

Institutional framework in developing economies

Do all dimensions matter for financial intermediation by microfinance deposit-taking institutions?

Framework in developing economies

271

George Okello Candiya Bongomin
FGSR, Makerere University Business School, Kampala, Uganda

Charles Akol Malinga
Bank of Uganda, Kampala, Uganda

John C. Munene
FGSR, Makerere University Business School, Kampala, Uganda, and

Joseph Mpeera Ntayi
FEEM, Makerere University Business School, Kampala, Uganda

Abstract

Purpose – The purpose of this paper is to establish the relationship between institutional framework of regulative (formal rules), normative (informal norms) and cultural-cognitive (cognition), and their effects on financial intermediation by microfinance deposit taking institutions (MDIs) in developing economies like Uganda.

Design/methodology/approach – Data collected from a total sample of 400 poor households and 40 relationship officers located in rural Uganda were processed using statistical package for social sciences and analysis of moment structures to establish the relationship between institutional framework of regulative, normative and cultural-cognitive, and their effects on financial intermediation by MDIs in developing economies.

Findings – The results showed that the three dimensions of regulative (formal rules), normative (informal norms) and cultural-cognitive (cognition) significantly affect financial intermediation by MDIs in developing economies like Uganda. In addition, as a unique finding, two new dimensions of procedural and declarative cognition emerged from cultural-cognitive framework to determine financial intermediation among MDIs in developing economies, specifically in Uganda.

Research limitations/implications – The study collected data from only poor households and relationship officers located in rural Uganda. It ignored peri-urban and urban areas in Uganda. In addition, the study focused only on MDIs and ignored other financial institutions. Besides, the study was purely quantitative, therefore, further research through interviews may be useful in future. Furthermore, the study was carried out in rural Uganda as a developing economy. Thus, future research using the same variables in other developing economies may be useful.

Practical implications – Managers of financial institutions and policy makers should know that market functions of financial intermediaries in developing economies are promoted by institutional framework of regulative, normative and procedural and declarative cognition that lowers transaction cost and promotes information sharing. Therefore, more efforts should be directed towards strengthening the existing institutional framework of regulative, normative and cognition to promote financial intermediation by financial institutions such as MDIs.

Originality/value – This paper is the first to test the relationship between institutional framework and their effects on financial intermediation by MDIs in developing economies. The results revealed



existence of two new factor structures of procedural and declarative cognition in explaining financial intermediation by MDIs in developing economies like Uganda. This is sparse in financial intermediation literature and theory.

Keywords Structural equation modeling, Developing economies, Financial intermediation, Institutional framework, Microfinance deposit taking institutions, Rules of the game

Paper type Research paper

Background to the study

According to [North \(1990\)](#), institutions consist of both “formal constraints” such as codified rules and laws, and “informal constraints” such as norms, customs, culture and shared beliefs, which help people to form expectations of what others will do in the presence of uncertainty and imperfect information for efficient transactional agreements to be achieved in the market ([Coase, 1937](#)). In addition, [Scott \(2001\)](#) also conceived institutions to “consist of regulative (legal), normative (social) and cultural-cognitive elements that together with associated activities and resources, provide stability and meaning to social life”. Hence, drawing from the institutional theoretical perspectives, institutions through its institutional framework define and specify the rules for competition and cooperation in both developed and underdeveloped markets.

Indeed, [Olsson \(1999\)](#) suggests that the rules of the game may involve sharing of information about the service or product being traded in the market. Under circumstances where wealth-maximizing agents exist in the market, economic agents find it worthwhile to cooperate with other agents (players) to make a gain because of repeated interaction and availability of complete information about the other agent’s (player’s) past performance. Thus, institutions promote efficient transactions in the market guided by the rules of the game, which lowers transaction cost resulting from information asymmetry.

Additionally, [Gurley and Shaw \(1960\)](#) argue that financial intermediaries arise to solve the problem of market frictions and imperfection such as information asymmetry. Therefore, financial intermediaries exist to eliminate transaction cost that arise from information asymmetry in financial markets between the surplus and deficit units (savers and borrowers). They try to limit the cost of information search, contracting, negotiation, monitoring contracts and costs of enforcement by collecting information from both the surplus and deficit units to complete the market (trade).

However, during the intermediation process, financial intermediaries may fail to collect all the required information to complete the market, thus, leading to re-current problem of information asymmetry. Thus, to complete the market, financial intermediaries require cooperative behaviour between the surplus and deficit units, hence, the need for institutions. This is supported by [Lin and Nugent \(1995\)](#) who argue that institutions through its institutional framework reduces the transaction cost of exchanges between surplus and deficit units in the financial market. According to [North \(1990\)](#), institutions reduce the cost by setting the “rule of the games” for cooperation among economic agents in exchange.

Whereas studies exist to explore the role of institutions in influencing economic exchange and performance between agents ([North, 1990](#); [Scott, 2001](#); [World Bank, 2001](#); [Olsson, 1999](#); [Hodgson, 1998](#); [Lin and Nugent, 1995](#)), a critical review of these studies largely ignores the role of institutional framework in promoting financial intermediation by microfinance deposit taking institutions (MDIs), especially in developing economies.

Therefore, the purpose of this study is to establish the relationship between institutional framework of regulative, normative and cultural-cognitive and their effects on financial

intermediation by MDIs in developing economies like Uganda guided by institutional theory.

