THE EFFECT OF SOCIAL CAPITAL ON LOAN REPAYMENT BEHAVIOR OF THE POOR:
A Study on Group Lending Model (GLM)
Application in Islamic Microfinance Institution[1]

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ABSTRACTS

Market failures in the financial system may be indicated by the absence of opportunities for the poor to get financial services. This also happens in the practice of Islamic banking. For this reason it is popping up a lot of non-market institutions - Islamic Microfinance Institutions (IMFi) is one of them - which tried to cover up the weaknesses of banking practices. However, the development IMfi is not effective in alleviating poverty and not much different from most banks. In turn, Islamic Microfinance-based groups emerged in the hope of further empowering the poor and ensure that financial services can be viable for them and they are able to repay their loans with three main approaches that implemented simultaneously; (1) spiritual approach (2) financial approach and (3) social approach. This study is expected to empirically test whether Islamic Microfinance-based groups can ensure that the poor can get financial services and are able to repay their loan on time. Using Structural Equation Model the study proved that social capital values which embedded within the Islamic Microfinance-based groups influence the behavior of the poor in repaying their debts. As a policy recommendation, Islamic Bank should consider to prefer Islamic Microfinance-based groups as partners in the realization of their linkage program for the poor so that poverty alleviation program can be optimally implemented.

Keywords: social capital, Group Lending Model (GLM), repayment behavior

INTRODUCTION

The poor often could not secure loans from any commercial banks due to unavailability of loan/physical collateral. Informational problems arise as banks fail to distinguish between 'good' and 'bad' borrowers, due to the poor accounting report of their business. Hence, it is well established in finance theory that credit markets characterized with high asymmetric information, notably, the existence of moral hazard and adverse selection prob-

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lems, leads to severe distortion and sometimes complete collapse of the formal credit market (Akerlof, 1970; Daripa, 2000; Dusuki, 2008). Financial contracts will not be written under this condition. Hence, goods and services will be under-produced and under-consumed. The contracts between borrower and lender will only be honored if the element of trust exists in such transactions.

It has been recognized, however, that non-market institutions play the role in overcoming such informational and enforcement problems (Varian, 1990; Stiglitz, 1990, 2002; Besley, 1993; Conning, 1999; Karlan, 2005). In relation to the fulfillment of collateral, in group lending methods such as interpersonal relations and cooperation among group members can become 'social collateral' (social capital), substituting the absence of physical collateral for the poor. This collateral substitute enhances the self-enforceable repayment of group members through the functioning of norms, peer monitoring or reciprocity and social sanctions. The success of group lending method, such as the Grameen Bank (Yunus, 2003) is said to be a prominent microfinance innovation, enhancing access of poor people to non-collateral loans as well as experiencing high repayment rate.

The successful performance of such Microfinance Institution (MFI) is largely associated with the utilization and the function of social networks of poor clients including the existence of trust (Chavez &Vega, 1996; Robinson, 2002; Martowijoyo, 2007). Apart from such practices, Sharia Microfinance Institutions (SMFIs) is another institutional innovation being designed to have soundness of lending technology (base on Islamic teachings) of group lending model (GLM) that could ascertain the poor to have an access to the financial services. Hence, the application of group lending model (GLM) will also ascertain the high rate of repayment from the borrowers. With this method or mechanism,

the high rate of loan repayment behavior becomes one of the success indicators of SMFIs.

The achievement of this high rate of loan repayment could be realized through the application of some incentives including sustained education and training within the program. In fact, the process of attaining social capital indicators starts from the beginning of the program. Many evidences have been put forward how education or training within the group could bring about the successful of the program performance participants. Basically, the importance of education or training to support this history success is one of the reasons why education or training for members becomes one of the program principles. The successful of education for members or community has also been well proved by the successful of credit union all over the world.

Putnam (1993) terms social capital as features of social organization, such as trust, norms, and networks that can improve the efficiency of society by facilitating coordinated actions". At this point, the above discussion could be concluded that the value of social capital can be identified as the functioning of social relationship and networks in the achievement of group's interest. Hence, the importance of interrelationship is emphasized further by O'hara (2007) through defining social capital as a durable process of communication and interaction within the community that can establish and promote networks, trust, social obligation and practices.

Grameen Bank model has been replicated and developed in Indonesia, including in Bogor West Java province. However, it has been modified and adjusted according to the need and the condition of certain local culture. One of modification model that has been formulated is the application of sharia model in Bogor area which is called Ikhtiar Program. Grameen Bank model is adopted and adjusted in a way that is suitable with Islamic teachings. Islamic microfinance institution that runs the program takes the form of Ikhtiar

Financial Service Unit (UPK Ikhtiar). It has now become Baitul Ikhtiar Cooperative (Koperasi BAIK). This cooperative is essentially designed as financial institution for poor people and micro enterprises. This program has certain characteristic as community based empowerment, microfinance services, participatory or group based lending and addressed particularly for woman of the poor or low income families.

This research will describe and explore the possibility of Ikhtiar Program to create social capital indicators within the community of Ikhtiar Program participants. It is expected that this research would reveal some factors (i.e. social capital indicators) that might significantly affects the success of the program, particularly the willingness of the borrowers to repay their loan (loan repayment behavior). In addition to that, this finding will be used as an input to have better program replication in a wider scale.

In order to portray the type of mechanism or strategy that has been applied by this program to ensure the soundness of their loan repayment performance, thus thesis statements of this research are formulated as follow:

1) What short of factors that trigger the attainment of social capital within the community group and how these factors have the impact on the attainment of social capital.

2) How social capital features can be implemented within the community group.

3) How the attainment of social capital through group lending model (GLM) in the Islamic microfinance institution would lead to the soundness of microfinance performance particularly in the loan repayment behavior of Ikhtiar Program participants.

THEORETICAL FRAMEWORK & STUDY LITERATURE

Loan repayment behavior is very much related to the economic behavior discourse. Economic behavior is the behavior of indi-

viduals that involves economic decisions and the causes and effects of those decisions. In economic research development, a study on human behavior particularly in economic decision is attributed to the psychological discipline. There are two reasons as main considerations subject to the determinant factors of the economic decision, namely: (1) rationality assumption and (2) self-interest assumption (Spielberg, 2004).Though, it can be clearly understood that those assumptions are subjective in nature (Frank, 1997).

Classical economists principally focused on rationality and self-interest (subjective reasoning) to explain human motivation in social, political, and economic lives. It can thus, be concluded that in times economics became independent from ethics, classical economists declared it as a value-free discipline. In contrast to the classical economics opinion, Islamic economics is a value-driven discipline. Individual Muslim's choices are subordinated to the collective interests of larger Islamic community. Accordingly, the collective of social and religious norms of Islam guide the behavior of Muslim individual live including economic decision or economic behavior. Hence, homo-Islamicus, unlike its counterpart homo-economicus, must represent the implementation of Islamic teachings and values (Qardhawi, 2004).In other words, in Islamic economics tradition, Islamic teachings and values guide economic behavior.

