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## BANKING & FINANCE | RESEARCH ARTICLE

# Financial inclusion in rural Uganda: The role of social capital and generational values

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**Abstract:** The purpose of this paper was to examine how variations in social capital across generations promote financial inclusion among the poor in rural Uganda. Data were collected from a sample of 200 poor households located in Mukono district and processed using ordinary least square regression and ANOVA to examine how variations in social capital across generations promote financial inclusion of the poor in rural Uganda. The results generated indicate that variations in social capital components across generations significantly and positively affect financial inclusion of the poor in rural Uganda. The paper makes a significant contribution to existing body of literature by showing that variations in social capital across generations can cause an effect in financial inclusion of the poor, especially in rural Uganda. Managers of financial institutions should consider generational values in promoting financial inclusion. Specifically, they should design social financial products and services that can boost collective action in order to promote financial inclusion of the poor, especially in rural Uganda.



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### PUBLIC INTEREST STATEMENT

Financial inclusion in developing countries has been limited by numerous challenges. While efforts have been adopted to improve its scope through supply and demand strategies, majority of the poor still remain largely financially excluded. High fees, minimum balances, lack of physical access, unsuitable financial products, long loan processing time, and strict documentation and collateral requirements, have voluntarily and involuntarily excluded over 62% of the poor in rural Uganda. Thus, in public interest, this study attempts to promote financial inclusion through social capital over different generations. The paper makes significant contribution to existing body of literature by showing that variations in social capital across generations can cause an effect in financial inclusion in rural Uganda. Managers of financial institutions should consider generational values in promoting financial inclusion. Specifically, they should design social financial products and services that can boost collective action in order to promote financial inclusion of the poor.

**Subjects: Social Sciences; Behavioral Sciences; Development Studies; Economics, Finance, Business & Industry**

**Keywords: bonding and bridging social capital; collective action; financial inclusion; poor households; generational values; microfinance; rural Uganda; trust; social structure; reciprocity**

### 1. Background

There is growing evidence that social capital is vital for economic outcomes (World Bank, 2008). According to Grootaert and Bastelaer (2002), social capital reduces poverty through sharing scarce resources such as credits that economically and socially empowers and helps the poor to come out of poverty. World Bank (2008) reveals that social capital significantly facilitates information sharing for collective action and decision-making through established roles, social networks and other social structures supplemented by rules, procedures and precedents, which results into efficient allocation of scarce resources among the poor.

Different views (Bourdieu, 1986; Coleman, 1988; Portes, 1998; Putnam, 1993) have been advanced to conceptualize social capital. Putnam (1993) refers to it as “features of social organization such as networks of individuals or households, norms, and social trust that facilitate coordination and cooperation (vertical structures)”. While Coleman (1988, p. 598) conceptualizes it as “a variety of different entities (which) all consist of some aspect of social structure, and (which) facilitate certain actions of actors—whether personal or corporate actors—within the structure”. Coleman’s conceptualization includes both the horizontal and vertical structures that results into social capital. Bourdieu (1986) defines social capital as “those—actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition, or in other words, to membership in a group”. According to Portes (1998, p. 6), social capital is “the ability of actors to secure benefits by virtue of membership in social networks or other social structures”. Therefore, all the above conceptualization of social capital by Putnam (1993), Coleman (1988) and Bourdieu (1986), and Portes (1998) portrays it as a resource (tangible and intangible) that promotes economic development among social actors embedded in social structures through reciprocity, trust and cooperation.

Indeed, as noted by Grootaert, Narayan, Veronica, and Woolcock, (2003), van Bastelaer (2000a), social capital in form of both horizontal and vertical networks through which information is organized and shared, facilitates and promotes coordinated activities and collective decision-making and minimizes opportunism by helping the poor to confront poverty, resolve disputes and take advantage of new opportunities within their social settings.

The concept of social capital has been widely applied to explore varieties of growth and developmental issues in economics (Knack & Keefer, 1997), sociology (Coleman, 1988), psychology (Munene, Schwartz, & Kibanja, 2005), anthropology (Bourdieu, 1986), political science (Putnam, 1993), education (Stone, 2006) and, more recently, in rural financing. Existing studies indicate that social capital and its nature improves the prospect for financial development, especially among the rural poor (Consultative Group to Assist the Poorest, 2010).

Scholars such as Karlan (2007), Ajani and Tijani (2009), and Okten and Osili (2004), Ahlin and Townsend (2007), Lawal, Omonona, Ajani, and Oni (2009) and Khan (2011) have used social capital to explore financial inclusion. Contextually, Ssewamala, Karimli, Han and Ismayilova (2010) applied it to predict savings and educational performance of orphaned adolescent in sub-Saharan Africa with a specific focus on Uganda. Besides, Heikkilä, Kalmi, and Ruuskanen (2009) used it to investigate access to credit and choice of financial institutions by individuals. Furthermore, Katungi, Edmeades, and Smale (2008) also adopted it to explain information diffusion and exchange among farmers in rural Uganda. Unfortunately, they ignore variations in social capital components of bonding, bridging, trust and collective action across generations (e.g. Generation Z, Millennial/Generation Y,

Generation X, Baby Boomers, and Traditionalists/Silent Generation), which may determine access to scarce resources like financial services (see, e.g. Lancaster & Stillman, 2002). Thus, in this study, we attempt to contextually examine how variations in social capital components across generations affect financial inclusion among the poor in rural Uganda.