Literature review and hypotheses

Institutions and economic exchange: institutional theory perspective

According to North (1991), institutions are “the rules of the game” of a society or “the humanly devised rules or constraints” that structures political, economic and social exchanges. They are made up of the formal constraints (rules, laws, constitutions) and informal constraints (norms of behaviours, conventions, self-imposed codes of conduct) and their enforcement characteristics. North (1993) further argues that institutions determine and structure human interactions by providing incentives and disincentives for people to behave in certain ways in economic, political and social activities.

Furthermore, Scott (2005) also observes that there exist three institutional pillars of regulative, normative and cultural/cognitive, which are the analytical elements that compose institutions. The pillars operate in combination, yet through distinct mechanisms. Under the regulative pillar, use of coercion (tests of strength and fear of sanctions) explains how institutions constrain and regularize actors’ behaviour. The normative pillar is based on agents’ social obligations, which are observable through values and norms. The cultural-cognitive pillar is characterized by interpretation and conception of meanings by actors guided by culture. Similarly, Greif (1994) also argues that institutions consist of a system of interrelated informal and formal elements of custom, shared beliefs, conventions, norms and rules governing social relationships within which actors pursue and fix the limits of legitimate interests.

North (1990) contends that 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. 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 as stipulated by Scott (1995). The pillars determine efficient coordination and cooperative behaviour in markets to reduce transaction cost.

According to the World Bank (2002), activities in under developed markets are supported by a complex blend of informal and formal institutions, which promote and limit market activities by setting mechanisms, which guide behaviours and actions of players. In most developing countries, especially where the poor live, informal institutions such as community networks are the only ones that are relevant because access to formal institutions is relatively scarce. Therefore, informal institutions can be superior to formal alternatives, either because they are more efficient at achieving the objective or because they embody features that formal institutions are unable to provide. Unfortunately, informal institutions may prevent further market development due to existence of closed networks that may restrict the scale and breadth of possible transactions (Granovetter, 1973). Thus, formal institutions become important because they can deal with a larger group of participants by including more market players rather than excluding them.

Conversely, to work effectively in under developed markets, a blend of formal institutions, informal norms and cultural-cognitive may be the solution to include many market players in economic exchange. This is because institutions promote information sharing and guides contract enforceability through the “rules of the game” by influencing the way how people think, thereby, lowering transaction cost (Dequech, 2004; North, 1991). The behaviours and actions of surplus and deficit units, and the financial intermediaries

largely depend on institutional framework to promote activities in the under developed financial market.

Regulative institutional framework and financial intermediation

The 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 (2005) also adds that regulatory processes involve the capacity to establish rules, inspect others conformity to them and, as necessary, manipulate 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 promotes certain types of behaviours and restrict others.

Merton (1995) observes that in under developed markets, the central financial issue that arises is the creditworthiness of the deficit units (borrowers) because of information asymmetry problem (See also Merton, 1993). Therefore, in a world where information about the other party in a transaction and the transaction itself is imperfect, there is need for mechanisms for the aggrieved parties to resolve their differences amicably.

Thus, the World Bank (2001) suggests that under developed markets work well if they have formal rules, which influence future behaviour and actions of participants. The regulative institutional framework constraints and promotes certain behaviour of the surplus and deficit units, and financial intermediaries like MDIs in developing economies (North, 1994). This is supported by Allen and Gale (2004) who contend that financial intermediaries have to rely on regulations while performing their functions to complete the market and lower transaction cost. Thus, here we hypothesize that:

H1. The regulative institutional framework affect financial intermediation in developing economies.

Normative institutional framework and financial intermediation

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). They arise from the problem-solving activity of individuals as rule-of-thumb guidelines of expected behaviour. Individuals’ choices in life are determined by norms, which guide their actions. Thus, the informal constraints (norms) shape choice set of individuals in various contexts.

Similarly, Scott (1995) also asserts that the normative component of institutions define what is appropriate and right for members of a society. As such, when an institution promotes the correct way of behaviour, even in the absence of legal or other sanctions, institution influences individual actions by normative processes. Therefore, the normative aspects of institutions most pronounced in kinship groups, social classes, religious belief systems and voluntary associations where common beliefs and values are more likely to exist, impose constraints on social behaviour, empower and enable social action.

Consequently, Hodgson (1998) argues that markets require social norms for peaceful trade and established information networks. The expectations derived from a common understanding of the rules of the game and the penalties for deviation, are based on shared beliefs and identities of network members.

Thus, for trade to occur, there must exist some market place or mechanism through which the prospective traders can conduct exchange (North, 1994). In developed markets, participants can use formal institutions, but the use of formal mechanisms for dispute resolution are uncommon in many societies, especially in developing countries where use of

justice may be regarded as expensive yet inefficient (World Bank, 2001). Under such circumstance, informal mechanisms may be the only alternative to improve information flows and enforce contractual arrangements to lower the risks in a transaction (Merton and Bodie, 2004).

The basic function of financial intermediaries is to pool savings from surplus units and lend to the deficit units in form of loans (Gurley and Shaw, 1960). However, the presence of imperfect information and lack of willingness of borrowers to honour loan repayment schedules may lead to adverse selection and moral hazards. Hence, financial intermediaries attempt to overcome these problems by demanding for collateral and relying on informal networks of borrowers guided by norms of punishment and sanctions.

Therefore, as many borrowers lack conventional collateral items, threat of loss of access to future borrowing opportunities and social sanctions of households' members guided by informal norms substitutes the lack of collateral (Zeller *et al.*, 1996). This reduces on the problem of default risk and high transaction cost faced by financial intermediaries in lending. Therefore, here we hypothesize that:

H2. The normative institutional framework affect financial intermediation in developing economies.

