

The Quality of Social Interaction Based on Homophily and its Impact on Default of Group Based Lending

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Abstract - Islamic Microfinance Institution with a lending group financing system was originally intended to provide easy access for individuals who were classified as non-bankable due to limited personal resources. This study highlights the impact of characteristics including: the status of social relations that may be different from each individual who receives financing benefits at the Islamic Microfinance Institution; whether classified as low or high homophily; on their default probability. The study was conducted by taking primary data from a sample of 240 customers from 2 different locations, each of 120 respondents in the province of West Sumatra and 120 respondents in Lampung province who received funding from the Islamic Microfinance Institution. To compare homophily variable relations; on the probability of default, the respondent is also combined from the debtor who experiences the default installment of financing or non-default. The data collection process uses a questionnaire that contains questions about basic demographics, in addition to questions that aim to bring up social relations status preferences. In addition, the impact of the characteristics of the external environment is also estimated using logit regression. Group-based financing, one of which is to reduce adverse selection, can have the opposite effect. The ineffectiveness of the group's role for various reasons, can be contagion to trigger moral hazard for other group members. The study found that in addition to the status of social relations, as internal factors, the effectiveness of financing groups as an external factor determining timely payment compliance also plays an important role.

Keywords - Islamic Microfinance Institution, Credit Risk, Homophily.

I. INTRODUCTION

The study of the determinants of Non-Performing Loans in Financial Institutions is mostly still struggling on the external side of the macro such as economic conditions [1].

Even though understanding the behavior of individuals as potential borrowers is an important step to reduce adverse selection and moral hazard [2] which can cause defaults.

Besley and Coate [3] show that the group lending mechanism also helps lenders overcome the problem of information asymmetry in markets where the credit history of a debtor cannot be observed (social collateral).

However, the financing scheme based on lending groups is not a panacea for the completion of the default potential.

Group lending also has limitations, both in terms of practical and psychological.

Nan Lin [4] presents the fact that different people may not have the same social capital and regain social capital as they would expect. This situation refers to what he calls the deficit of social capital.

While the deficit of social capital return refers to a process where there are differences in both the quantity and the level of quality of social capital, there are differences in certain benefits perceived by different individuals.

Closed structures tend to form solid networks that create strong relationships between the same individuals. The downside, the structure of homogeneity and closedness will

cause the group to become rigid in cognitive flexibility and difficulty adjusting to environmental changes.

Groups that are not completely closed, but have a low homophily with other groups, will benefit from the flow of information between groups through bridging relationships.

Mark Granovetter argues that a low homophily gives group members the latest information on ideas, modes and job openings, and increases the likelihood that members can be organized in social movements.

Islamic microfinance can be understood in the context of Islamic religious attitudes towards the distribution of wealth, ethics, and social and economic justice [5]. Contrary to conventional microfinance, Islamic finance is guided by *maqashiddul syar'iyah*, which ensures that wealth circulates to as many people as possible, ensuring that growth and equity promote social justice and prosperity [6].

In addition to prohibiting usury, the next principle is the idea of risk sharing between lenders and borrowers. This idea promotes profit and loss sharing between two parties during both positive and negative periods [7]

Research question:

1. Do default occur in lending groups that have social relations with homophily-based types or vice versa?
2. Are there any impacts derived from socio-economic, demographic, geographic and cultural characteristics of the default or non-default of a consumer in Islamic Microfinance Institutions?

II. MATERIAL AND METHODS

This research combines two research methods, qualitative and quantitative methods. Qualitative methods are carried out at the stage of measuring the type of social capital. Type of social capital of an individual is observed through interviews using a questionnaire containing a set of questions that are measured on a Likert scale.

Furthermore, after going through quantification of the qualitative data, where the Likert scale of each individual will be aggregated, then the quantitative data is analyzed. In this case the causality pattern between variables from individual data is constructed into econometrics. Furthermore, econometric models or modeling of hypotheses that have been proposed will be processed using regression analysis.