As far as research on economic behavior concerned, determinant factor of economic decision of economic agent (player) in their economic behavior is not merely dominated by subjective reasoning. According to the economic psychology discipline, economic decision in economic behavior not solely affected by such rationality assumption, but also influenced by religiosity, culture and other non-rational variables (Spielberg: 2004).In line with the above explanation, Umar stated that economic behavior is not only influenced by rational reason but also might be affected by

psychological reasons such as motivation, perception, learning process, trust and attitude. In other literature, in Zafirovski opinion, economic behavior in economic decision is not only determined simply by rational reason, but also could be by unification reason between rational and non-rational reasons (e.g. moral values etc.) including religiosity reason (Umar, 2005).

Fishben, another scholar, further explains that someone behavior particularly on their loan repayment behavior might be influenced by many factors. Generally, determinant factors of behavior could be looked by the Theory of Reasoned Actions (TRA). According to this theory, someone behavior is influenced by the intention to do something and this intention is much influenced by his attitude. If his/her attitude is positive, then the behavior will be good and suitable to be practiced and someone will practice it. The behavior also influenced by subjective norm (Ajcen, 2001).

This theory also explains that someone attitude to behave in certain cases is influenced either by his or her beliefs. In that case, what he is doing will generate certain outcomes, as he evaluates the benefit he is going to achieve. Whereas, subjective norm is the belief of someone to some people who is very mean to him/her that suggest him/her whether his/her job is suitable or not. The above factors are basically influenced by external variables, such as: demographic variables: age, sex, occupation, socioeconomic status, religion and education; attitudes toward targets such as attitude toward people and attitude toward institution; as well as personality traits. The theory has been developed and becomes the Theory of Planned Behavior by IcekAjzen in 1985.The theory of planned behavior (TPB) which is extended from the theory of reasoned action has been used extensively to explain socially significant behaviors (Cho, 2002). Besides attitude and positive norms, Ajzen adds perceived behavioral control as another

factor that influence someone intention to do certain behavior.

Perceived behavioral control plays an important part in the theory of planned behavior. In fact, the theory of planned behavior differs from the theory of reasoned action in its addition in perceived behavioral control. Consistent with the emphasis on factors that are directly linked to a particular behavior, perceived behavioral control refers to people's perception of the ease or difficulty of performing the behavior of interest (Ajcen, 1991).

Loan repayment behavior in this research is one of the topics in the economic behavior discourses as has been discussed previously. The following are some researches related to the causes which have an impact on the high rate of loan repayment. Economists have developed numerous theories seeking to explain the high repayment rates frequently associated with group lending in developing countries. These theories can be roughly divided into three categories (Cassar, *et al.*, 2005): (1) those who view the relational aspects of social capital as key to the performance of group lending; (2) those who view the informational aspects of social capital as key to the performance of group lending; and (3) those who view the merits of group lending (relative to individual lending) solely through its innate properties as a joint-liability contract, where social capital plays little or no role.

The distinction is important. If the first two groups of theories hold the existing level of social capital in the form of strong personal relationships or local information may be critical to group lending's success. The third group of theories holds, that group lending may succeed whether or not it is implemented among borrowers with high levels of existing social capital.

Opinion in the first category therefore emphasizes the potential for social sanctions as a primary factor in group loan repayment. Since the group members are jointly liable for

repayment of the loan of each group member, they can press their fellow members who fail to maximize the probability, that their share in the group of loan will be repaid. The greater the potential for social sanctions, the more likely they are to lie off the equilibrium path, and as the result is the higher group of loan repayment rate one should observe. An example of this is Floro and Yotopolous case who demonstrate that where social ties are strong, group lending can both improve loan repayment and relax credit constraints (Floro & Yotopolus: 1990, Cassa *et al*: 2005).

The most well-known paper in this category is that of Besley & Coate. The paper argues that without the potential for social sanctions, group lending may offer little if any advantage over individual lending (Besley & Coate, 1995). However, given that sanctions are sufficiently effective, group lending in their model is able to curtail the moral hazard associated with loan repayment. Social sanctions, combined with peer monitoring also play a significant role in papers such as in Stiglitz (1990), Besley, *et al*. (1994), as well as in de Aghion (1999). Although these papers are focusing on peer monitoring, social sanctions, they are typically assumed to be exogenous. In the model of Wydick (2004), sanctions in the form of group expulsion are endogenous in that they represent a credible threat that comprises part of a perfect Bayesian equilibrium punishment strategy.

Given a sufficient low level of peer monitoring among the borrowers, it is rational for group members to replace defaulting member with the new member, even when there is no informational evidence of risky borrower behavior. In a high-information environment, expulsions and group replacements are only carried out if there is observable evidence of risky behavior. The threat of social sanctions over and above group expulsion, however, only adds to the incentive to undertake safe investments.

Papers in the second category focus on the heightened informational flows that exist in high social-capital areas, and their impact on group loan repayment. Foremost among these are papers by Tassel (1999) and Ghatak (1999) who both demonstrate that the borrower self-selection process used in most group lending schemes improves repayment rates through mitigating adverse selection in credit markets. If borrowers have clear information over the riskiness of one another's projects, they sort themselves into homogeneous groups through an assortative matching process.

Tassel's model in particular, shows how a lender can offer a set of individual and group loan contracts such that only high-ability borrowers will accept the group loan contract in equilibrium. The intuition is similar to the way insurance companies offer separate car insurance contracts to single and married drivers--insurance companies know that married drivers tend to be safer, and that getting married merely to pay less for car insurance. In Ghatak's model, risky borrowers internalize their externality on the group through being yoked with other risky borrowers. Safe borrowers are drawn back into the credit pool as the equilibrium interest rate is reduced, thus it increases repayment rates. In both models, existing social capital is important only when it facilitates informational flow between borrowers; social sanctions are unnecessary to their results.

A third view of group lending downplays the influence of existing social capital in the performance of group lending altogether. The advantages of group lending over individual lending rest on neither the potential for social sanctions nor informational flows between members. Instead, the relative advantage of group lending arises simply from the terms of a joint liability contract. The best example of this view is de Aghion & Gollier (2000). They show that, in a pool of "safe" and "risky" borrowers, if the higher return realized by a

risky borrower in the good state of nature is (uniquely) sufficient to cover for a defaulting group member, then the group lending contract can reduce the equilibrium interest rate and induce higher repayment rates relative to individual lending. The interesting point about their result is that unlike the models of Tassel and Ghatak, it does not rely on borrowers having an informational advantage over the lender. Their model is, however, sensitive to changes in assumptions about borrower returns.

There has been relatively little empirical work that has sought to discriminate between these three classes of group lending theories, and empirical results taken from actual field data have yielded mixed results. Wenner (2005) provides some evidences that active screening and social pressure among members of twenty-five Costa Rican credit groups improved group performance. Zeller (1998) finds credit group performance positively related to social cohesion within groups. Wydick (2000) finds that while peer monitoring appears to have some positive effect on group loan repayment, strong social ties within groups appears to make it more difficult to pressure fellow members to repay loans. More recent research on larger microfinance data sets has yielded fascinating, but somewhat contradictory results. Gómez & Santor (2003) use a statistical matching model to compare default rates of 1,389 individual and group borrowers in a Canadian lending institution. Based on observable variables, they find both selection and incentive effects to be operational in explaining lower default rates for group loans relative to individual loans.