Cultural–cognitive institutional framework and financial intermediation

The cultural–cognitive aspect of institutions are the shared conceptions that constitute the frames through which meaning is made (Scott, 2005). It is characterized by interpretation and conception of meanings by actors. The cultural–cognitive institution recognizes that internal interpretive processes are shaped by external cultural frames. The cognitive institution emphasizes cognition and actors' generally shared perception of what is typical or taken for granted (Busenitz *et al.*, 2000).

According to Hoffman *et al.* (2002), cultural-cognitive conception of institutions stresses the central role played by the socially mediated construction of common frames of meaning through language, meaning systems and other rules of classifications among individuals. Snow and Benford (1992); and Campbell (2005) also suggest that meaning is mediated by 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 observes that cognitive programs such as schemas, frames, inferential sets and representations affect the way people notice, categorize and interpret their environment.

Thus, from the foregoing, Markus and Zajonc (1985) argue that the minds of the surplus and deficit units (savers and borrowers) register incoming financial information and then subject them to varieties of transformation before ordering their responses towards saving or borrowing from financial intermediaries. Cognition helps the surplus and deficit units to recall and call back financial information that is explicitly stored in their minds to make meaning and sense repeatedly to use financial services offered by financial intermediaries. This is consistent with Horn and McArdle (2007) who revealed that most deficit units in developing countries may depend in part on their ability to invoke several dimensions of their memories and cognitive skills to make financial decisions and choices to use financial services provided by financial intermediaries. Hence, here we hypothesize that:

H3. The cultural–cognitive institutional framework affect financial intermediation in developing economies.

Research methodology and approach

Research design, procedures and setting

The study adopted both descriptive and analytical research designs by applying confirmatory factor analysis (CFA) and structural equation modeling (SEM) to establish the relationship between institutional framework of regulative (formal rules), normative (informal norms) and cultural-cognitive (cognition), and their effects on financial intermediation by MDIs in rural Uganda. A sample size of 400 poor households and 80 relationship officers were selected from a population of 1.2 million poor households [Uganda Bureau of Statistics (UBOS), 2012] and 100 relationship officers (PRIDE Human Resource Data Base, 2013) respectively using formulae for sample determination recommended by Yamane (1973).

Sampling method

Simple random sampling using a list of clients obtained from PRIDE Microfinance deposit-taking institution was used to select poor households for the study. The study targeted poor households' heads who were the main respondents. Besides, relationship officers were purposively selected for the study based on PRIDE Human Resources Register. This resulted into a total sample of 480 respondents used in the study. As our unit of analysis comprised of both the poor households' heads and relationship officers who are directly linked to the activity of PRIDE MDI, the data were aggregated at individual level during data analysis.

Data collection instrument and data analysis

Semi-structured questionnaires containing items adopted from previous studies were used under this study to elicit responses in order to answer hypotheses derived under literature review. Further, before the major study, the measurement items were pre-tested. The final instrument was developed by eliminating all ambiguous and redundant items prior to the final study. Data were collected by research assistants recruited from the different districts located in the north, east, south and western Uganda to solve the problem of language barrier. This also helped the respondents to clearly understand the questions that were being asked during the study. Exploratory factor analysis (EFA) was performed to check for item loadings before running the CFA test for the latent and manifest variables, as it is judicial or quasi-judicial in character according to Tukey (1977). SEM was carried out to confirm that the dimensions of institutional framework were theoretically grounded and fitted to the data (Jöreskog and Sörbom, 1989). The measurement and structural models were constructed using analysis of moment structures (AMOS).

Measurement of variables

Institutional framework. The constructs of regulative, normative and cognition under institutional framework were measured using 34 items. However, after carrying EFA and CFA, only eight items were retained. The eight items were anchored onto a five-point Likert scale of 1 – strongly disagree, 2 – disagree, 3 – not sure, 4 – agree and 5 – strongly agree. The overall Cronbach's (α) alpha coefficient for institutional framework was 0.879.

Financial intermediation. Financial intermediation was measured using the constructs of market penetration and quality of services provided by the financial intermediaries. Originally, there were 34 items used to measure financial intermediation. However, after EFA and CFA, 14 items were retained and used to measure financial intermediation with Cronbach's (α) alpha coefficient of 0.891.

Data management. Raw data collected from the field were captured into SPSS statistical analysis tool and checks for data entry errors, missing values, outliers and normality were performed. Frequencies and descriptive statistics were generated to check for data entry errors and missing values, while Little's MCAR test was performed to check for the extent and pattern of missing values in the data. The results indicated that there were minimal data entry errors, and the data were missing completely at random with Little's MCAR test significant at p -value less than 5 per cent. However, the missing data were dropped, as they were minimal and could not bias the results. In addition, box plots were also used to determine the presence of outliers. The results revealed that there were no outliers sighted in the data. Thus, this enabled us to test for assumptions of parametric data.

Tests for assumptions of parametric data

The tests for assumptions of parametric data was performed based on normality and homogeneity of variance. The histogram, normal p-p plots, skewness and kurtosis, multicollinearity, and Levene test for homogeneity of variances (linearity) were performed on the clean data. The results indicated that the histogram was bell-shaped indicating that the data were normally distributed. Besides, the normal p-p plots revealed that the data were normal as most dots (observed values) were falling along the straight line. Furthermore, skewness and kurtosis results showed that the data were normally distributed since all values were zero as stipulated by Field (2005). Further analysis of the data indicated that multicollinearity was not a problem in the data as the tolerance values were greater than 0.2 and variance inflation factors were less than 4 as stipulated by Hair *et al.* (2010). In addition, the Levene test results were also non-significant at $p > 0.05$ showing that the variances were stable at all levels. Thus, all the tests confirmed that assumptions of parametric data were achieved and tenable and the data were good enough for further statistical analysis.