## 2. Literature review, hypotheses

Past studies have examined financial inclusion based on both supply and demand side factors. In this section, we review and extend research on financial inclusion based on a demand side perspective by introducing variations in social capital constructs of bonding, bridging, trust and collective action across generations in relation to financial inclusion among the poor.

## 3. Social capital and generations

According to Portes and Sensenbrenner (1993, p. 1323), social capital is constituted by “those expectations for action within a collectivity that affect the economic goals and goal-seeking behaviour of its members, even if these expectations are not oriented towards the economic sphere”. This therefore, suggests that social capital enables people to attach greater value in their family, friends and associates that facilitate collective action for mutual benefits. As a result, this lowers uncertainty and reduces transaction costs thereby fostering economic activity, especially in rural development (Grootaert & Bastelaer, 2002). In fact, Durlauf and Fafchamps (2004, p. 5) state that social capital achieved through shared trust, norms and values based on social networks and associations and their consequent effects on expectations and behaviour, generates (positive) externalities or beneficial outcomes for members.

Further, Woolcock and Narayan (2000) observe that the concept of social capital has become increasingly important in development, also especially in rural financing of the poor. Indeed, Fukuyama (2001) contends that social capital play a critical role in reducing transaction costs associated with coordination mechanisms such as contracts, through acquisition of information, which is costly in economic transactions. This view is supported by Stiglitz (1986), who reveals that social capital promotes information acquisition and reduces transaction costs incurred in information search, especially in rural financial markets.

Scholars like Debar (2004) argue that social capital and its components, which determines sharing and allocation of scarce resources, and coordinated activities in order to minimize opportunism, varies across generations. The levels of bonding, bridging, trust and collective action across generations are determined by differences in values, influence, attributes, ethics and their environments. Lancaster and Stillman (2002) suggest that people born within an approximately 20-year time period share a common set of characteristics based on their historical experiences, economic and social conditions, technological advances and other societal changes they have in common. This is supported by Howe and Strauss (2000, p. 4) who observe that as a group, Millennials generation and generation Z are more affluent, better educated, more ethnically diverse, literally demand interactivity and manifest a wide array of positive social habits including a new focus on teamwork that promotes social cohesion. Thus, variations in social capital among the poor born in different generations helps them to confront poverty, resolve disputes and take advantage of new opportunities within their social settings.

Previous studies such as Atemnkeng (2009) and Karlan (2007) reveals that rural financing particularly, microfinance initiatives in most rural settings rely heavily on social capital in lowering risks. Indeed, this is evidenced by the success of microfinance programmes, such as Grameen Bank in Bangladesh and BancoSol in Bolivia, which have been greatly linked to the notion that rural poor households can utilize their social capital to overcome many problems associated with asymmetric information in financial markets (Gomez & Santor, 2001). Additionally, Aryeetey (2005) also observes that group membership is an essential tool for screening microfinance loan applications and for ensuring that contracts can be enforced among borrowers. This reduces transaction costs incurred while banking with the poor. Therefore, variations in social capital based on generations, influences

information sharing through bonding and bridging, which results into trust and collective action among the poor. Thus, here we state that:

H1: Social capital components and financial inclusion of the poor varies across generations.

#### **4. Bonding social capital, generations and financial inclusion**

Woolcock and Narayan (2000) argue that bonding social capital parallels the notion of “strong ties” embraced by Granovetter (1973). This entails strong relationships that exist in close-knit settings. Further, Sobel (2002) also observes that the extent to which an individual has access to resources of his or her network members depends on his or her ties and on the strength of those ties. This view is supported by Munene et al. (2005, p. 59) who reveals that bonding is grounded in trust and reciprocity among individuals with strong ties. Through this, bonding social capital promotes reciprocity and helps in mobilizing solidarity among close-knit groups (Woolcock & Narayan, 2000). This enables individuals in such close-knit groups to gain access to helpful information, which is vital for economic transactions, especially among the rural poor (Lai & Wong, 2002).

Debard (2004) suggests that formation of strong relationships that exist in close-knit settings in networks, depends on generational differences. He observes that the traditionalists, generation X and the millennial are loyal and focus extremely on their children/families as their close-knit networks and strong ties to gain access to helpful information, which is vital for economic transactions. Indeed, informal networks of strong families’ ties (bonding social capital) reduces information asymmetry and promotes monitoring through sanctioning since members share common values, expectations and obligations, that requires no interactions.

Indeed, Dufhues, Buchenrieder, and Munkung (2012) argue that existing market imperfection such as lack of information, resulting into prohibitively high transaction costs, common in rural financial markets, can be overcome by bonding social capital. This statement is supported by Homans (1974), who observes that frequency of interaction, a characteristic feature of close-knit networks among the rural poor lowers monitoring cost in lending since information about members’ conduct is common knowledge. Thus, bonding social capital reduces credit constraints by enabling participation in credit groups. From the foregoing, we hypothesize that:

H1a: Bonding social capital across generations will significantly affect financial inclusion of the poor in rural Uganda.