The study was conducted in 2 (two) locations, West Sumatra province, which was dominated by Minangkabau ethnic and Metro Lampung city, Lampung Province, which

was relatively multi ethnic. The analysis unit is a financing customer that has a default of 240 people from 4 different Islamic microfinance institutions by looking at the relationship between lender-borrower, urban and rural and gender.

Hypothesis

This research proposes a hypothesis that will be proven through analysis of findings, as follows:

1. Default consumer have higher social capital ties than non-default consumers.
2. Default consumer have a lower level of education and socio-economic background than non-default consumers.
3. Individual characteristics (internal factors) and regulations or good governance of Islamic microfinance institutions (external factors) also determine the default status of individuals.

III. RESULT

A. Regressi-Basic Analysis

Tables 3 and 4 describe the findings of the econometric estimates of this study. Here are 6 regression models tested. Model 1, examines the respondent's social ties status in a group-lending to the probability of default in installments of Islamic microfinance institutions. The processed logit regression results show that the default tendency relation with the low homophily level corresponds to the hypothesis. Direct (positive) relations of both variables and their significance reveal the fact that non-default installments have higher in low homophily than default.

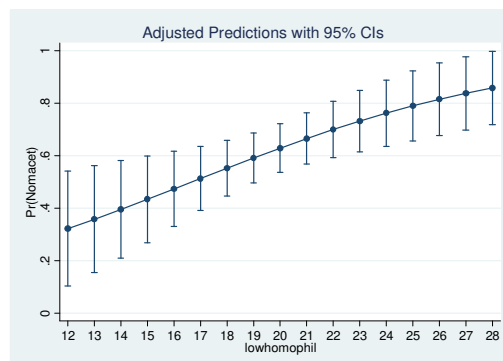
Model 1 in Tables 3 and 4 shows the relationship between these two variables is very significant. Furthermore, on models 2, 3, 4 and 5, after the entry of several other variables, age and gender into the model, the status of respondents' social ties in a group-lending to the probability of default in financing installments remains unchanged. Significant in the same direction as model 1.

Table 3 shows that the tendency of non-default installments of SMEs in the province of West Sumatra in general tends to increase as the low homophily score increases. In Figure 4, it turns out that the low homophily variable starts rising at a score of 15 from the range of scores 18. However, compared to the general condition with Lampung province, the impact coefficient increases the homophily low score on the non-default trend of SME perpetrators slightly higher. On average, an increase of 1 unit of low homophily score for SMEs in the province of West Sumatra has caused the non-default tendency of installment

to rise by 0.20 points. The same thing happened in Lampung rising by 0.10 points.

But as with the nature of the non-linear estimation, the degree of relation between the two variables also shows a change from one condition to another. Figure 1 below shows

that low homophily perpetrators of SMEs tend to increase as the low homophily score increases. From the reading in Figure 4, it turns out that the low homophily variable from the score range 18-23 shows that the marginal tendency for non-default effects is getting smaller..



Source: Survey data processed

Figure1. Relationship Probability Margin of Low Homophily to Non-Default
WEST SUMATRACOMBINED DATA

The findings of this study are in line with the initial proposition. So that in turn, the increasing degree of low-homophily will lead to non-default choices. If the presence of other variables in the model will not change the direction and significance of the relation of the main variables as in the previous model, it can be concluded that the pattern of relations is robust. On these three models (1, 2 and 3), the status relation is low homophily with the default status, having a line (direction) corresponding to the previous model 1. But as an interesting note, the pattern of relations between low homophily status and financing default status, slightly decreased the level of significance. This can be seen from the model 1. Similarly, the magnitude of the coefficient (z-score), which from model 1 to model 3, also decreases. The rationale behind this interesting fact needs to be further revealed by conducting various tests.

From the reading on model 2 to model 3, it turns out that the relationship between respondents and Islamic microfinance institutions also influences the default status. The findings of this study state that respondents with higher financing frequency tend not to default. This strengthens the initial proposition.