Results

Overall, 440 responses were received back from the study. This accounted for 92 per cent response rate in the study. The main unit of inquiry were the poor households' heads and relationship officers. The households' heads used in the study were those who were clients of PRIDE MDI and the relationship officers were staff of PRIDE MDI who directly worked with the poor. The average age for the respondents was 26-33 years. The results also indicated that 64.3 per cent of the poor households' heads were male and 35.7 per cent were female. Furthermore, the results also revealed that 79.5 per cent of the poor households' heads were able to read and write, and only 20.5 per cent could neither read nor write. Hence, those who were not able to read and write were helped to respond during the study by research assistants. Besides, 52.5 per cent of the relationship officers who participated in the study were degree holders, while 45 per cent were diploma holders.

In addition, the descriptive statistics indicated that poor households voluntarily comply with existing rules in all financial dealings (mean = 3.79, SD = 1.151), and they do show due diligence when dealing with a financial institution (mean = 3.79, SD = 1.165). Further analysis of the results also revealed that poor households exhibit loyalty in all financial dealings (mean = 3.83, SD = 1.130), and they also honor all financial dealings (mean = 3.91, SD = 1.066). Besides, the results showed that poor households can handle everyday financial problems (mean = 3.35, SD = 1.269), and they are able to make decisions on financial matters (mean = 3.39, SD = 1.273). The results further confirmed that poor households have the ability to evaluate content of financial information (mean = 3.40, SD = 1.298). Finally, the results revealed that poor households can easily memorize and remember financial matters

when dealing with financial intermediaries (mean = 3.49, SD = 1.280). These results are summarized in [Table I](#).

Based on the regulative institutional framework, the results showed that poor households can voluntarily comply with existing rules in form of policies and bank fees when dealing with financial intermediaries. In addition, the results also indicated that poor households do show due diligence in form of meeting their obligation when dealing with financial intermediaries. This supports *H1* under this study.

Drawing from the normative institutions, the summary of the results indicated that poor households exhibit loyalty and honor all financial dealings with financial intermediaries. Norms provide consciously the understanding of legal, social or moral rules and guidelines for behaviours among the poor (deficit units) to conceive every day real world. Thus, existing normative institutions guide expected behaviours, which result into respect and fulfillment of obligation when dealing with financial intermediaries. This is in line with *H2* of this study.

Furthermore, the results also revealed that poor households can handle everyday financial problems, able to make decisions on financial matters, able to evaluate content of financial information and can easily memorize and remember financial matters based on their cognitive science when dealing with financial intermediaries. Indeed, procedural (implicit) and declarative (explicit) memories helps the rural poor (deficit units) to recall and call back financial information that is explicitly stored to make meaning and sense

		N	Minimum	Maximum	Mean	SD
<i>Regulative institution</i>						
FR6	My household members always show due diligence when dealing with a financial institution	440	1	5	3.82	1.151
FR1	We in this household do voluntarily comply with existing rules in all our financial dealings	440	1	5	3.79	1.165
<i>Normative institution</i>						
INF6	In this household we always honour all financial dealings	440	1	5	3.91	1.066
INF7	In this household, we always exhibit loyalty in all financial dealings	440	1	5	3.83	1.130
<i>Procedural-cognitive institution</i>						
COG16	Members of this household can easily handle everyday financial problems	440	1	5	3.35	1.269
COG15	Members of this household can easily make decisions on everyday financial matters	440	1	5	3.39	1.273
<i>Declarative cognitive institution</i>						
COG13	In this household members can easily memorize and remember financial matters	440	1	5	3.49	1.280
COG5	In this household members can easily evaluate content of financial information	440	1	5	3.40	1.298

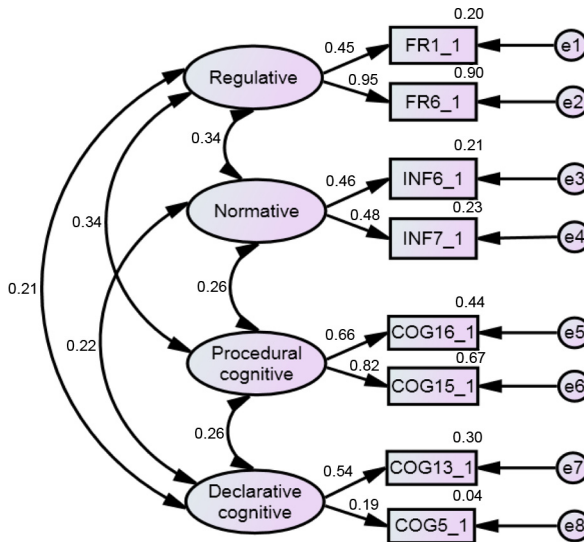
Table I.
Showing descriptive statistics

repeatedly when dealing with financial intermediaries. Therefore, this confirms our *H3* stated under this study.

The study attempted to establish the relationship between the observed and the latent variables. The model was tested using AMOS/20 software. Initially, CFA for institutional framework was generated to determine the relationship and construct validity. The results yielded satisfactory factor loadings which were above the recommended minimum cut-off standardized regression weights of 0.5. Four observed variables of regulative, normative, procedural and declarative institutional framework with their manifest loaded on the global latent of institutional framework.