#### **5. Bridging social capital, generations and financial inclusion**

According to Putnam (1993), bridging social capital occurs when members of one group connect with members of other groups to seek access, support and/or gain information. Putnam (2000) argues that bridging increases one’s ability to obtain resources through the created networks. Indeed, Munene et al. (2005, p. 148) note that weak bridges resulting from weak ties bring new ideas to community or individuals through sharing of knowledge and skills possessed, resulting into sharing and access to critical new information. They further observe that the new ideas thus, needed to solve problems usually come from weak bridges. This is in line with Granovetter (1973) who states that “the absence of weak ties does more damage to locality than the absence of strong ties”. The strength of bridging social capital lies in enabling access to information through its connection to other networks outside one’s core network. According to OECD (2001), Lin (1982), bridging networks provide linkages to external resources and vital information dispersion, thereby enhancing access to new information not otherwise available to closed networks.

Debard (2004) argues that the millennial and generation Z have more socialability, highly collaborative and globally networked within an interactive environment. This enables them to have wide networks that they utilize to have access to scarce resources than the traditionalists, baby boomers and the generation X. The generation X believes in self-reliance and independence as their core values thus, limiting their networks and access to useful information and resources for economic gains.

Indeed, informal networks of weak bridging ties connecting friends and acquaintances in a repetitive interactions (bridging social capital), results into access to scarce resources such as loans by the poor from the different bridges through structural holes (Burt, 2000).

Past scholars have revealed that bridging social capital inform of open networks of weak ties helps individuals to access information in order to come out of economic problems. Munene et al. (2005, p. 135) argue that weak bridges inform of associational networks, provide useful information necessary for economic outcomes. According to Fafchamps and Minten (2002), information sharing through and within social networks reduces transaction costs and, thus, improves peoples' access to resources such as financial services. Grootaert (2001) also notes that networks provide information about existing sources of financial services among the poor. Furthermore, van Bastelaer (2000b) also observes that bridging networks increases the capacity for accessing market information and reduces the search cost, hence enhancing the linkage among credit stakeholders and creating tie network among the poor in lending groups (Yokoyama & Ali, 2006).

Networks between the rural poor in bridging relationship is an essential tool for screening loan applications and for ensuring that contracts are enforced (Karlan, 2007). Indeed, findings by Munene et al. (2005, p. 139) revealed that presence of weak bridges that linked women from different groups in Uganda, enabled them to gain access to loans (credit) from FINCA. Therefore, we hypothesize that:

H1b: Bridging social capital across generations will significantly affect financial inclusion of the poor in rural Uganda.

## 6. Trust, generations and financial inclusion

Recently, considerable body of research has been devoted to the role of trust in shaping different kinds of transactions, especially in rural financial development (Fehr & Gächter, 2000; Sudgen, 2000). Weber (1968) argue that trust results from frequent interactions between different individuals in social structures. They observes that trust as a social phenomenon “emerges from and maintains itself within the context of social interaction of everyday”. Weber (*ibid*) further contend that trusting others is “the belief that others will take one’s perspectives into account when making a decision, and will not act in ways to violate the moral standard of relationship (p. 3)”. This view is supported by Munene et al. (2005, p. 126) who reveal that shared cognitive social capital motivates communities and their members to protect, maintain and enhance their relationships. Through this, people reach similar judgements and evaluation of what outcomes are desirable and undesirable and what behaviour is rational or not. This promotes the ideas that others are trustworthy and lead individuals to believe they can draw on others for cooperative action where necessary. As a result, individuals will trust each other, leading to acts of reciprocity.

Debard (2004) argues that trust varies across generations. The traditionalists interacts frequently, prefer giving back to the community and have high level of trust, thus, resulting into high level of reciprocity compared to the baby boomers, who trust no one over the age of 30 years. The generation X have mistrusts for individuals and institutions, and rejects rules in the societies where they belong. Beard (2007), Bjornskov (2003), Cassar, Crowley, and Wydick (2007) argue that trust and reciprocity among individuals in different groups are conducive for social capital.

According to Bjornskov (2003), accumulation of social capital through social relationships within different groups and levels, results into a positive level of generalized trust. The investment in social relationships and the belongingness to groups provides a set of expectations towards others' trustworthiness and vice versa. Thus, this will constrain individuals' actions to the respect of their obligations (Coleman, 1990).

Previous studies such as Knack and Keefer (1997) reveal that in the current informational asymmetric world trust contribute to economic outcomes. Further, Knack and Keefer (1997) also argue

that when networks are strong, information about credibility and reputation of individuals will be easily observed thus, strengthening mutual trust among individuals. This happens through pooling information about individuals' reputation and credibility. Coupled with strong group sanctions towards potential free-rider behaviours, peer monitoring can inhibit individuals from behaving opportunistically.

From the rural financing perspective, most rural-based financial institutions are faced with challenges of having clients with insufficient physical collateral (Edgcomb & Barton, 1998). Besides, existing legal mechanism for contract enforcement is weak in such environment (World Bank, 2002). Therefore, under such circumstances, access to financial services, especially credit becomes primarily social, and depends entirely on believe and trusts between the financial institution and borrowing individuals (Von Pischke, 1991). Further, Bennett (1996a) also observes that rural financial institutions rely on trust as a mechanism for contract enforcement in providing financial services to the rural poor population, in order to ensure that contracts will be honoured. The poor consider social collateral, such as mutual trust, friendship and norms of reciprocity, to enforce loan repayments due to absence of collateral. This argument is supported by Heikkilä et al. (2009) who observe that relatively localized social capital where people trust their fellow villagers may be sufficient for sustainable rural financing. Higher level of trust improves the efficiency of financial contracts and increases their use (Ghatak, 1999). Thus, the poor use their social capital inform of interpersonal and generalized trust and social sanction to substitute and guarantee the loan and its future repayment (Atemnkeng, 2009). We therefore hypothesize that:

H1c: Trust across generations will significantly affect financial inclusion of the poor in rural Uganda.