In model 2 to model 3, it turns out that the variable number of home ownership status is also related to this default status. The findings of this study also seem to be in accordance with the initial proposition. Customers who already have their own homes at a fixed location are proven not to cause default status.

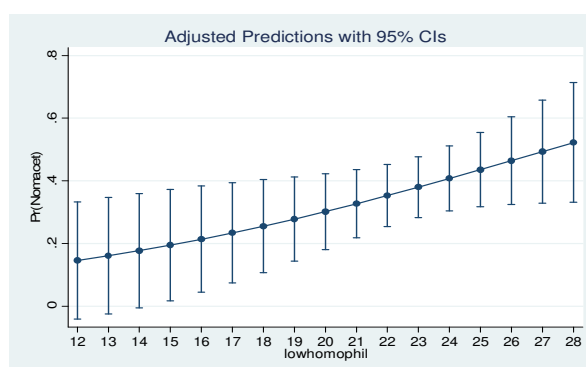


Figure 2. Relationship Probability Margin of Low Homophily to Non-Default
LAMPUNG COMBINED DATA (Source: Survey data processed)

Unlike the conditions in West Sumatra, Figure 5 above shows that the low homophily of perpetrators of SMEs in Lampung province tends to be constant as the low homophily score increases. But the education level relation with the default status shows a negative pattern even though it is not significant. From model 2, after the entry of several other variables, low homophily relations with default status in Islamic microfinance institutions remained significant in the same direction to model 1.

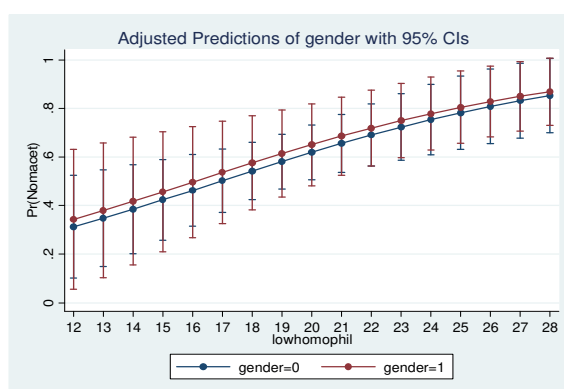
B. Robustness Test

Furthermore, robustness-test model, various other variables are included in the model as controls. If the presence of other variables in the model does not change the direction and significance of the relation of the main

variables as in the previous model, it can be concluded that the relation is robust.

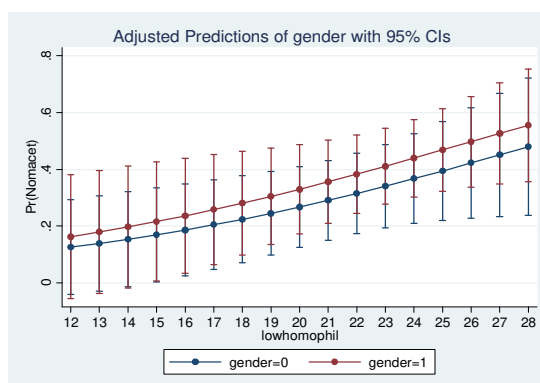
1. Role of Gender

From the reading on model 2 to model 6, it turns out that in general (of the whole sample) in the province of West Sumatra, gender variables are not related to the default through the low homophily level. In line with this, there are also findings in Lampung province. Figure 1 below (red line = male and blue line = female) shows that the default of SMEs with a tendency to tend to increase in women, but the difference is not significant.



Source: Survey data processed

Figure 3. Relationship Probability Margin between Main Variables and Gender Control
WEST SUMATRA COMBINED DATA

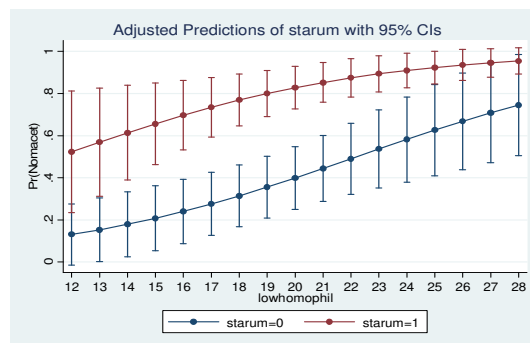


Source: Survey data processed

Gambar 4. Relationship Probability Margin between Main Variables and Gender Control
LAMPUNG COMBINED DATA

2. The role of other socioeconomic characters

Meanwhile, in West Sumatra the status of home ownership turned out to have a different impact on the default status.