The results of the fit indices in **Figure 1** represent an excellent fit between the model and the observed data with chi-square (χ^2) = 4.528 (degrees of freedom = 14, probability level = 0.991). The incremental fit index (IFI) was 1.067 further above the cut-off figure of 0.95, while the Tucker–Lewis index (TLI) was 1.148 way above the recommended cut-off figure of 0.95. The comparative fit index (CFI) was 1.000 further beyond the recommended cut-off figure of 0.90. The results further revealed that the root mean square error of approximation (RMSEA) = 0.000. Besides, assumption for convergent validity such as composite reliability was 0.879 above the recommended 0.70 as stipulated by **Nunnally (1978)**. Conclusively, the results in **Table IV** indicated that the latent variables of regulative, normative, and procedural and declarative institutional framework are related as indicated by squared multiple correlations estimate.

Finally, to establish the effect of institutional framework of regulative, normative and cultural cognitive on financial intermediation, the manifest variables and the global latent

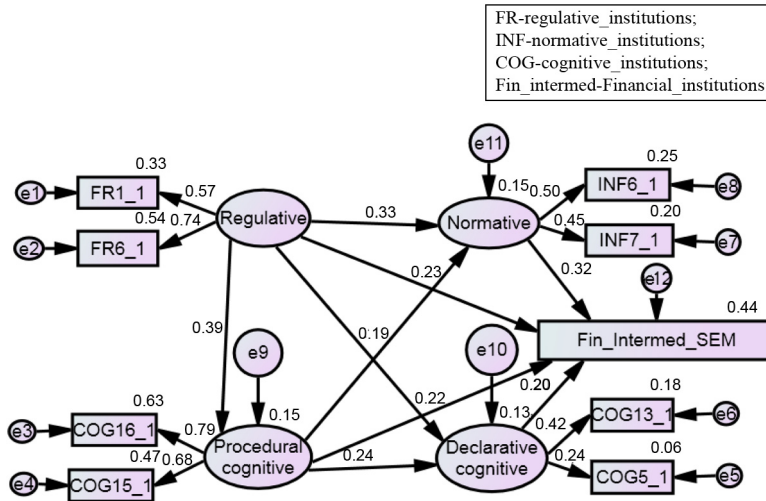


Notes: Chi-square = 4.528; Degrees of freedom (DF) = 14; Probability (P) = 0.991; Incremental Fit index (IFI) = 1.067; Tucker Lewis index (TLI) = 1.148; Comparative Fit index (CFI) = 1.000; Root Mean Square error of Approximation (RMSEA) = 0.000

Figure 1. Showing CFA for institutional framework

(exogenous constructs) were subjected to SEM to determine their influence on the endogenous variable of financial intermediation (Schreiber *et al.*, 2006; Hair *et al.*, 1995). Furthermore, to estimate the overall model, all the possible path within the structural equation were accepted during the analysis as indicated in Tables III and IV and Figure 2. The results revealed that the model fit the observed data excellently with chi-square (χ^2) = 14.227 (degrees of freedom = 19, probability level = 0.770); IFI = 1.023; TLI = 1.047; CFI = 1.000; and RMSEA = 0.000. Overall, the institutional framework of regulative, normative and procedural and declarative cognition explains 44 per cent of the variation in financial intermediation by MDIs in developing economies, specifically in Uganda. The results of the SEM are shown in Figure 2 (Table II).

Further analysis of the results in Table III indicated that the regulative institutional framework has a significant effect on financial intermediation ($\beta = 0.240, p \leq 0.05$). This implies that use of rules enhance financial intermediation by MDIs between the surplus and deficit units. Regulative institutional framework constraints and limits certain behaviours of the surplus and deficit units.



Notes: Chi-square = 14.227; Degrees of freedom (DF) = 19; Probability (P) = 0.770; Incremental Fit index (IFI) = 1.023; Tucker Lewis index (TLI) = 1.047; Comparative Fit index (CFI) = 1.000; Root Mean Square error of Approximation (RMSEA) = 0.000

Figure 2.
Showing SEM

Table II.
Model fit for institutional framework for financial intermediation

	X ²	x ² /df	Df	AIC	ECVI	CFI	IFI	TLI	NFI	PNFI	RMSEA
Cut of points		≤5.0				≥0.90	≥0.95	≥0.95	≥0.95		≤0.08
Estimated Model 1	3.967	0.283	14	63.967	0.321	1.000	1.082	1.186	0.971	0.485	0.000
Estimated Model 2	14.227	0.770	19	86.061	0.432	1.000	1.023	1.047	0.938	0.469	0.000

In addition, the results also revealed that normative institutional framework and financial intermediation are significantly related ($\beta = 0.305, p \leq 0.01$). This means that existing values and norms among the poor (deficit units) helps MDIs in lending money. Sanctions and punishment of deviant behaviours among the deficit units reduces the problem of default risk and high transaction cost.

Additionally, the results also showed that procedural ($\beta = 0.228, p \leq 0.01$) and declarative cognitive institutional framework ($\beta = 0.173, p \leq 0.01$) are significant predictors of financial intermediation by MDIs. Procedural and declarative cognitive institutional framework, which emerges from cultural-cognitive institutional framework helps the poor (deficit units) to make wise decisions towards using financial services offered by MDIs (Table IV).