## 7. Collective action, generations and financial inclusion

Woolcock (1998, p. 15) conceptualizes social capital as “encompassing the norms and networks facilitating collective action for mutual benefit”. Thus, Meinen-Dick, Di Gregorio, and McCarthy (2004) argue that social capital entails relations of trust, reciprocity and exchanges, common rules, norms and sanctions, as well as networks and groups, which are important mechanisms for promoting collective action.

Additionally, Katungi et al. (2008) observes that social capital inform of formal and informal institutions, networks, and associations, are factors that lead to information diffusion and exchange in social circles. The willingness and cooperation to share information, culminates into collective action. Hence, this results into reduction in costs of information acquisition and uncertainty about reliability. This view is supported by Dasgupta (2005) who argues that individuals engage in long-term collective action (cooperation) because they care and trust one another to perform their obligations. Furthermore, members will sustain their obligations because violating agreement of collective action can lead to social exclusions. Therefore, it can be deduced that having feelings of shame, incredibility and being socially excluded in the case of violating collective agreement will encourage individuals to honour their obligations, which promotes collective action among the rural poor.

Scholarly work by Knack and Keefer (1997) indicates that cooperative norms effectively constrain opportunism, thereby lowering the costs of monitoring and enforcing contracts, which results into payoffs to economic transactions. Cooperative norms act as constraints on narrow self-interest, leading individuals to contribute to collective action because (internal and external) sanctions associated with norms alter the costs and benefits of cooperating (Coleman, 1990). Therefore, since each individual will behave honourably towards their obligations, monitoring costs are lowered due to absence of moral hazards. Existing evidence indicate that collective action resulting from social capital is vital in generating economic prosperity over generations.

Debard (2004) observes that the traditionalists believes that contributing to collective good is important in societies. He further argues that they adhere to rules, dedication/sacrifice, loyalty,

community involvement, patriotism, dependability, giving back and trust as core values, which results into collective action. Debard (2004) further observes that the Millennial also engage more in community involvement compared to the other generations. These characteristics of social embeddedness, which promote social relationships among different generations, shape their set of expectations and obligations, and finally influence their capacity to coordinate, cooperate and engage in any form of exchange to obtain some collective benefit (Boix & Posner, 1998; Fukuyama, 1999; Putnam, Leonardi, & Nanetti, 1993). Indeed, individuals cooperate for the achievement of collective needs for the benefits of the entire groups and individuals within the group (Alesina & La Ferrara, 2002; Beard, 2005; Burt, 1997; Putnam et al., 1993; Warren, 2008) through collective engagement.

Drawing from above, Putnam (1993) argues that the hallmark for success in northern Italy was based on long-standing tradition of engagement facilitated by networks of organized reciprocity and civic solidarity (cooperative action). Contextually, this is supported by Munene et al. (2005, p. 136), who noted that cooperation among the rural poor contributes to the likelihood that they will move beyond their diverse self-interest towards mutually beneficial collective action that helps them to escape from poverty. We hypothesize that:

H1d: Collective actions across generations will significantly affect financial inclusion of the poor in rural Uganda.

## 8. Methodology

### 8.1. Research design, setting, and procedure

Descriptive and analytical research design was adopted to predict financial inclusion of poor households in Uganda. A sample of 200 poor households was selected from a population of 6,883 poor households based on Cohen statistical analysis. The  $\alpha$  (alpha) level was set at 0.05 and the effect size was considered medium and the desired power set at 0.80. Simple random sampling method using a list of poor households from Uganda Bureau of Statistics population forecast (UBOS, 2012) was used to select poor households who participated in the study. Only household heads that are familiar with the characteristics of the household members were chosen to participate in the survey. This resulted into 175 respondents. However, since we had the contacts of the respondents, a follow-up was made and 25 questionnaires that were incomplete were fully answered, thus, enabling us to collect all the 200 responses. Since our unit of analysis were households, all responses were aggregated at household level during data analysis. A self-administered questionnaire containing items adopted from past studies were used to answer hypotheses of our study. Measurement items adopted in this study were subjected to pretest before the main survey. Items for final study were reworded and all vague and ambiguous questions were improved by keeping them simple, specific and concise. Multiple regression analysis and ANOVA were performed to show how variations in social capital among different generations affect financial inclusion of the poor in rural Uganda (Hair, Anderson, Tatham, & Black, 2010).