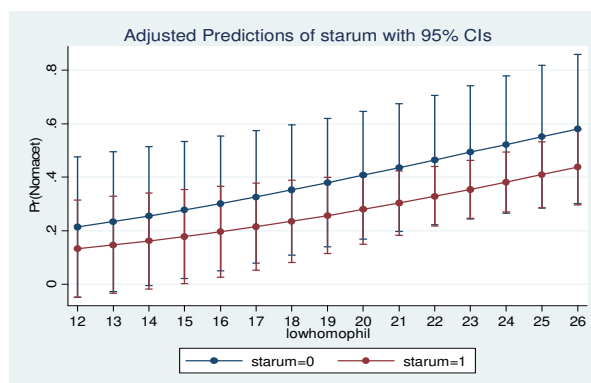


Source: Survey data processed

Figure 5. Relationship Probability Margin between Main Variables and Home Ownership Control
WEST SUMATRA COMBINED DATA

There is a significant difference in the relationship between the main variables based on the status of home ownership. Individuals who have their own homes turn out to have a low homophily tendency which is greater than customers who do not have their own homes. Unlike in

Lampung province, there is no significant difference in the relationship between the main variables based on the status of home ownership. Individuals who have their own homes do not have different low homophily status, which is different from those who do not own their own homes.



Source: Survey data processed

Figure 6. Relationship Probability Margin between Main Variables and Home Ownership Control
LAMPUNG COMBINED DATA

No less surprising that it turns out that in Lampung province the level of education relation with non-default status shows a pattern that changes from negative to positive although not significant. In model 2, the relation is negative. The more educated (higher) default status is more visible. But in model 3, the relationship between these two variables

becomes positive. In other words, customers who have education, apparently have a tendency to default. Surprisingly, the findings of this study reveal something different from the initial proposition. Unfortunately our data cannot explain further about the fact of this unique relationship.

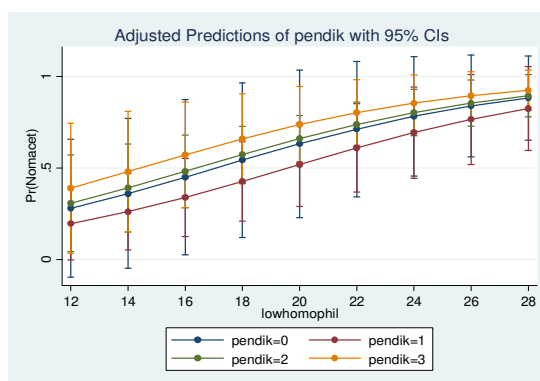
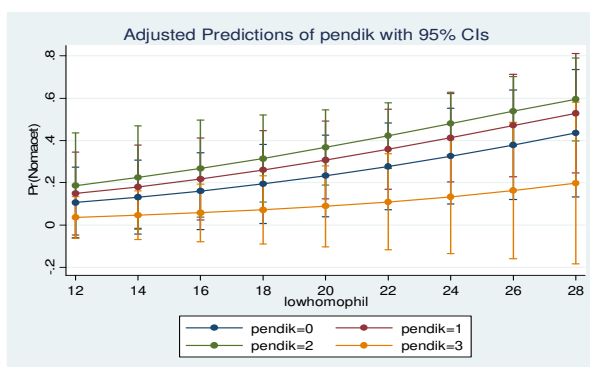


Figure 7. Relationship Probability Margin between Main Variables and Level of Education Control
WEST SUMATRA COMBINED DATA