Discussion and implications

Regulative institutional framework and financial intermediation

The results from the study revealed that regulative institutional framework significantly affect financial intermediation in developing economies, thus, lending support to *H1* of this study. This means that the regulative institutional framework is important in promoting cooperation and coordination among actors in the financial markets. The regulative

	Estimate unstandardized (B)	SE	Estimate standardized (β)	<i>p</i>
Pcog \leftarrow regulative	0.359	0.122	0.386	**
Dcog \leftarrow regulative	0.112	0.131	0.183	*
Dcog \leftarrow Pcog	0.150	0.133	0.230	*
INF \leftarrow regulative	0.187	0.116	0.311	*
INF \leftarrow Pcog	0.044	0.112	0.068	**
INF \leftarrow Dcog	0.114	0.288	0.115	*
F.int \leftarrow INF	1.290	0.682	0.305	**
F.int \leftarrow Dcog	0.726	0.937	0.173	**
F.int \leftarrow regulative	0.612	0.316	0.240	*
F.int \leftarrow Pcog	0.626	0.288	0.228	**

Table III.
Standardized regression weights using maximum likelihood estimates: (group number 1 – default model)

Notes: Group number 1 – Default model; Legends: Pcog-procedural cognitive institutions; INF-normative institutions; Dcog-cognitive institutions; F.int-financial intermediation; **, *significant at $p \leq 0.0001$ and 0.0005 , respectively

Standardized regression weights	Estimate	<i>p</i> -value	<i>e</i>	Squared multiple correlations estimate
FR6 \leftarrow regulative	0.735	***	0.20	0.540
FR1 \leftarrow regulative	0.575	***	0.90	0.331
INF6 \leftarrow normative	0.493	***	0.21	0.243
INF7 \leftarrow normative	0.455	***	0.23	0.207
COG15 \leftarrow procedural cog.	0.683	***	0.44	0.466
COG16 \leftarrow procedural cog.	0.795	***	0.67	0.631
COG13 \leftarrow declarative cog.	0.442	***	0.30	0.195
COG5 \leftarrow declarative cog.	0.235	***	0.04	0.055

Table IV.
Showing regression weights

Notes: Group number 1 – Default model; Legends: FR-regulative institutions; INF-normative institutions; COG-cognitive institutions; *** $p < 0.0001$

institutional framework set rules/laws that guide transactions in the financial markets, especially during financial intermediation between the surplus and deficit units by MDIs. The surplus and deficit units should share information to enable financial intermediaries to complete the market. Regulative institutional framework helps to eliminate transaction costs that arise due to existence of information asymmetry in financial markets by setting rules that influence future behaviours and actions of the surplus and deficit units. This is supported by [Allen and Gale \(2004\)](#) who argue that financial intermediaries have to rely on regulations while performing their functions to complete the market and lower transaction cost.

Thus, for efficient functioning of financial intermediaries in the financial market, it is prudent to have regulative institutional framework to promote transactions between the surplus and deficit units in developing economies like Uganda. The regulative institutional framework prescribe and proscribe rules and regulations for financial intermediation by financial institutions in the financial market.

Normative institutional framework and financial intermediation

Furthermore, the results from the study showed that normative institutional framework significantly affect financial intermediation in developing economies. This lends support to *H2* of this study. Norms pronounced in kinship and socialization guide actions and behaviours of surplus and deficit units by shaping their choices in the financial market. Indeed, normative institutional framework imposes constraints on social behaviour, which promote peaceful trade and established information networks among the surplus and deficit units ([Hodgson, 1998](#)). However, as many deficit units (borrowers) do not own collateral, threat of loss of access to future borrowing opportunities and social sanctions of defaulters guided by informal norms substitute the lack of collateral and promotes financial intermediation by MDIs in developing economies.

Therefore, in the process of financial intermediation, MDIs require informal mechanism guided by norms of punishment and sanctions to improve information flow and contract enforcement. This reduces the problem of default risk and high transaction cost faced by financial intermediaries in lending to deficit units. [Guiso et al. \(2004b\)](#), and [Yokoyama and Ali \(2006\)](#) argue that social network provides feedback about the borrowers' information to the financial intermediaries. Indeed, social norms (normative institution) act as sanctions and peer monitoring mechanism among deficit units to reduce moral hazard of repayment.

Thus, networks based on normative institutions promote financial intermediation by enabling information sharing and cooperative outcomes between the surplus and deficit units, thereby, lowering transaction cost and opportunistic behaviour ([Grootaert and Bastelaer, 2002](#)). Thus, managers of financial institutions should adopt the use of normative institutional framework to promote financial intermediation because it mitigates the problem of information asymmetry and promotes trade between the deficit and surplus units in a developing financial market like in Uganda.

Cultural-cognitive institutional framework and financial intermediation

Finally, the results from the study indicated that cultural-cognitive institutional framework of procedural and declarative cognition significantly affect financial intermediation in developing economies. This is in line with *H3* set under this study. This implies that cultural-cognitive institution shaped by external cultural frames determine decision and choice set of surplus and deficit units in the financial market. Indeed, 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 helps surplus and deficit units to use financial services provided by financial intermediaries such as MDIs in developing economies.

Horn and McArdle (2007) argue that most deficit units in developing economies may depend in part on their ability to invoke several dimensions of their memories and cognitive skills to make financial decisions and choices to use financial services provided by financial intermediaries.

Therefore, the minds of the surplus and deficit units (savers and borrowers) register incoming financial information and then subjects them to varieties of transformation before ordering responses towards saving or borrowing from financial intermediaries. Cognition helps the surplus and deficit units to recall and call back financial information that is explicitly stored in their minds to make meaning and sense repeatedly to use financial services offered by financial intermediaries.

Thus, managers of financial intermediaries should design financial products that suit the condition and needs of the deficit units as their cultural-cognitive institutional framework provokes the way they make decisions towards use of particular financial products and services offered by financial intermediaries.