Moreover, incentive effects appear to be strengthened when "low trust" groups are removed from the sample, leaving groups within which there existed a higher degree of trust before applying for the loan. Their results, however, do depend on the assumption that unobservable characteristics are uncorrelated with borrowing group formation. If borrowing groups admit members based on characteristics unobservable to the researcher, the results could overstate group-borrowing effects. Nevertheless, their findings present some of the strongest evidence for the positive effects of informational and relational social capital on group loan repayment.

Their conclusions contrast somewhat with the empirical results of Ahlin & Townsend (2010), which do support Ghatak's local information model in more wealthy urban areas, and the importance of village-level social sanctions in rural Thailand. Yet, the fact that they find strong social ties within borrowing groups to be negatively correlated with group repayment which causes them to challenge the idea that the group lending works primarily through its ability to harness existing social capital. While each of these empirical studies has made a significant contribution to better understanding of group lending, this research attempts to contribute to this effort from a different angle.

The particular angle this research takes is most similar to that of the first two groups of findings which view that the existing level of social capital in the form of strong personal relationships or local information may be critical to group lending's success (Floro & Yotopolous, 1991; Besley & Coate, 1995; Stiglitz, 1990; Besley, *et al*., 1993; de Aghion, 1999; Wydick, 2001; Tassel, 1999; Ghatak, 1999).

This research will employ TPB of Icek Azjen to detect the type of factors that induce the program participants to repay their loan. In addition, this research will also take into account the role of religious norm as part of latent variable in the model. Having this additional religious norm, this research is expected to enrich the research relationship between religiosity and economic behavior, particularly in taking economic decision. At least, this research is expected to reexamine some previous thesis which stated that social

capital including religiosity has relationship with economic behavior, particularly on loan repayment behavior. In certain reason, this research finding might also confront previous researches which do not take into account religious norm as determinant factor of loan repayment rate. Thus, this research is a part of economic psychology studies. Whereby, economic psychology is defined as the study of the behavior of individuals that involves economic decisions and the causes and effects of those decisions.

RESEARCH METHODOLOGY

Population and Sample

Necessary data in this study are the data related to institutional Ikhtiar Program and its participants. The data that measuring research variable are empirically defined based on each variable that is equipped with observable indicators that can be measured.

The population frame of this research is housewives of poor family as participants of Ikhtiar Program conducted by Peramu Foundation, Kabupaten Bogor (Rural area of Bogor); Housewives of poor family who has received loan or financing more than two rounds of transactions in the program. Until June 2010, Ikhtiar Program participant particularly in Kabupaten Bogor, already reached 5091 people with 1273 groups and 319 centre meeting (*majlis*). Each centre meeting consists of 4-5 groups, whereas each group consists of 5 participants (members).

To obtain valid research results and robustness, this study used more than one hundred of respondents to qualify the use of Structural equation model (SEM). By using respondents who are relatively homogeneous in term of demographic description and their social economic condition, simple random sampling used to obtain necessary respondent in this research (Singarimbun & Effendi, 1981; Sugiyono, 2002).

Data Collection Technique

The instrument used to collect data on the form of a list of questions and questionnaire to conduct structured interviews with individual respondents. Models are open question questionnaire and some were closed. Open questions intended to obtain respondents' answers openly in accordance with the views as well as the conditions of respondents. As such, these open-ended questions allow respondents describe freely in answering questions or responding to the claims submitted. Whereas a closed question is a question that has been determined all the alternative answers.

Research Method

In conjunction with the research approach in the previous discussion, research method that used in this research is case study method. Basically, the main reason of using case study as a method is due to the fact that the focus of this research is one single unit and systemic in nature (Sevilla, 1988). Therefore, this research is directed to analyze and find a specific analysis unit particularly in loan repayment behavior of Ikhtiar Program participant.

Research Variables

As stipulated in the conceptual framework and the relationships between variables, some variables that are used for research purposes of this study are: Age, education, work experience, length of membership, family economy, Ikhtiar program, loan repayment attitude, loan repayment subjective norms, and religion norm on loan repayment, perceived in the ability of loan repayment, intention on loan repayment and participant program behavior on loan repayment.

Instrumentation

Instrumentation is the means or instruments to obtain a valid research data. The selection of research sample begins with the selection of 30 respondents to test the research

instrument that will be used to obtain data. Construct validity (*product moment correlation*) and reliability (*Alpha Cronbanch*) test are undertaken to have such valid instrument survey. Respondents were taken randomly from the 30 groups of six center meeting. A center meeting usually consists of four to five groups. One group consisted of five participants. The selection of center meeting and respondents are conducted randomly based on list of groups and list of participants.

Data Analysis and Testing Hypotheses

In a descriptive analysis of the characteristics of individual and the potential of family, this research employing parametric analysis using SPSS. The purpose of this study is to analyze loan repayment behavior of Ikhtiar program participants. Such behavior can be seen from the association or relationship between the variables of the study. Associations between variables which measured by ordinal scale are analyzed with Rank Spearman correlation (r_s)(Siegel & Castellan, 1988). On the basis of such correlation analysis, following afterward is an analysis using *Structural Equation Modelling* (SEM).

SEM model consists confirmatory factor analysis (CFA) to analyze the measurement model and structural model analysis using LISREL 8.51 *software*. SEM components consist of:

- Two (2) types of variables: latent variables and observed variables *(manifest variables)*
- Two (2) types of models: structural model and measurement model.
- Two (2) types of errors are structural errors and measurement errors *(structural measurement)*

Wijanto (2008) described that in order to facilitate in reading models, path diagram is utilize as a means of communication. Latent variable is an abstract concept that can only be observed indirectly and imperfectly through its effects on the observed variables. Examples of latent variables or abstract concepts are: behavior, attitude and intention.

Observed variables or measured variables are variables that can be observed or measured empirically and can be used as indicators of latent variables. Observable variables related to or represent the effects of the exogenous latent variables given the label X mathematical notation, while related to the endogenous latent variables given the notation Y. In one model, X variable can be place Y variable in other studies or it can be its sub-model.

Based on these definitions, the variables within this study can be drawn on a model. To test this model, the procedure is done using SEM as follows (Bollen & Long, 1993):

1. SPECIFICATION

Diagram Path of Research Model

2. IDENTIFIION

- Determine the result of either LF MV = 1, or
- Determine the variance of all exsogen LV = 1

3. ESTIMATION

| Create SIMPLIS program for model estimation (CFA model) | Create SIMPLIS program for Full SEM (add structural equation to CFA model before |

Doing the estimation
- ML, Robust ML, or WLS

Doing the estimation
- ML, Robust ML, or WLS

4. GOODNESS OF FIT TEST

Analysis of Estimation Model
- Goodness of Fit Test
- Validity Test
  - t -values ? 2
  - SLF ? 0.70 atau? 0.50
- Realibility Test
  - CR ? 0.70; VE ? 0.50

Analysis of Structural Model
- Goodness of Fit Test Model (GOF)
- Coeffisien Structural Test
- t- values ? 2

OK?