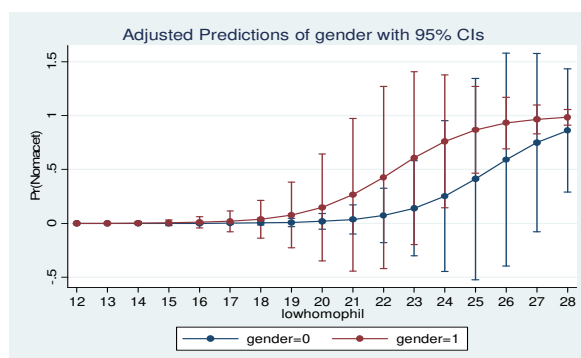
Source: Survey data processed

Figure 8. Relationship Probability Margin between Main Variables and Level of Education Control
LAMPUNG COMBINED DATA

C. Role of Urban-Rural

When the data has been divided into 2 parts, urban and rural, from model 2 to model 6, it turns out that the gender variable is most related to this default through the low

homophily level. Surprisingly, the findings of this study reveal different things with the initial proposition. Figure 1 below shows that the defaults of SMEs with tendencies will tend to increase in women.

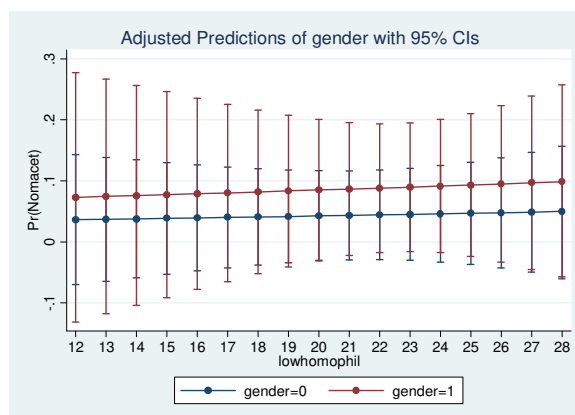


Source: Survey data processed

Figure 9. Relationship Probability Margin between Main Variables and GenderControl
RURAL WEST SUMATRA DATA

Unlike the findings in Lampung province. Figure 1 below (red line = male and blue line = female) shows that the default of SMEs with a tendency to tend to increase in women, but the difference is

not significant. It turns out that there are significant differences in relations between the main variables based on gender. Men have a lower homophily tendency than women.

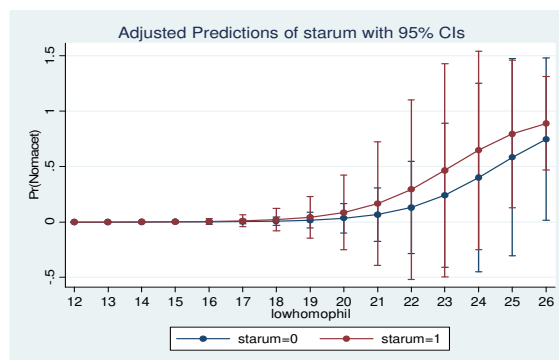


Source: Survey data processed

Figure 10. Relationship Probability Margin between Main Variables and Gender Control
RURAL LAMPUNG DATA

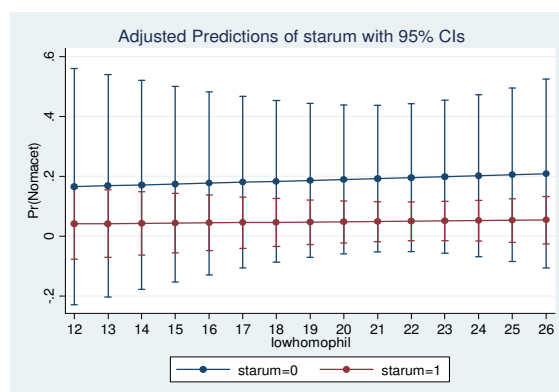
Furthermore in Figures 11 and 12 shows that there is a significant difference in relations between the main variables based on the status of home ownership. Individuals who have their own homes turn out to have a low homophily tendency which is greater than customers who do not have their own homes. Unlike the case in

Lampung province, there is no significant difference in relations between the main variables based on the status of home ownership. Individuals who have their own homes do not have different low homophily status, which is different from those who do not own their own homes.