### 8.2. Measurement of variables

Bonding and bridging social capital constructs were measured using 15 items derived from Munene et al. (2005) and World Bank Social Capital Initiative (2002). Sample item scales for bonding included: members of this household are always honest among themselves; in this household, members always have a high sense of trust among themselves; in this household, we always treat ourselves equally; in this household, we are always polite among ourselves; in this household, we are always concerned about our safety; in this household, we always care and help each other; in this household, all members want things to be in good order; members of this household always fit in and do things the way the other members do. The sample items for bridging included: in this household, we always share our plans with others beyond this household; in this household, we always share our abilities in what we do with others beyond this household; in this household, we always share our ideas and thinking with others beyond this household; in this household, we are always curious of what others do beyond this household; in this household, we always listen and understand other

people beyond this household and get along well with them; in this household, we always like to work hard and get ahead by sharing with others beyond this household; in this household, members always want to be successful and impress others beyond this household. The combined Cronbach's alpha coefficient was 0.771 with a mean of 3.35 and standard deviation (SD) of 0.314.

Trust construct was measured using six items. This was deemed fit because the respondents were poor individuals with diverse needs and who have interacted with each and had definite views on trust in their rural settings. The trust construct was operationalized using the degree to which members of households trust each other, leading to acts of reciprocity. Items developed by Munene et al. (2005) and World Value Survey (1998), which was earlier used by Guiso, Sapienza, and Zingales (2004), were adopted in measurement of our trust construct. The sample questions included: most people who live in this community can be trusted; in this community, people do not take advantage of others; in this community, people generally trust others in matters of lending and borrowing money; in this community, the level of trust has improved in the past years; in this community, people always care about others; in this household, we always count on neighbours to take care of the children when we are away. The overall Cronbach's alpha coefficient was 0.836.

Collective action construct was measured based on items of collective action and cooperation developed by World Bank Social Capital Initiative (2002). The sample questions included: members of this household always work with others for the benefit of this community; members of this household always contribute money to community projects; in this household, we always want to give something back to this community; in this household, members are always involved in charity to serve this community; in this household, members always contribute time to community projects.

Sample measurement items for financial inclusion include: there are many financial institution branches nearby this household; the initial account opening fees charged by the financial institution is affordable; the number of documents required by the financial institution to open an account is few; there are many financial services delivery channels nearby this household; in this household, we are not discriminated by the financial institution in its service provision; the account maintenance fees charged by the financial institution is affordable; the savings product provided by the financial institution suits our needs; the loan product provided by the financial institution suits our needs; the payment services provided by the financial institution suits our needs; the saving product provided by the financial institution is useful to us; the payment services provided by the financial institution is useful to us; the loan products provided by the financial institution is useful to us; the saving product provided by the financial institution satisfies us; the loan product provided by the financial institution satisfies us; the payment services provided by the financial institution satisfies us; cost of making a trip to the financial institution is low; fees charged by the financial institution on use of its services are favourable; financial institution always provide its services on regular basis; financial institution always provide its financial services at convenient hours; terms set by the financial institutions on use of its products and services are favourable to us; financial institution used by this household member is conveniently located; process of getting financial services from the financial institution is easy; members of this household trust financial products and services offered by the financial institution; products (services) provided by the financial institution has increased our income; products (services) provided by the financial institution has led to increased consumption in this household; products (services) provided by the financial institution has improved our housing condition; products (services) provided by the financial institution has enabled us acquire more assets; products (services) provided by the financial institution has led to improvement in our nutrition; products (services) provided by the financial institution has improved our access to utilities; products (services) provided by the financial institution has improved our access to amenities. All item measures had Cronbach's alpha coefficient of 0.848.

Finally, different generations of the poor were determined based on the values they attach in real life. The items were derived from values attached to the different generations of Generation Z, Millennial/Generation Y, Generation X, Baby Boomers and Traditionalists/Silent Generation. The items used for measurements of the variables under study are shown in Appendix 1.

**Table 1. Zero-order correlations**

	Mean	S.D	1	2	3	4	5	6
Bonding social capital (1)	4.41	0.678	1.000					
Bridging social capital (2)	4.42	0.545	0.122*	1.000				
Trust (3)	4.12	0.753	0.172*	0.162*	1.000			
Collective action (4)	4.40	0.588	0.175**	0.186**	0.164*	1.000		
Generational values (5)	3.59	0.337	0.101*	0.156*	0.131*	0.153*	1.000	
Financial inclusion (6)	3.87	0.184	0.300**	0.253**	0.248**	0.281**	0.138*	1.000

Note:  $n = 200$ .

\*Correlation is significant at 0.05 level (2-tailed).

\*\*Correlation is significant at 0.01 level (2-tailed).

### 8.3. Model specification

The main purpose of the study is to contextually explore how variations in social capital across generations promote financial inclusion of the poor in rural Uganda. A regression equation was derived to demonstrate this as shown in the regression model below:

$$\text{Model}_1: \text{fin} = f(B_1 \text{BOND} + B_2 \text{BRG} + B_3 \text{TRST} + B_4 \text{COLLACT} + \text{GENV} + c),$$

where  $\text{fin}$  = financial inclusion (dependent variable);  $B_1 \text{BOND}$  = Beta coefficient of bonding social capital (independent variable);  $B_2 \text{BRG}$  = Beta coefficient of bridging social capital (independent variable);  $B_3 \text{TRST}$  = Beta coefficient of trust (independent variable);  $B_4 \text{COLLACT}$  = Beta coefficient of collective action (independent variable);  $\text{GENV}$  = generational values;  $c$  = constant.