No   Yes

OK?

FINISH

Yes   No

5. RESPESIFICATION

- Modification program of SIMPLIS
  - Omit MV which do not cover the requirement
  - Utilize MI

- Modification program of SIMPLIS

- LF : Loading Factor;
- SLF : Standardized Loading Factor; MV : Measured Variables; LV : Latent Variables;
- CR : Construct Reliability; VE: Variance Extracted; CFA : Confirmatory Factor Analysis;
- ML : Maximum Likelihood; WLS: Weighted Least Square; MI: Modification index

Figure 1. SEM Procedure (Wijanto, 2008)

Research Framework

One of the successful indicators of micro-finance institution services is the sound performance of its loan repayment. It is expected that the achievement of high rate of loan repayment is due to the achievement of social capital. The existence of social capital influences the behavior of Ikhtiar Program participants to repay their loan. At this juncture, group lending method (GLM) undertaken by Ikhtiar Program would significantly ascertain the attainment of social capital indicators (social virtues) within the group members. The attainment of these social virtues, in turn, affects group members' motivation in their behavior particularly in repayment behavior.

To ascertain and grasp the type of factors – particularly social capital - affecting group members in their loan repayment behavior, this research is developed base on the Theory of Reasoned Action (TRA) developed by Fishbein (Mowe, 1990). Further, it has been developed to become the Theory of Planned Behaviour (TPB) by Ajzen. This theory explain and predict human behavior as well as its behavior intention (Cho, 2010). Whereas among various models and theories, the Theory of Planned Behavior is a popular theory.

The different between both theories is that the TRA emphasized on the effect of attitude toward behavior and the effect of subjective norm toward such behavior while TPB adds the effect of perceived behavioral control. Based on both theories, someone intention is made identical with his behavior which is being influenced by three main factors; attitude toward the behavior, subjective norm and perceived behavioral control. It is understood that social capital embedded within these latent variables.

Based on such basic theory, therefore, conceptual framework that can be drawn in this research is as follow (Figure 2).

Research Hypothesis

Having the conceptual framework as well as literary studies discussed above, therefore, the hypothesis formula in this research are:

1. Loan repayment behavior of Ikhtiar Program participant (Y) is influenced by the attaienment of social capital which is embedded within their attitude of repaying loan, subjective norm, religious norm, perceived behavior, individual characteristic as well as their family economic background.

2. Ikhtiar Program (X) itself has an effect to the group members loan repayment behavior.

PROBLEM ANALYSIS

The Relationship between Social Capital and Loan Repayment Behavior

To see the validity of research instrument so that can used to measure the defined latent variables and observable variables, construct validity test will be undertaken accordingly. This test aims to looking for the definitions of concepts that are written by experts in literature, and then translated into operational definitions.

The instrument reliability is conducted to see how far a measuring instrument capable of measuring something. Reliability of this instrument is approached with three questions, namely: a) If the same object set is measured repeatedly with the same or similar instruments, will the result obtain the same or similar?; b) Are measures which derived from a measuring instrument the actual size of these measured properties?; c) How many measurement tools are contained in an instrument measure?

Reliability test instruments used in this study is *Cronbach Alpha* method which measured on a scale from 0 to 1. Instruments classified as reliable if the coefficient value between 0.6 to 1. The result of reliability test using *Cronbach Alpha* coefficient is as in Table 2.
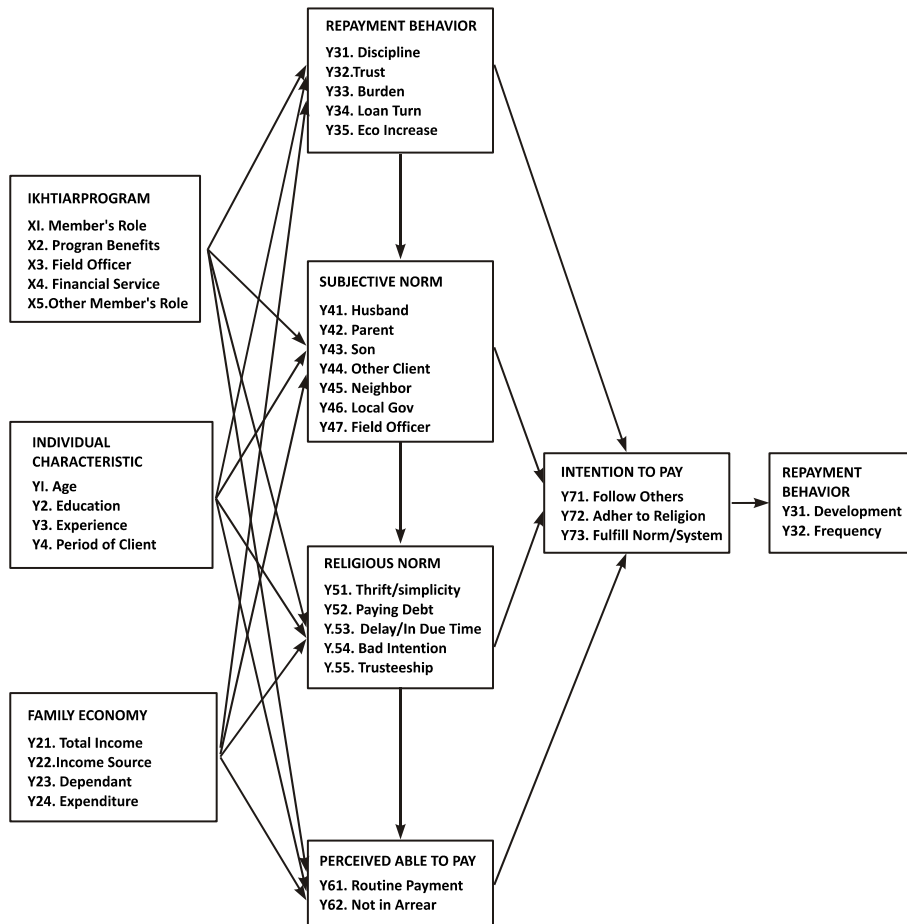
Figure 2. Conceptual framework the relationship between variables (This figure is formulated based on TPB of Ajzen)

Model Specification

As being discussed in the first chapter, this research is employing nine latent variables base on theoretical foundation of human behavior proposed Ajzen (1991). However, the authors would be a bit different with that of Ajzen's TPB and the rest of research on the relationship between social capital and economic performance since the authors include religious norm as one determinant factor in the model. Having employed such Ajzen's TPB as model specification, the authors also used the model of Georgarakos & Furth (2010) to include religious norm in the model. Thus,

these nine latent variables are: Ikhtiar Program, Individual Characteristic, Household Economy, Repayment Behavior (Attitude), Subjective Norm, Religious Norm, Perceived Behavior, Intention to Pay, and Repayment Behavior. Accordingly, specification model of this research is employing this grand theory. Loan repayment in this model is considered as last terminal which might be influenced by other factors. The early structural model in this research by using structural model equation (SEM) approach is as in the following figure 3.