Conclusion

The study found that regulative institutional framework significantly affect financial intermediation in developing economies. The formal rules and laws influence future behaviours and actions of participants, especially in poor markets. Thus, as a result, the regulative institutional framework constraints and promotes certain behaviour of surplus and deficit units and financial intermediaries like the MDIs. This is supported by North (1994) who argues that formal constraints (regulations) shapes choice set of surplus and deficits units in dealing with financial intermediaries in various context in developing countries.

Besides, the results also revealed that normative institutional framework affect financial intermediation in developing countries. Normative institutions facilitate, motivate and govern joint action of surplus and deficit units and, thus, determine their choices, which guide their actions when using financial services provided by financial intermediaries. Indeed, the problem of information asymmetry and lack of willingness, especially by deficit units to honour loan repayment schedules can be solved by normative institutions/informal norms that regulate their behaviours. Therefore, in an attempt to overcome the problems of adverse selection and moral hazards, financial intermediaries rely on normative institutions among the deficit units to sanction and punish individuals who may fail to honour their financial obligation. This reduces on the problem of default risk and high transaction cost faced by financial intermediaries in lending in developing economies.

Finally, the study results indicated that cultural-cognitive institutional framework affect financial intermediation in developing countries. The minds of the surplus and deficit units in developing countries register incoming financial information and then subjects them to a variety of transformation before ordering a response on whether to consume financial services offered by MDIs. Procedural and declarative cultural-cognition helps the surplus and deficit units to recall and call back financial information that is explicitly stored to make meaning and sense repeatedly to use financial services offered by financial intermediaries in developing countries.

Limitations of the study and areas for further research

The current study was not without limitations. First, the study collected data from poor households and relationship officers located in rural Uganda and ignored the other regions. Therefore, future studies involving urban and peri-urban areas may be useful. Second, the study focused on only MDIs and ignored other financial institutions therefore, future studies

may consider other financial institutions like banks. Third, the study was purely quantitative, thus, a qualitative survey through interviews may be useful in future studies. Fourth, the study focused on only rural Uganda as a developing country. Future research using the same variables may be carried out in other developing economies. Finally, future research in other developing countries need to investigate the unique finding of existence of procedural and declarative cognitive institutional framework in determining financial intermediation in developing economies.

References

- Allen, G. and Gale, D. (2004), "Financial intermediaries and markets", *Econometrica*, Vol. 72 No. 4, pp. 1023-1061.
- Busenitz, L.W., Gómez, C. and Spencer, J.W. (2000), "Country institutional profiles: unlocking entrepreneurial phenomena", *Academy of Management Journal*, Vol. 43 No. 5, pp. 994-1003.
- Campbell, J.L. (2005), "Where do we stand?", In Davis, G.F., McAdam, D., Scott, W.R. and Zald, M. N. (Eds), *Social Movements and Organization Theory*, Cambridge University Press, Cambridge.
- Coase, R.H. (1937), "The nature of the firm", *Economica*, Vol. 4 No. 16, pp. 386-405.
- Dequech, D. (2004), "Uncertainty: individuals, institutions and technology", *Cambridge Journal of Economics*, Vol. 28 No. 3, pp. 365-378.
- Field, A. (2005), *Discovering Statistics Using SPSS*, Sage, London.
- Granovetter, M.S. (1973), "The strength of weak ties", *The American Journal of Sociology*, Vol. 78 No. 6, pp. 1360-1380.
- Greif, A. (1994), "Cultural beliefs and the organization of society: a historical and theoretical reflection on collectivist and individualistic societies", *Journal of Political Economy*, Vol. 102 No. 5, pp. 912-950.
- Grootaert, C. and Bastelaer, V.T. (2002), *Understanding and Measuring Social Capital: A Multidisciplinary Tool for Practitioners*, World Bank Publications, Washington, DC.
- Guiso, L., Sapienza, P., Zingales, L. and Macelli, V. (2004b), "Cultural biases in economic exchange", NBER working paper.
- Gurley, J. and Shaw, E. (1960), *Money in a Theory of Finance*, Brookings Institution, 1960, Washington, DC.
- Hair, J.F., Anderson, R.E., Tatham, R.L. and Black, W.C. (2010), *Multivariate Data Analysis*, 7th ed., Prentice Hall, Englewood Cliffs, NJ.
- Hair, J.F. Jr, Anderson, R.E., Tatham, R.L. and Black, W.C. (1995), *Multivariate Data Analysis*, 3rd ed., Macmillan Publishing Company, New York.
- Hodgson, G. (1998), "The approach of institutional economics", *Journal of Economic Literature*, Vol. 36 No. 1, March, pp. 166-192.
- Hoffman, A.J., Riley, H.C., Troast, J.G., Jr. and Bazerman, M.H. (2002), "Cognitive and institutional barriers to new forms of cooperation on environmental protection: insight from project XL and habitat conservation plans", *American Behavioral Scientist*, Vol. 45 No. 5, pp. 820-845.
- Horn, J.L. and McArdle, J.J. (2007), "Understanding human intelligence since Spearman", in Cudeck, R. and MacCallum, R.C. (Eds), *Factor Analysis at 100: Historical Developments and Future Directions*, Erlbaum, Mahwah, NJ, pp. 205-247.
- Jöreskog, K.G. and Sörbom, D. (1989), *LISREL 7, A Guide to the Program and Applications*, SPSS Inc., Chicago, IL.
- Kostova, T. (1997), "Country institutional profile: concepts and measurement", *Best Paper Proceedings of the Academy of Management*, pp. 180-184.

