecast the outcome of their financial dealings

27

COG10   In this household, we can easily make judgments on financial matters
COG11   In this household, members can easily organize financial information
COG12   Members in this household can easily recognize financial terms
COG13   In this household, members can easily memorize and remember financial matters
COG14   In this household, members can easily respond to financial issues
COG15   In this household, members can easily make decisions on everyday financial matters
COG16   In this household, members can easily handle everyday financial problems

Section 3:   Social network
Please circle the most appropriate option for each of the questions below;
Strongly agree (5), agree (4), not sure (3), disagree (2) strongly agree (1)

         Ties
T1   In this household, some members are leaders in social groups to which they belong
T2   In this household, we belong to social groups where most members are neighbours
T3   In this household, we belong to social groups with members from diverse occupations
T4   In this household, we belong to social groups with members from diverse religion
T5   Members of this household belongs to social groups with members from diverse ethnicity
T6   Members of this household belongs to social groups with members from diverse age groups
T7   Most of the members in this household are friends to friends who know each other
         Interaction
INT1   In this household, we belong to social groups which frequently interact with other groups outside this community
INT2   In this household, some members are friends to prominent people in this community
INT3   In this household, members always get together with friends to play games and recreational activities
INT4   My household members have many friends with whom we are very close within and outside this community
INT5   In this household, most members participate in social organizations in this community
INT6   In this household, most members participate in activities of diverse social organizations
INT7   In this household, most members are highly involved in activities of social organization to which they belong
INT8   Members of this household always get together with others regularly to do an activity
         Interdependence
IND1   In this household, members have many people beyond this household that we can turn to in case we needed help
IND2   In this household, we have many stable friendships and we support and trust each other
IND3   In this household, members have people they feel at ease with
IND4   In this household, we have people we can talk to about our private matters
IND5   In this household, we have people we can call upon for help
IND6   Members of this household closely talk to many households in this community when they have problems
IND7   Members within this household can easily approach other households within this community when they have problems
IND8   In this household, we always go outside this community to visit
IND9   In this household, we are always visited by friends when we get problems
IND10 In this household, we always ask neighbours to take care of our children when we are away

Section 4:   Financial inclusion
Please circle the most appropriate option for each of the questions below;
Strongly agree (5), agree (4), not sure (3), disagree (2) strongly disagree (1)

         Access
ACC1   There are many financial services delivery channels nearby this household
ACC2   There are many financial institution branches nearby this household
ACC3   The initial account opening fees charged by the financial institution is affordable
ACC4   The account maintenance fees charged by the financial institution is affordable
ACC5   The minimum balance on savings account required by the financial institution is affordable
ACC6   The loan fees charged by the financial institution is affordable
ACC7   The minimum loan amount offered by the financial institution is satisfactory
ACC8   The numbers of documents required by the financial institution to open an account are few
ACC9   The number of days taken by the financial institution to process loan applications is favourable
ACC10   In this household, we are not discriminated by the financial institution in its service provision
ACC11   The location to submit loan application required by the financial institution is favourable
ACC12   The fees charged on payment services offered by the financial institution is affordable
         Quality/relevance
QTY1   The savings product provided by the financial institution suits our needs
QTY2   The loan product provided by the financial institution suits our needs
QTY3   The payment services provided by the financial institution suits our needs
QTY4   The savings product provided by the financial institution is safe for us
QTY5   The loan product provided the financial institution is safe for us
QTY6   The payment services provided by the financial institution is safe for us
QTY7   The saving product provided by the financial institution satisfies us
QTY8   The loan product provided by the financial institution satisfies us
QTY9   The payment services provided by the financial institution satisfies us
QTY10   The saving product provided by the financial institution is useful to us
QTY11   The loan products provided by the financial institution is useful to us
QTY12   The payment services provided by the financial institution is useful to us
         Usage
USG1   The cost of making a trip to the financial institution is low
USG2   The paper work requirements by the financial institution is favourable
USG3   The fees charged by the financial institution on use of its services are favourable

USG4	The level of service provision by the financial institution is very good
USG5	The financial institution always provide its services on regular basis
USG6	The financial institution always provide its financial services at convenient hours
USG7	Members of this household trust financial products and services offered by the financial institution
USG8	The products and services provided by the financial institution are user friendly
USG9	The process of getting financial services from the financial institution is easy
USG10	It takes us less time to reach the financial institution to get the services
USG11	The interest on deposit services offered by the financial institution is attractive for us
USG12	The terms set by the financial institutions on use of its products and services are favourable to us
USG13	The financial institution used by this household member is conveniently located
USG14	The terms of repayment of loans provided by the financial institution is favourable to us
	Welfare
WEL1	The products/services provided by the financial institution has improved our standard of living
WEL2	The products/services provided by the financial institution has increased our income
WEL3	The products/services provided by the financial institution has enabled us acquire more assets
WEL4	The products/services provided by the financial institution has led to improved literacy in this household
WEL5	The products/services provided by the financial institution has led to increased consumption in this household
WEL6	The products/services offered by the financial institution has provided self-employment to this household members
WEL7	The products/services provided by the financial institution has improved our access to health services
WEL8	The products/services provided by the financial institution has improved our housing condition
WEL9	The products/services provided by the financial institution has improved our access to amenities
WEL10	The products/services provided by the financial institution has improved our access to utilities

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