Table 2. Reliability Test with Cronbach Alpha

Variable	Standardized Cronbach Alpha
A. Ikhtiar Program	0.7272
1. Roles of participants in group	0.727
2. Assessment of participants on the benefit program	0.727
3. Assessment of participants on the field officer	0.7276
4. Assessment of participants on financial services	0.7276
5. Assessment of participants to other participants	0.727
B. Attitude of Paying Debt(Loan Repayment)	0.7273
1. Perception of Paying Debt	0.7274
2. Paying Debt Evaluation	0.7272
C. Subjective Norm	0.7263
1. Expectations of important people	0.7265
2. Commitment to the important people	0.7261
D. Religious Norms	0.7272
1. Perceptions of teachings	0.727
2. Commitment to perform religious norm	0.7275
E. Perceived Behavior (Confidence) to Pay Debt	0.7275
1. Confidence ability to pay debt of each meeting	0.728
2. Confidence capability not to delinquent	0.727
F. Intention to Pay Debt	0.7267
G. Loan Repayment Behavior	0.854

Source: Ikhtiar Program Participant (Peramu Foundation), (2010)

Hence, to have a result of the significance level of correlation between variables and how this variables are fit in the model is, this research is employing LISREL (Linear Structural Relation) 8.51. Through this software, there will a fit test either measurement fit test or structural fit test. The observed variables which fulfill measurement fit is variables that can measure the variation of its latent variable with minimum loading factor 0,3. Whereas, variables which fulfill structural fit is when the correlation between latent variable having t value > 1,96 at α=0,05 (level of significance).

The process of having the last fitted model in this research is through stages which being stated in the previous chapter. First, building a first model of loan repayment behavior by involving the entire endogenous and exogenous manifest variables which shown in the figure 3.

Second, assessing the early model specification to detect whether the offending estimates exists. Before moving forward to the next stages, namely fit test, it is better to check estimation results whether it is contain offending estimates. There are three offending estimates which commonly found, namely: (1) negative error variances or non-significant error variance for the available constructs, (2) standardized coefficients more or very close to 1.0, or (3) standard errors with high value. From the first fit model, it is found that there exist *offending estimates* in the form negative error variance of manifest variable x1. This problem, however, could be handled by defining such error variance to lowest positive value, for example 0.05 or 0.01 (Wiajnto: 2008). Thus, in this research I add set error variance of x1 to 0.05 by SIMPLIS program.
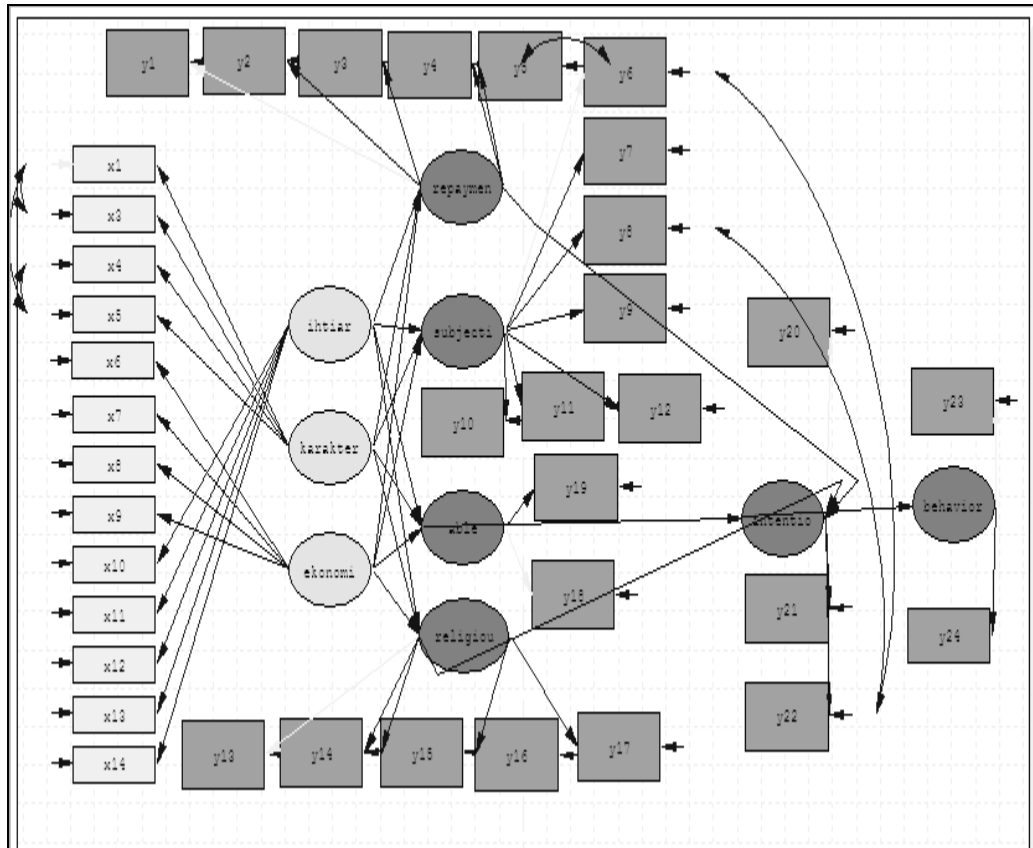
Source: Primary Data of Ikhtiar Program Participant

Figure 3. Early Specification Model

It is found that there is a significant correlation between latent variable intention to pay and repayment attitude with negative value error variance. However, the estimated value of structural relationship is not more than 1. There are some manifest variable which do not significantly related to its latent variables. These manifest variables are x5, x7, x8, y5, y7, y8, y12, and y22. The existence of offending estimates which still found in the second model modification is could be released by not included those manifest variables.

Having those eight manifest variables excluded from the model, now we do have second model modification to be examined

further. Thus, the entire manifest variables in this second model are significantly influence either endogenous or exogenous variables. To this point, there is no offending estimate to be worried to proceed to the overall model fit.

Overall Model Fit Test

Having the assessment to the offending estimates problem, the next stage will be the evaluation of SEM overall model fit. Below is provided some statistical analysis related to the overall model fit. The first evaluation is base on the absolute measurement (it is used to evaluate model fit and do not used to compare between the two model), among other things is Chi-quadrate test, Goodness-of-Fit Index

(GFI), and Root Mean Square Residual (RMSR) (see figure 3). From the test using Chi-quadrate it is found the value of χ^2 is 232.31 with level degree of freedom (df) 359 and P-value 1.000. According to this test, it can be concluded that the model used in this research is well fit to the data. In other words, the condition of empirical data is well fit with Ajzen's TPB being put forwarded in this research. However, this statistical measurement is very sensitive to the example measurement as well as data normal assumption. Thus, the assessment of overall model with using Chi-quadrate should be supported by any other statistical measurement.

