

## The Delegated Roles of Group Leader in Group-based Lending Program: Evidence from Vietnam

Tran Ba-Tri<sup>1\*</sup>, Truong Dong Loc<sup>1</sup>, Pham Phat Tien<sup>1</sup>

<sup>1</sup>*School of Economics, Can Tho University, Can Tho City 94155*

---

**Abstract:** In this paper, we investigate the impact of delegated monitoring by the group leader on group loan default rate in the group-based lending program of the Vietnam Bank for Social Policy (VBSP). We interviewed group leaders from 225 groups in the Mekong River Delta, Vietnam. This group-based lending program employs a unique monitoring system by hiring the group leader to supervise the group. We use two independent variables-commission on business income rate and group size-to measure the delegated monitoring motivation of the group leader. Additional variables serve as proxies for screening, monitoring, and enforcing loan repayment. The results of the Tobit model demonstrate that commission received by the group leader is effectively in reducing group loan default rate within a benchmark. Beyond the benchmark, the likelihood of group loan default increases. Additionally, under the delegated monitoring scheme, group size plays an important role in decreasing group loan default rate. And geographic proximity also helps to make the monitoring by the group leader more effective.

**Keywords:** group loan default rate, delegated monitoring, group leader, group lending, Vietnam.

---

### 1. Introduction

Development economists and policymakers have identified that one of the main obstacles to poverty reduction is access to credit. In an environment of imperfect information, information asymmetry between lenders and borrowers leads to adverse selection and moral hazard problems (Akerlof, 1970; Stiglitz & Weiss, 1981). Traditional commercial banks fail to supply microloans in rural areas of developing countries due to high transaction costs, information costs, monopolistic profits, and lack of collateral (Hoff & Stiglitz, 1990). These issues negatively impact the functioning of credit markets in underdeveloped areas, particularly in the rural regions of developing countries. These issues negatively impact the functioning of credit markets in underdeveloped areas, particularly in the rural regions of developing countries.

The innovation of joint-liability group lending programs helps to reduce costs by transferring them to the borrowers. However, joint liability alone cannot ensure the success of microcredit programs. Joint liability needs to be incorporated with dynamic incentives and innovative contract terms to achieve success (de Aghion, 1999; Chowdhury, 2005; de Aghion & Morduch J, 2010). This explains the shift from joint-liability group lending toward individual-based lending systems. Additionally, the development of information technology infrastructure has spurred delegated lending practices in crowd funding programs. The success of crowd funding programs stems from collaborating with local microfinance institutions (MFIs), which are responsible for disbursing loans and collecting repayments. These local MFIs have a cost advantage in producing information about credit risk compared to the crowd (Berns et al., 2021; Bouasria et al., 2020). This delegated monitoring model has been increasingly replicated across various countries.

In Vietnam, the Vietnam Bank for Social Policies (VBSP) has implemented a delegated group-based lending program, which features unique characteristics distinct from joint-liability group lending and delegated lending programs on crowd funding platforms. The first fundamental difference is that all members of the group are not jointly liable for each other's loans. The second difference pertains to the delegation of tasks. During the candidate screening stage, the Bank authorizes village leaders, socio-political organizations (such as the Women's Union, Farmers' Union, War Veterans' Association, or Youth Union), and the group leader to screen candidates. These organizations encourage their members, who are typically poor or near-poor households, to apply for membership. Since the purpose of this lending scheme is to support the Government's hunger eradication and poverty alleviation program, most applicants with businesses are approved as group members. The group leader and the village head are responsible for screening the loan demand size and the loan purposes of the group members. They then finalize the proposed loan size and submit it to the Bank. Based on this proposal, the Bank approves and disburses the loan at the Commune government's office. The Bank hires the group leader to supervise the group members. The group leader promptly informs the Bank and local authorities of any cases where members have the means to repay but fail to do so.