### 8.4. Results

The survey achieved 100% response rate for the unit of analysis. This was achieved because 25 questionnaires that were incomplete during the first phase of data collection were fully answered during a follow-up since we had contacts of all the respondents. The average age range for the respondents was 34–41 years. Results revealed that 56% of the respondents were male and 44% were female. The means and standard deviation for our study variables were as follow: bonding (mean = 4.41, SD = 0.678), bridging (mean = 4.42, SD = 0.545), collective action (mean = 4.40, SD = 0.588), trust (mean = 4.12, SD = 0.753), generational values (mean = 3.59, SD = 0.337) and financial inclusion (mean = 3.87, SD = 0.184). The corresponding Cronbach’s alpha coefficients for reliability were 0.763, 0.772, 0.766, 0.836 and 0.844, respectively. Furthermore, zero-order correlation was adopted to investigate whether there were relationships between the social capital components, generational values and financial inclusion. The results are indicated in Table 1.

### 8.5. Bonding social capital and financial inclusion

The study sought to establish the relationship between bonding social capital and financial inclusion. The results indicate a significant and positive association ( $r = 0.300, p \leq 0.01$ ), implying that bonding social influences financial inclusion of the poor. This finding lends support to previous studies by Woolcock and Narayan (2000), who argue that bonding social capital promotes reciprocity and helps in mobilizing solidarity among close-knit groups, which results into access to scarce resources such as credit, especially among the rural poor.

### 8.6. Bridging social capital and financial inclusion

The results from Table 1 indicate that there is a significant and positive relationship between bridging social capital and financial inclusion ( $r = 0.253, p \leq 0.01$ ). This result means that change in bridging social capital is associated with changes in financial inclusion. Therefore, it can be concluded

that information sharing through bridging networks reduces transaction costs and, thus improves the poor’s access to resources such as financial services as stated by Fafchamps and Minten (2002).

**8.7. Trust and financial inclusion**

Furthermore, the results reveal a significant and positive relationship between trust and financial inclusion ( $r = 0.248, p \leq 0.01$ ). This finding is in line with Bennett (1996a), who observes that rural financial institutions rely on trust as a mechanism for contract enforcement in providing financial services to the rural poor in order to ensure that contracts will be honoured. The poor consider social collateral such as mutual trust, friendship and norms of reciprocity to enforce loan repayments due to absence of physical collateral.

**8.8. Collective action and financial inclusion**

The findings from the study further shows that collective action and financial inclusion are significant and positively related ( $r = 0.281, p \leq 0.01$ ). Dasgupta (2005) argues that individuals engage in long-term collective action (cooperation) because they care and trust one another to perform their obligations. Thus, they will sustain their obligations because violating agreement of collective action can lead to social exclusions. Therefore, it can be deduced that having feelings of shame, incredibility and being socially excluded in the case of violating collective agreement will encourage individuals to honour their obligations, which promotes collective action for economic benefits such as access to financial services among the rural poor.

**8.9. Generational values and financial inclusion**

Finally, the analysis of the results indicate that there is a significant and positive relationship between generational values and financial inclusion ( $r = 0.138, p \leq 0.05$ ). This is consistent with Debard (2004) who argues that social capital and its components, which determines sharing and allocation of scarce resources, and coordinated activities in order to minimize opportunism, varies across generations. Indeed, social capital among the poor born in different generations helps them to confront poverty, resolve disputes, and take advantage of new opportunities within their social settings.

In addition, after testing for the association and relationships between social capital components, generational values and financial inclusion, multiple regression analysis was run to determine the predictive power of the above variables on the outcome variable of financial inclusion. The multiple regression results generated is shown in Table 2.

**Table 2. Multiple regression results**

Variables	Model 1	VIF
Constant	0.808	
Bonding social capital	0.249**	1.048
Bridging social capital	0.197*	1.046
Trust	0.179*	1.039
Collective action	0.214**	1.049
Generational values	0.102*	1.024
R	0.479**	n/a
R <sup>2</sup>	0.229**	n/a
Adjusted R <sup>2</sup>	0.209**	n/a
Standard error of the estimate	0.164	n/a
F change	11.535**	n/a
Durbin-Watson	1.700	

Notes: Dependent variable: Financial inclusion; n = 200;  
 \*\*, \*: Statistically significant at 1 and 5%, respectively.

**Table 3. ANOVA for the variables under study**

		ANOVA				
		Sum of squares	df	Mean square	F	Sig.
Financial inclusion	Between generations	0.172	5	0.043	1.272	0.282
	Within generations	6.577	195	0.034		
	Total	6.749	200			
Bonding social capital	Between generations	4.012	5	1.003	2.233	0.067
	Within generations	87.586	195	0.449		
	Total	91.598	200			
Bridging social capital	Between generations	0.863	5	0.216	0.723	0.577
	Within generations	58.189	195	0.298		
	Total	59.052	200			
Trust	Between generations	1.299	5	0.325	0.568	0.686
	Within generations	111.482	195	0.572		
	Total	112.782	200			
Collective action	Between generations	3.903	5	0.976	2.936	0.022
	Within generations	64.799	195	0.332		
	Total	68.702	200			

Social capital components of bonding, bridging, collective action and trust were combined with generational values (GENV) and entered into a multiple regression model to explain financial inclusion.