In addition to the value of Chi-quadrate, GFI value is 0.88, a bit less than the ideal minimum limitation of 0.90. This result indicates that the model is not good enough to fit with the data. Another absolute statistical measurement that could be used is RMSR. The value of RMSR is 0.062. With this figure, it is enough to conclude along with the value of Chi-quadrate that the model in this research is good enough to fit the data.

Hypothesis Test

Base on structural equation model (SEM) using LISREL in appendix 8.4, detailed are some hypothesis test from the previous statement problem stated in the first chapter:

1st Hypothesis

H_0: Loan repayment attitude of Ikhtiar Program participant is not significantly affected by Ikhtiar Program, Individual Characteristic and Family economy.

H_a: Loan repayment attitude of Ikhtiar Program participant is significantly affected by Ikhtiar Program, Individual Characteristic and Family economy.

Based on SEM analysis using LISREL, it is found that t-test for each latent variables is: Ikhtiar Program (2.74), Individual Characteristic (-0.60) dan Family Economy (-2.09). Ac-

cording to the result of such t-test, there only Ikhtiar Program variabel which significantly influence Loan Repayment Attitude. The result of 2.74 is higher than 1.96, whereby we reject H_0 in the case of Ikhtiar Program. It means that Ikhtiar Program influence Loan Repayment Behavior of Ikhtiar Program participant. With coefficient of 0.93, it is indicates that every 1 additional effort in the program estimated will have a positive impact on the increasing of loan repayment attitude in its five main indicators by 93%, namely: 1) repaying the loan in due time will create discipline attitude; 2) repaying the loan in due time will gain a trust from other members within self-group; 3) it will not be a burden for the economic family in the future; 4) repaying the loan in due time will assist other members within self-group to have their turn to get their loan; 5) repaying the loan will increase the family economy. Therefore, there should be general evaluation related to have effective and efficient effort that might be useful for future development of Ikhtiar Program. In this case, as being discussed in focus group discussion, it is very much related to the needs of manual or standard in religious teachings.

2nd Hypothesis

H_0: Subjective Norm is not significantly affected by Ikhtiar Program, Individual Characteristic and Family economy

H_a: Subjective Norm is significantly affected by Ikhtiar Program, Individual Characteristic and Family economy

Based on SEM analysis using LISREL, it is found that t-test for each latent variables is: Ikhtiar Program (2.64), Individual Characteristic (-0.58) and Family Economy (-1.82). Similar with that of Loan Repayment Attitude variable, it is only Ikhtiar Program variable that significantly influence Subjective Norm. Thus, in this second hypothesis H_0 is rejected accordingly.

With coefficient of 0.66, it is indicates that every 1 additional effort in the program estimated will have a positive impact on the increasing of subjective norm by 66%. In this case, participant is being treated as part of family which works hand in hand with her husband. In fact, Ikhtiar Program always involve participant's husband in some programs. Therefore, there should be a special program for participant's husband to be involved more seriously as they really become an effective tool for Ikhtiar Program management to ascertain the high rate of loan repayment of participant.

3rd Hypothesis

H_0: Religious Norm is not significantly affected by Ikhtiar Program, Individual Characteristic and Family economy

H_a: Religious Norm is significantly affected by Ikhtiar Program, Individual Characteristic and Family economy

Whereas for Religious Norm variable, the result of SEM indicate that the value of t-test for each variable is: Ikhtiar Program (3.68), Individual Characteristic (0.89) andFamily Economy (-1.59). Based on this figure, it is clear that only Ikhtiar Program variable which significantly influence Religious Norm variable. Thus, $H_0$is rejected in this third hypothesis.

With coefficient of 0.72, it is indicates that every 1 additional effort in the program estimated will have a positive impact on the increasing of religious norm variable latent by 72%. Since religious norms or teachings are an important source of creating social capital, it is therefore, what has been applied so far has been further developed. An evaluation for the effectiveness of religious teachings toward community behavior should be taken into seriously. Similar to that of loan repayment attitude, it is very much related to the needs of manual or standard in religious teachings. Ikhtiar Program management should come up

with specific standard module for religious teaching so that it easy to be evaluated.

4th Hypothesis

H_0: Perceived Able to Pay is not significantly affected by Ikhtiar Program, Individual Characteristic and Family economy

H_a: Perceived Able to Pay is significantly affected by Ikhtiar Program, Individual Characteristic and Family economy

Analysis result for Perceived Able to Pay variable using SEM indicates that the value of each t-test is: Ikhtiar Program (2.66), Individual Characteristic (1.00) andFamily Economy (0.41). Similar to that of previous hypothesis, only Ikhtiar Program variable that significantly affect Perceived Able to Pay variable. Thus, H_0in this analysis is rejected accordingly.

With coefficient of 0.45, it is indicates that every 1 additional effort in the program estimated will have a positive impact on the increasing of perceived able to pay variable latent by 45%. The early process of this program, may has positive impact for Ikhtiar Program participant to say that they perceived able to repay their loan in due time. In fact, Ikhtiar Program management directs the participant to utilize the loan in a proper way. In addition, the participant always is remembered as they always recite the pledge every weekly meeting.

5th Hypothesis

H_0: Intention to Pay is not significantly affected by Repayment Behavior, Subjective Norm, Religious Norm, and Perceived Able to Pay

H_a: Intention to Pay is significantly affected by Repayment Behavior, Subjective Norm, Religious Norm, and Perceived Able to Pay

Analysis result using SEM for Intention to Payequation model indicates that the value of

t-testof each variable is: Repayment Behavior (1.68), Subjective Norm (-0.72), Religious Norm (-0.78) andPerceived Able to Pay (0.36). Based on such analysis result, there is no one single variable which significantly influence Intention to Pay variable in 5% level of significance. However, by employing 10% level of significant, Repayment Loan Behavior (attitude) is significantly influence Intention to Pay variable. Thus, H_0rejected.

With coefficient of 1.39 within α=0.10, it is indicates that every 1 additional effort in the repayment attitude of participant estimated will have a positive impact on the increasing of intention someone or Ikhtiar Program participant to pay their loan/debt by 139%. Actually, level of significance at α=0.10 for social sciences is still accepted compare to medical research which should have level of significance at α=0.1. In fact, intention to pay is consists of three main indicators as being figure out in table 4.31, namely; benefit, reference group as well as religious norm.

6th Hypothesis

H_0: Behavior is not significantly affected by Ikhtiar Program, Individual Characteristic and Family economy.

H_a: Behavior is significantly affected by Ikhtiar Program, Individual Characteristic and Family economy.

Based on SEM analysis, it can be figure out that the value of t-test for each variable is: Ikhtiar Program (3.77), Individual Characteristic (-0.42) andFamily Economy (-0.41). From such value of t-test, only Ikhtiar Program which significantly influence Loan Repayment Behavior variable. Thus, $H_0$is rejected in the case of Ikhtiar Program where it is significantly influence Loan Repayment Behavior of Ikhtiar Program participant.