Source: Survey data processed

Figure 11. Relationship Probability Margin between Main Variables and Home Ownership Control
RURAL WEST SUMATRA DATA



Source: Survey data processed

Figure 13. Relationship Probability Margin between Main Variables and Home Ownership Control
RURAL LAMPUNG DATA

IV. CONCLUSIONS AND SUGGESTIONS

A. Conclusions

The results of the linear probability estimation show some conclusions. First, principals of SMEs who have a low homophily level have a smaller probability of default. This result is in accordance with the null hypothesis that there is a difference in the low homophily level with the default status. This hypothesis stems from the idea that more open relationships bring greater opportunities for SMEs in group-lending-based financing in Islamic microfinance in sharing success according to profit sharing contracts.

Second, the perpetrators of male SMEs in a group-lending financing tend to be non-default. This result is ambiguous. On the side of ease of access, this result is not too surprising. Men tend to be easier to react with various people with different socioeconomic attributes. But on the practical side that has been known from the results of empirical research in various parts of the world, this is precisely the opposite.

Grameen Bank, as a reference model for group-lending based microfinance management, is actually known as the domination of the financing group from housewives. So, to answer this, nothing else, bad social capital theory must be put forward. It was suspected that the group actually fertilized and transmitted moral hazard to fellow members of the financial group that were women (bad social capital). Bad social capital refers to bonding social capital, which is a close social relationship in family, friends and a negative environment. In peer groups, this usually refers to aspects of imitating bad behavior. This is done by young people who are afraid of losing friends. This is what then becomes the justification for financing strategies for MFIs in various

worlds which are now starting to leave group-lending financing.

Third, the findings turned out to find an interesting relationship pattern with U-inverse pattern (inverted U-shape) between the level of education of the perpetrator and the SMEs of the default status tendency. Up to one threshold level of education, SMEs tend to default. But after passing that year, the trend towards default is decreasing.

Regarding regional status, it turns out that some uniqueness characterizes a region, both in Lampung and West Sumatra provinces, which contribute to the status of financing defaults. But its contribution is not through the status of social relations, but through other variables or characteristics. This is shown in the regression table. In both regions, the same real low-homophily status contributes to the low default status. But not on gender status and home ownership.

B. Suggestions

The findings about default relations with gender are in contrast to lessons learned that have been known from the results of empirical research in various parts of the world. Grameen Bank, as a reference model for group-lending based microfinance management, is actually known as the domination of the financing group from housewives. This requires further research. Is this because the group member selection model is done voluntarily or because it is determined by Islamic microfinance?

REFERENCE

- [1] World Bank (2013). "The New Microfinance Handbook: A Financial Market System Perspectives", New York.
- [2] Pearlman, Sarah (2012). "Too Vulnerable for Microfinance? Risk and Vulnerability as Determinants of Microfinance Selection in Lima," *Journal of Development Studies*, 48 (9), pp. 1342-1359.
- [3] Besley, T., Coate, S., (1995). Group lending, repayment incentives and social collateral, *Journal of Development Economics*. 46 (1), 1–18.
- [4] Nan Lin (2000). *Contemporary Sociology: Inequality in Social Capital*, American Sociological Association. Vol. 29, No. 6, pp. 785-795
- [5] Dhumale, R., and A. Sapcanin, 1999, *An Application of Islamic Banking Principles to Microfinance*, World Bank
- [6] AsyrafWajdiDusuki, (2008) "Banking for the poor: the role of Islamic banking in microfinance initiatives", *Humanomics*, Vol. 24 Issue: 1, pp.49-66,
- [7] El-Komi, M., & Croson, R. (2011). *Efficiency of Islamic Finance Contracts: Microfinance Experiments*. 8th International Conference on Islamic Economics and Finance. Qatar: Center for Islamic Economics and Finance.