The results in Table 2 reveal that there is a significant and positive relationship between bonding and financial inclusion ( $\beta = 0.249, p < 0.01$ ). This finding therefore, supports our hypothesis (H1a) of the study which stated that: bonding social capital across generations will significantly affect financial inclusion of the poor in rural Uganda.

Furthermore, the results also indicate that bridging social capital significantly and positively impacts on financial inclusion ( $\beta = 0.197, p < 0.05$ ). This implies that bridging social capital across generations affect financial inclusion of the poor in rural Uganda, therefore, supporting hypothesis (H1b) of the study.

In addition, the results also show that trust is a significant and positive predictor of financial inclusion of the poor in rural Uganda ( $\beta = 0.179, p < 0.05$ ). This finding supports our hypothesis (H1c) of the study, which stated that trust across generations will significantly affect financial inclusion of the poor in rural Uganda.

Further analysis of the results reveal that collective action has a significant and positive relationship with financial inclusion ( $\beta = 0.214, p < 0.01$ ), thus supporting hypothesis (H1d) stated under this study.

Finally, the findings from the study indicate that generational values had a positive and significant impact on financial inclusion ( $\beta = 0.102, p < 0.05$ ). Combining social capital components of bonding, bridging, trust and collective action with generational values significantly and positively explains 23% of the variations in financial inclusion of the poor in rural Uganda.

The results suggest that variations in social capital across different generations affect financial inclusion of the poor in rural Uganda. The overall combination of the findings can be summarized by the regression model equation below:

$$\text{Model}_1: \text{fin} = f(.249\text{BOND} + .197\text{BRG} + .179\text{TRST} + .214\text{COLLACT} + .102\text{GENV} + .808).$$

Besides, analysis of variances (ANOVA) was also performed to show variations in social capital components across generations. The results showed that bonding, bridging and trust did not significantly differ across generations. However, the results reveal that collective action among the poor significantly differs across generations, which determine their being financially included. This is indicated by the  $p$ -value, which is significant ( $p < 0.05$ ) as stipulated by Field (2005). The ANOVA results are indicated in Table 3.

## 9. Discussions and implications

Consistent with Dufhues et al. (2012), market imperfection such as lack of information resulting into prohibitively high transaction costs common in rural financial markets, can be overcome by social capital in form of bonding. Based on hypothesis (H1a), this study finds that bonding social capital across generations significantly affects financial inclusion of the poor in rural Uganda. The finding suggests that bonding social capital parallels the notion of “strong ties” embraced by Granovetter (1973). Sobel (2002) also argues that the extent to which an individual has access to the resources of his or her network members depends on his or her ties and on the strength of those ties. This enables individual in such close-knit groups to gain access to helpful information, which is vital for economic transactions such as access to financial services by the poor (Lai & Wong, 2002). Therefore, bonding social capital reduces credit constraints by enabling the poor to participate in credit groups.

Further, the results also reveal that bridging social capital across generations significantly affects financial inclusion of the poor in rural Uganda. This confirms hypothesis (H1b) of the study, which states that bridging social capital across generations will significantly affect financial inclusion of the poor in rural Uganda. Financial inclusion is determined by bridging between the poor people who live in different groups separated by bridges (Burt, 1992). This study finds that financial inclusion is a function of sharing ideas (financial information) and thinking, sharing of plans and abilities with others beyond an individual’s current groups. This finding is consistent with Munene et al. (2005) who noted that weak bridges resulting from weak ties bring new ideas to community or individuals through sharing of knowledge and skills possessed, thus, resulting into access to critical new information. Indeed, Debard (2004) observes that the millennial and generation Z with more wide networks of weak ties, have access to scarce information and resources. According to Fafchamps and Minten (2002), information sharing through and within social networks reduces transaction costs and thus, improves peoples’ access to resources, such as financial services. A study by Karlan (2007) in rural Peru, reveals that networks between the poor in bridging relationship is an essential tool for screening loan applications and for ensuring contracts’ enforceability. Contextually, Munene et al. (2005, p. 139) found that presence of weak bridges that linked women from different groups in Uganda enabled them to gain access to loans (credit) from FINCA.

Based on hypothesis (H1c) of this study, the results reveal that trust across generations significantly affects financial inclusion of the poor in rural Uganda. Beard (2007), Bjornskov (2003), Cassar et al. (2007) argue that trust and reciprocity among individuals in different groups are conducive for social capital. Indeed, as noted by Knack and Keefer (1997), when networks are strong, information about credibility and reputation of individuals will be easily observed, thus, strengthening mutual trust among the individuals. This promotes the ideas that others are trustworthy and leads individuals to believe that they can draw on others for cooperative action where necessary. As a result, individuals will trust each other, leading to acts of reciprocity. Indeed, the poor will trust one another and reciprocate by performing their obligations in the course of accessing financial services such as loans. However, this finding is contrary to a study by Heikkilä et al. (2009), who found that community and interpersonal trust had no impact on access to financial services in Uganda.