With coefficient of 0.61, it is indicates that every 1 additional effort in the program estimated will have a positive impact on the increasing of loan repayment behavior of Ikhtiar

Program participant. It is interesting, where Ikhtiar Program has direct impact to the behavior of loan behavior of program participants. According to this estimation result, there should be additional effort undertaken by the program management to reach another 61% of Ikhtiar Program participant loan repayment behavior. This additional effort could be in various forms as long as what have been done is not rejected accordingly.

7th Hypothesis

H_0: Behavior is not significantly affected by Intention to Pay

H_a: Behavior is significantly affected by Intention to Pay.

Based on analysis result SEM, it can be found that Loan Repayment Behavior of Ikhtiar Program participant is significantly influence by Intention to Pay variable. This conclusion can be convinced by the result of t-test with 3.35 which higher than 1.96 at α = 0.05. Thus, it is enough to reject H_0.

With coefficient of 0.61, it is indicates that every 1 additional effort in the program estimated will have a positive impact on the increasing of loan repayment behavior of Ikhtiar Program participant. It is interesting, where Ikhtiar Program has direct impact to the behavior of loan behavior of program participants. According to this estimation result, there should be additional effort undertaken by the program management to reach another 61% of Ikhtiar Program participant loan repayment behavior. This additional effort could be in various forms as long as what have been done is not rejected accordingly.

From the overall hypotheses on the above discussion using SEM analysis with t-test > 1.96 at α=0.05, it can be concluded that Ikhtiar Program is directly (Hypothesis 6) and indirectly influence (Hypothesis 1, 5 and 7) the loan repayment behavior of Ikhtiar Program participant.
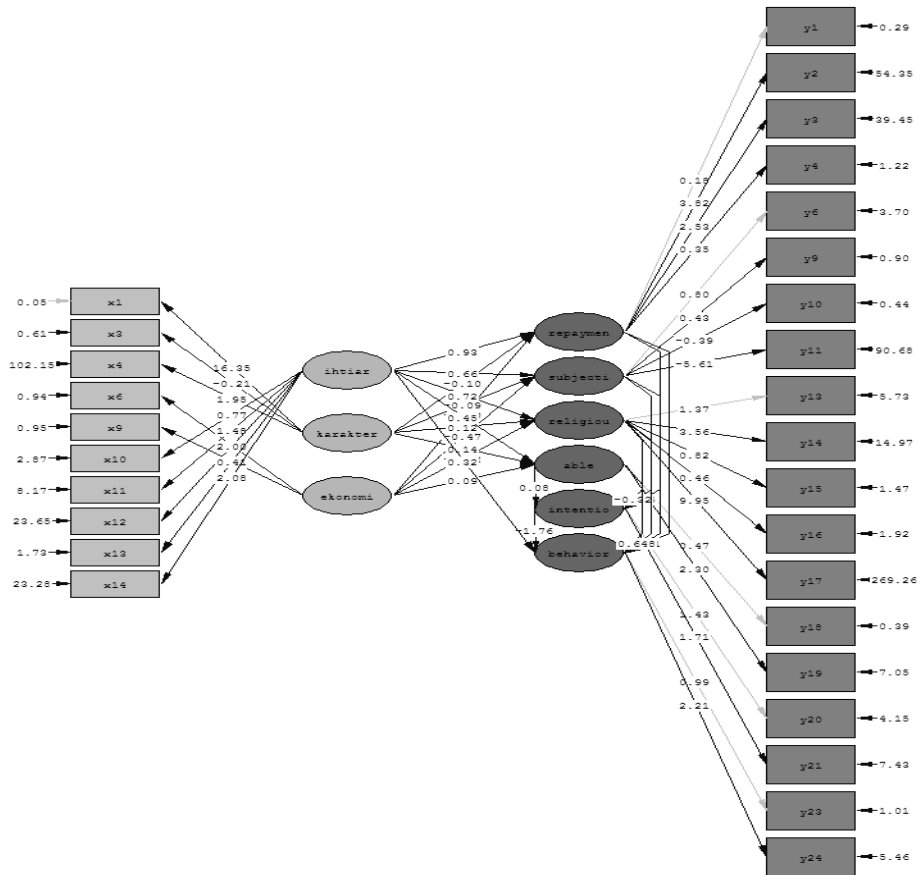
Chi-Square=216.96, df=353, P-value=1.00000, RMSEA=0.000

Explanation:
X1 = Ikhtiar Program	Y3 = Religious Norm
X2 = Individual Characteristic	Y4 = Perceived Behavior
X3 = Family Economy	Y5 = Intention to Pay
Y1 = Repayment Behavior (Attitude)	Y6 = Loan Repayment Behavior
Y2 = Subjective Norm	

Figure 4. Model Respecification of Loan Repayment Behavior

With coefficient of 0.70, it is indicates that every 1 additional effort in the intention to pay variable estimated will have a positive impact on the increasing of loan repayment behavior of Ikhtiar Program participant. It means that every single variable that affect three main indicators of intention to pay should be taken into seriously effort. Once these three indicators increase, it will automatically followed by the increase in loan repayment behavior of program participant by 70%.

Actually, Ikhtiar Program is not merely focused on financial services. It is also developed some programs which is directed to the empowerment of Ikhtiar Program participant other than financial services (beyond microcredit). As being stated previously that the vision of Peramu Foundation is "the establishment of new order of a just social and economic cultural community, so that *mustad'afin* of community group – male and female – become community group which has sound criti-

cal sense, able to fight for his bargaining position and wellbeing." Therefore, the mechanism being applied by Peramu Foundation through Ikhtiar Program is not dominated by financial strategy (e.i. joint-liability mechanism), rather it also contains social-economic strategy.

Ikhtiar Program is integrate two main important elements, namely: (1) Building social capacity of community so that able to empower themselves through some approaches: (i) microfinance services, (ii) training and education about household economic management, enterpreneurship, cooperative, and civic education, and (iii) strengthen community capacity in organizational work and delivering an opinion. (2) Utilizing Zakat, Infaq dan Shodaqah (ZIS) fund to empower the poor (mustahik) through sistematic, planned and sustained process.

The result analysis in this research, somehow, is similar to that of the first two groups of theories which hold that the existing level of social capital in the form of strong personal relationship/social trust or local information is affecting to group lending's success. In other words, loan repayment behavior of Ikhtiar Program participant is very much affected by the existing social capital which embedded in Ikhtiar Program, Repayment Behavior (Attitude) and Intention to Repay the Loan. The role of Ikhtiar Program in this context is affirmative in the process of capacity building of the entire participant program in the form of attitude, subjective norm, religious norm and others. The dense social network is considered as one indicator of high stock social capital in certain community (Georgarakos & Furth, 2010). Here, participant which always attend such meeting and training including religious teaching are likely to have moral constraints to misbehave.