Most empirical studies on joint-liability group-based lending programs investigate the impact of formal screening (Wenner, 1995), social ties (Sharma & Zeller, 1997; Zeller, 1998), peer monitoring, peer pressure (Wydick B, 1999), nonfinancial services (Diagne, 1999) on repayment performance. Hermes et al. (2006) is, to

our knowledge, the first to examine the roles of both the group leaders and group members within a joint-liability group in Eritrea. Using the data obtained from a questionnaire survey of 351 members across 102 groups, they found that the social ties of the group leader have a significantly positive effect on repayment performance of groups, while social ties of other group members do not impact on the repayment. In addition, the authors documented that monitoring activities of both the group leader and the other group members have no effects on repayment performance of groups. Eijkel et al. (2012) using the same data as Hermes et al. (2006), found that group leaders exerted more monitoring efforts than ordinary members. Al-Azzam et al. (2013) determined the effects of joint liability, screening, monitoring activities, and social ties of both the group leader and other group members on repayment performance in Jordan. Using a negative binomial II model, they found that the higher the joint liability of the group leader, the better repayment performance of the group. Regarding screening, this study reported the group leader's knowledge about the rest of the group members' assets and debts reduces days of late repayment, while other group members having similar knowledge about each other's assets and debts appears to have no significant impact on late repayment. In addition, social ties of the group leader and group members have a significant effect on repayment. However, monitoring activities of both the group leader and group members have no effects on repayment rates.

Regarding delegated monitoring, prior studies have used various proxies to measure the monitoring intensity of financial institutions. For instance, Coleman et al. (2006) and Lee & Sharpe (2009) used the salary expense share of a bank as a proxy for monitoring effort, based on the assumption that higher salaries incentivize greater effort. However, these studies focused on commercial banks. To our knowledge, Berns et al. (2021) investigated the effect of delegated monitoring on repayment rates of a microfinance program, investigating 67,177 loans administered by 102 MFIs in 35 countries listed on the Kiva platform. This study provides evidence to confirm that borrowers who are more intensely monitored by MFIs, such as staff workload and staff salary, are more likely to make a repayment of loan on time. In addition, the effect of monitoring activities on repayment of individual loans is stronger than group-based loans. Finally, they found that monitoring activities has a stronger effect on repayment performance in less competitive lending markets.

In summary, the empirical studies provide evidence that the role of the group leader is more significant in increasing group repayment performance compared to the role of group members. However, there is limited evidence that the monitoring efforts of the group leader effectively impacts group repayment performance. In addition, some studies found that the delegated monitoring plays an important role in reducing credit risk. However, to our knowledge, no study investigates the impact of the delegated monitoring of the group leader on repayment performance of the group-based lending programs.

To fill this gap in the literature, this study investigates the effects of the delegated monitoring by the group leader on loan default rate of the group-based lending program in Vietnam. This study contributes to the literature as follows. First, this study provides unique insights into the literature covering the impact of delegated monitoring on loan default rate of the group-based lending programs due to the fact that the group-based lending programs in Vietnam are not financially joint liability. Second, most of previous studies have focused on delegated monitoring by external MFIs, our study investigated the monitoring motivation from within the group, specifically from the group leader, who is also a member. As an insider, the group leader has cost advantages in producing information about credit risk compared to an external third party and is incentivized by commissions. We hypothesize that the group leader's delegated monitoring motivation will effectively reduce the likelihood of loan defaults.

The remainder of the paper is organized as follows. Section 2 details the group-based lending program of VBSP for poor and near-poor borrowers. Section 4 describes the data. Section 5 outlines the empirical model and results. Finally, Section 6 concludes with the findings and limitations of the study.

## **2. Group-based lending program of VBSP for the Poor and near-Poor in Vietnam**

VBSP is a state-owned bank, which is established for the hunger eradication and poverty alleviation purposes. It emerges at the district level nationwide in Vietnam. Group-based lending program of VBSP is designed for the poor or near-poor household who is member of one of four socio-political organizations: Women's Union, Farmers' Union, Veterans' Association, or Youth Union. District branch delegates authority to the village chief or one of the socio-political organizations to select candidates to participate in the borrowing group. During the group formation meeting, the list of group members is endorsed, and the management board is elected. The list of group members must then be approved by the commune People's Committee before being officially accepted by VBSP. The number of members in a group range from 5 to 60 people, with a loan amount of up to 100 million VND (approximately 4,000 USD) without collateral and a loan term of up to 120 months, depending on the purpose(s) of the loan application.