- Kostova, T. (1999), "Transnational transfer of strategic organizational practices: a contextual perspective", *Academy of Management Review*, Vol. 24 No. 2, pp. 308-324.
- Lin, J.Y. and Nugent, J.B. (1995), "Institutions and economic development", *Handbook of Development Economics*, Vol. 3, pp. 2303-2370.
- Markus, H. and Zajonc, R.B. (1985), "The cognitive perspective in social psychology", in Lindzey, G. and Aronson, E. (Eds), *Handbook of Social Psychology*, 2nd ed., Random House, New York, NY, pp. 137-230.
- Merton, R.C. (1993), "Operation and regulation in financial intermediation: a functional perspective", in Englund, P. (ed.), *Operation and Regulation of Financial Markets*, The Economic Council, Stockholm.
- Merton, R.C. and Bodie, Z. (2004), "The design of financial systems: towards a synthesis of function and structure", *National Bureau of Economic Research*, Working Paper Number 10620.
- North, D.C. (1990), *Institutions, Institutional Change and Economic Performance*, Cambridge University Press, Cambridge.
- North, D.C. (1991), "Institutions", *Journal of Economic Perspectives*, Vol. 5 No. 1, pp. 97-112.
- North, D.C. (1993), "Institutions and credible commitment", *Journal of Institutional and Theoretical Economics*, Vol. 11 No. 1, pp. 11-23.
- North, D.C. (1994), "Economic performance through time", *American Economic Review*, Vol. 84 No. 3, pp. 359-367.
- Nunnally, J.C. (1978), *Psychometric Theory*, McGraw-Hill, New York, NY.
- Olsson, A. (1999), "A microeconomic analysis of institutions", Working Papers in Economics No: 25, Department of Economics Göteborg University.
- PRIDE Human Resource Data Base (2013).
- Schreiber, J.B., Nora, A., Stage, F.K., Barlow, E.A. and King, J. (2006), "Reporting structural equation modeling and confirmatory factor analysis results: a review", *The Journal of Educational Research*, Vol. 99, pp. 323-337.
- Scott, R.W. (2001), *Institutions and Organizations*, 2nd ed., Sage, Thousand Oaks, CA.
- Scott, R.W. (1995), *Institutions and Organizations*, Sage, Thousand Oaks, CA.
- Scott, R.W. (2005), "Institutional theory: contributing to a theoretical research program", in Smith, K.G. and Hitt, M.A. (Eds), *Great Minds in Management: The Process of Theory Development*, Oxford University Press, Oxford, pp. 460-484.
- Snow, D.A. and Benford, R.D. (1992), "Master frames and cycles of protest", in Morris, A.D. and Mueller, C.M. (Eds), *Frontiers in Social Movement Theory*, Yale University Press, New Haven, CT, pp. 133-155.
- Tukey, J.W. (1977), *Exploratory Data Analysis*, 1st ed., Addison-Wesley, Pearson Publisher, New York.
- Uganda Bureau of Statistics (UBOS) (2012), *Poverty Projections Statistical Abstract 2012*, Uganda Bureau of Statistics, Kampala.
- World Bank (2001), "World development report 2001/2002", Oxford University Press, Inc, New York, NY.
- World Bank (2002), "World development report, 2001/2002, building institutions for markets", World Bank, Washington, DC.
- Yamane, T. (1973), *Statistics: An Introductory Analysis*, 3rd ed., Harper & Row, New York, NY.
- Yokoyama, S. and Ali, A.K. (2006), "Social capital and farmer welfare in Malaysia", *International Association of Agricultural Economists Conference*.
- Zeller, M., Schrieder, G., Braun, J.V. and Heidhues, F. (1996), *Rural Finance for Food Security of the Poor: Concept, Review, and Implications for Research and Policy*, International Food Policy Research Institute (IFPRI), Washington DC, Forthcoming.

Further reading

Nunnally, J.C. and Bernstein, I.H. (1994), *Psychometric Theory*, 3rd ed., McGraw-Hill, New York, NY.

About the authors

George Okello Candiya Bongomin holds a PhD, MSc (Accounting & Finance) and bachelor's degree in Commerce (B.COM) from Makerere University Kampala, Uganda. He is a financial management specialist. His research interests are in development finance, business finance, rural finance (microfinance), behavioural finance, institutional economics and business psychology. George Okello Candiya Bongomin is the corresponding author and can be contacted at: abaikol3@yahoo.co.uk

Charles Akol Malinga, MBA, is a Director of currency at Bank of Uganda (BoU) and a part-time lecturer at Makerere University Business School (MUBS), Kampala, Uganda. He has rich experience in corporate finance, financial management, risk management, financial markets and money and banking.

John C. Munene, PhD, is a Professor of psychology and coordinator of PhD programme at Faculty of Graduate Studies and Research, Makerere University Business School (MUBS), Kampala, Uganda. His research interests are in industrial and organizational psychology. He is an organizational psychology consultant.

Joseph Mpeera Ntayi, PhD, is a Professor of procurement and logistics management and a Dean at Faculty of Economics, Energy and Management Science at Makerere University Business School (MUBS), Kampala, Uganda. His teaching and research interests are in logistics, financial engineering, entrepreneurship, public procurement, managing contracts, business ethics, industrial marketing, purchasing and supply chain management. He is an entrepreneur and a public procurement and marketing consultant.

For instructions on how to order reprints of this article, please visit our website:

www.emeraldgroupublishing.com/licensing/reprints.htm

Or contact us for further details: permissions@emeraldinsight.com