It is similar with Seragilden & Grootaert (2002) that coordination or relationship builds trust and reduces opportunistic and uncoordinated behavior that can result in market failure. Another attribution that can be adapted to

this kind of network in this program is that it is strong ties networks. Henning & Lieberg, for instance, refers to networks with strong ties as when they are characterized by frequent and regular contacts between actors, such as relationships between family members and close friends and neighbors. This type of networks share similar characteristics with the network closure that is when most of individuals' contacts are overlapping with one another.

The finding is also similar with that of Cassar, *et al*. (2005), where they found evidence of reciprocating behavior in their research. The more a member is helped to repay the group loan by others, the more that member is likely to contribute back to the group. More importantly, social capital within the community of Ikhtiar Program in the form reciprocity norm is existed to influence their economic behavior.

The effect of IkhtiarProgam toward Repayment Behavior (Attitude) is 0.93 (coefficient result). It means that an increase in one unit or effort in Ikhtiar Program is estimated to raise 93 % of the Repayment Behavior (Attitude) of Ikhtiar Program participant. Where, Repayment Behavior (Attitude) indicators in this research is consists of five things, namely, 1) repaying the loan in due time will create discipline attitude; 2) repaying the loan in due time will gain a trust from other members within self-group; 3) it will not be a burden for the economic family in the future; 4) repaying the loan in due time will assist other members within self-group to have their turn to get their loan; 5) repaying the loan will increase the family economy. There exist a direct influence from Ikhtiar Program to Loan Repayment Behavior and indirect influence from Ikhtiar Program to Loan Repayment Behavior through Repayment Behavior (Attitude) indicates that to encourage the participant to repay their loan can be done directly or through some stages. However, this indirect influence of Ikhtiar Program is considered as a long term influence.

The effect of Ikhtiar Program toward Loan Repayment Behavior is affirmatively the impact of some programs that undertaken and provided by Ikhtiar Program for their participant or client. As being described in the previous chapter, to be a participant of Ikhtiar Program is merely based on their criteria but also they should attend and follow compulsory group training (LWK) within three days. It is one form of selection process. Hence, they also obliged to attend some program scheduled by Ikhtiar Program particularly weekly meeting within 1-2 hours. Throughout this meeting, there will be an exchange of knowledge and experience, create sense of solidarity, sense of trusteeship, giving each other input for the collective betterment. In this context, the authors could argue that the three virtuous values of social capital exist within the community of Ikhtiar Program participant in the form of Repayment Behavior (Attitude). An example of this is Floro & Yotopolous (2005) who demonstrate that where social ties are strong, group lending can both improve loan repayment and relax credit constraints.

Apart from having compulsory group training (LWK), there is also borrower self-selection process. It is similar with that of Tassel and Ghatak model whereby both demonstrate that the borrower self-selection process used in most group lending schemes improves repayment rates through mitigating adverse selection in credit markets. If borrowers have clear information over the riskiness of one another's projects, they sort themselves into homogeneous groups through an assortative matching process. Related to this social homogeneity, this research also similar to that of Cassar, *et al.* (2005) whereby their result from their art factual field experiments lend measured empirical support to the idea that social homogeneity is a good thing for group loan repayment.

However, this finding research is different with that of Wydick. Wydick (2000) found that while peer monitoring appeared to have some positive effect on group loan repayment, strong social ties within groups appeared to make it more difficult to pressure fellow members to repay loans. A strong social tie in the context of Wydick is somehow negative. In some cases, norms, relationships, and social networks embedded in societies can become a liability as they induce lethargy and can be a drag on change and development. This can happen in closely knit societies where integration within the community is high but weak linkages beyond the community prevent individuals to take new initiatives (Ahmed: 2009). Fukuyama (2001) also suggested that social capital can cause negative externalities when people in power favor those in their groups leading to cronyism and corruption. However, Ikhtiar Program participant is utilize this existing social capital for the right thing, even though they can easily change their mind to agreed together (self-group) not to repay their loan what has been stated by Fukuyama. Strong ties in Wydick perspective is considered kinship which is tend to be corrupted in nepotism practices.

The authors would say also in this finding in the context of the sources of social capital within this group of Ikhtiar Program participant, that it is a mixed between institutional and relational social capital. Institutional capital is structured whereby rules and procedures guide the behavior of individuals. This type of capital arises in institutional and organizational frameworks where the roles and responsibilities of different stakeholder are clearly defined.

Relational capital is based on cognition and resides in norms and beliefs of different societies. As the sources of this capital can arise from families, communities, and religions, it is unstructured and fluid (Khrisna, 2002). Ikhtiar Program in this context is regarded as a set of rules and procedures that guide the behavior of individuals including join-liability mechanism (Institutional). However, this program is not solely depend on

join-liability mechanism – as being opined by de Aghion and Gollier – rather there are many supported program that directed to go beyond simply financial service (beyond microcredit). Whereas, repayment behavior (attitude) and intention to pay is could be considered as relational social capital.

To sum up, the authors would end this part by saying that affirmatively social capital influence loan repayment behavior and accordingly against those that view the merits of group lending (relative to individual lending) solely through its innate properties as a joint-liability contract, where social capital plays little or no role.

CONCLUSION AND RECOMMENDATION

Conclusion

Based on analysis result as well as a discussion in the previous chapter, this research conclude that loan repayment behavior of Ikhtiar Program participant is very much affected by the existing social capital which embedded in Ikhtiar Program, Repayment Behavior (Attitude) and Intention to Repay the Loan. The role of Ikhtiar Program in this context is affirmative in the process of capacity building of the entire participant program in the form of attitude, subjective norm, religious norm and others.

Such that, this research is, somehow, is similar to those that view the relational aspects of social capital as key to the performance of group lending and those that view the informational aspects of social capital as key to the performance of group lending.

The effect of Ikhtiar Program toward Loan Repayment Behavior is affirmatively the impact of some programs that undertaken and provided by Ikhtiar Program for their participant or client. As being described in the previous chapter, to be a participant of Ikhtiar Program is merely based on their criteria but also they should attend and follow compulsory

group training (LWK) within three days. It is one form of selection process. Hence, they also obliged to attend some program scheduled by Ikhtiar Program particularly weekly meeting within 1-2 hours. Throughout this meeting, there will be an exchange of knowledge and experience, create sense of solidarity, sense of trusteeship, giving each other input for the collective betterment. In this context, the authors could argue that the three virtuous values of social capital exist within the community of Ikhtiar Program participant in the form of Repayment Behavior (Attitude). An example of this is Floro and Yotopolous who demonstrate that where social ties are strong, group lending can both improve loan repayment and relax credit constraints.

To sum up, the authors would conclude that affirmatively social capital influence loan repayment behavior whereby economic decision of this kind of people is not merely dictated by rational reasoning in the form material aspect.

Recommendation

Base on a conclusion put forward in this research, there are some recommendation that might be useful in the future policy of Islamic Bank or research related to social capital and economic decision:

1. It is urged for Islamic Banksto have a partnership with those IMFIs which apply group lending model (community based) to run their linkageprogram.

2. There should be another research that having a wider coverage of research, particularly in the different area or region so that the finding will have a comprehensive comparison in term of community economic behavior.

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