Additionally, Woolcock (1998) argues that collective action resulting from trust leads to mutual benefits among the poor. From hypothesis (H1d) of the study, the findings indicate a significant and positive effect of collective action across generations on financial inclusion of the poor in rural

Uganda. Scholars like Putnam et al. (1993), Boix and Posner (1998) and Fukuyama (1999) argue that rules, dedication/sacrifice, loyalty, patriotism, dependability, giving back and trust as core generational values, shape expectations, obligations and promotes collective benefit, which results into collective action. Munene et al. (2005) further argue that collective action (cooperation) among the poor contributes to the likelihood that they will move beyond their diverse self-interest towards mutually beneficial collective action, which helps them to escape from poverty. This is justified by the fact that it is common practice among individuals, especially from northern and western regions in Uganda who always come together to cultivate agricultural land backed by reciprocity among themselves. This confirms Putnam (1993) assertion that the hallmark for success in northern Italy was based on long-standing tradition of engagement facilitated by networks of organized reciprocity and civic solidarity (co-operative action) resulting from trust. Thus, it can be deduced from our finding that collective action for mutual benefit, facilitated by networks of organized reciprocity and trust may generate high economic prosperity such as financial inclusion among the poor in rural in Uganda.

### 10. Conclusions, implications, limitations of the study and areas for further research

This study adds to existing literature on financial inclusion by revealing that variations in social capital components across generations explain financial inclusion. Specifically, collective action varies and significantly predicts financial inclusion of the poor across generations. This study is beneficial to managers of financial institutions to consider generational values in promoting financial inclusion. They should design social financial products and services that can boost collective action in order to promote financial inclusion of the poor, especially in Uganda. However, this study focused only on cross-sectional data, thus, a longitudinal study may be used in future research. Besides, the study was purely quantitative, therefore a qualitative survey through interviews may be conducted in future. In addition, although the sample was large enough, the study ignored other equally vulnerable sections of the population like disabled persons, migrants, women and adolescent population, who may be used as samples in future studies.

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## Appendix 1

### Final 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: Social capital

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)*

	<i>Bonding</i>
BD1	Members of this household are always honest among themselves;
BD2	In this household, members always have a high sense of trust among themselves;
BD3	In this household, we always treat ourselves equally;
BD4	In this household, we are always polite among ourselves;
BD5	In this household, we are always concerned about our safety;
BD6	In this household, we always care and help each other;
BD7	In this household, all members want things to be in good order;
BD8	Members of this household always fit in and do things the way the other members do
	<i>Bridging</i>
BR1	In this household, we always share our plans with others beyond this household;
BR2	In this household, we always share our abilities in what we do with others beyond this household;
BR3	In this household, we always share our ideas and thinking with others beyond this household;
BR4	In this household, we are always curious of what others do beyond this household;
BR5	In this household, we always listen and understand other people beyond this household and get along well with them;
BR6	In this household, we always like to work hard and get ahead by sharing with others beyond this household;
BR7	In this household, members always want to be successful and impress others beyond this household
	<i>Trust</i>
TR1	Most people who live in this community can be trusted;
TR2	In this community, people do not take advantage of others;
TR3	In this community, people generally trust others in matters of lending and borrowing money;
TR4	In this community, the level of trust has improved in the past years;
TR5	In this community, people always care about others;
TR6	In this household, we always count on neighbours to take care of the children when we are away.
	<i>Collective action</i>
CA1	Members of this household always work with others for the benefit of this community;
CA2	Members of this household always contribute money to community projects;
CA3	In this household, we always want to give something back to this community;
CA4	In this household, members are always involved in charity to serve this community;
CA5	In this household, members always contribute time to community projects

### Section 3: 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 agree (1)*

	<i>Financial inclusion</i>
FIN1	There are many financial institution branches nearby this household;
FIN2	The initial account opening fees charged by the financial institution are affordable;
FIN3	The number of documents required by the financial institution to open an account is few;
FIN4	There are many financial services delivery channels nearby this household;
FIN5	In this household, we are not discriminated by the financial institution in its service provision;
FIN6	The account maintenance fees charged by the financial institution are affordable;

FIN7	The savings product provided by the financial institution suits our needs;
FIN8	The loan product provided by the financial institution suits our needs;
FIN9	The payment services provided by the financial institution suits our needs;
FIN10	The saving product provided by the financial institution is useful to us;
FIN11	The payment services provided by the financial institution are useful to us;
FIN12	The loan products provided by the financial institution are useful to us;
FIN13	The saving product provided by the financial institution satisfies us;
FIN14	The loan product provided by the financial institution satisfies us;
FIN15	The payment services provided by the financial institution satisfy us;
FIN16	Cost of making a trip to the financial institution is low;
FIN17	Fees charged by the financial institution on use of its services are favourable;
FIN18	Financial institution always provides its services on regular basis;
FIN19	Financial institution always provides its financial services at convenient hours;
FIN20	Terms set by the financial institutions on use of its products and services are favourable to us;
FIN21	Financial institution used by this household member is conveniently located;
FIN22	Process of getting financial services from the financial institution is easy;
FIN23	Members of this household trust financial products and services offered by the financial institution;
FIN24	Products (services) provided by the financial institution has increased our income;
FIN25	Products (services) provided by the financial institution has led to increased consumption in this household;
FIN26	Products (services) provided by the financial institution has improved our housing condition;
FIN27	Products (services) provided by the financial institution has enabled us acquire more assets;
FIN28	Products (services) provided by the financial institution has led to improvement in our nutrition;
FIN29	Products (services) provided by the financial institution has improved our access to utilities;
FIN30	Products (services) provided by the financial institution has improved our access to amenities



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