The loan process for the program is as follows: the specific socio-political organization encourages eligible members to submit loan applications to the group management board. The group management board

collaborates with a specific socio-political organization to hold a meeting to assess the demand and propose a loan amount for every member. The list of all proposed loans is submitted to the local commune government and the Bank for approval. The Bank approves the loans and notifies the government, the organization, and the group leader. The group leader then notifies the borrowers about the date of disbursement. The Bank disburses the loans directly to the borrowers at the commune government's office.

After the loans have been disbursed, the group leader carries out the tasks outlined in the delegation contract signed with VBSP. The group leader directly monitors the loan use, production and business activities, and income of the group members. They encourage group members to use the loan in accordance with its intended purpose and to repay the loans on time. If a group member encounters difficulties or is unable to repay the loan, the group leader takes measures to assist the member in repaying the Bank. They promptly inform the Bank and local authorities of any cases where group members misuse the loans. Additionally, the group leader proactively urges, advises, and collaborates with the village chief and socio-political organizations to handle cases where members have the means to repay but fail to do so. The Bank generally supervise the management board and only intervene with specific group members if misuse of the loan occurs.

### 3. Data

From August to October 2022, a survey was conducted in rural villages across five provinces in the Mekong River Delta including An Giang, Bac Lieu, Dong Thap, Hau Giang, and Tien Giang with totally 225 groups. Please note that the interviews were conducted during the Covid-19 pandemic. Therefore, data collection was limited to five provinces in the Mekong Delta region. However, the interview areas are still representative of the region based on two criteria: geographical location and diversity of production and business activities. For the first criterion, the five provinces are located in the northern part of the Tien River, between the Tien River and the Hau River, and in the southern part of the Hau River. The Mekong Delta is the basin of these two rivers. For the second criterion, we chose An Giang because it is known for rice and aquaculture, Hau Giang for rice and fruit trees, Dong Thap for fruit trees, aquaculture and rice, Tien Giang for livestock and fruit trees, and Bac Lieu, a coastal province, known for its seafood industry.

The interviewees are the group leaders. The questionnaires covered individual socio-economic characteristics, screening, monitoring, enforcement, commission social ties of the group leader. All data concerning loans, repayment, business activities of group members, group characteristics, and local infrastructure are also collected from the group leader.

### 4. Empirical model

We investigate the roles of the group leader as a delegate of the Bank. In particular, we examine the monitoring, screening, and enforcing of the group leader. We utilize the Tobit model to assess the impact of independent variables on group default rate. The empirical model employed in this study is outlined as follows:

$$GDefRate_i = \alpha + \beta_m Monitor_{m,i} + \delta Screen_i + \gamma Enforce_i + \lambda Control_{q,i} + \varepsilon_i(1)$$

Where,

GDef Rate is the dependent variable. It is calculated by dividing the number of borrowers having repayment problems by the total number of members in a group.

Monitor is a vector of independent variables representing monitoring of the group leaders. Monitoring is a labor-intensive task and involves activities that are not directly observable. Prior studies have used different proxies to measure the monitoring intensity of a financial institution. Coleman et al. (2006); and Lee & Sharpe (2009) use the salary expense share of a financial institution as a proxy for monitoring intensity, based on the assumption that higher remuneration incentivizes the institution's staff to exert greater monitoring efforts. Furthermore, Berns et al. (2021) add the number of borrowers per loan officer at each MFI (workload of loan officers) as another proxy for monitoring intensity besides the average salary divided by GDP per capita of MFI staff. They argue that an increasing in the number of borrowers per loan officer would decline the loan officer's ability to monitor borrowers' activities.

Our choice of proxy for delegated monitoring intensity is motivated by the study of Berns et al. (2021). However, we introduce two three proxy variables for delegated monitoring: (LCommInc Rate), (LCommInc Rate<sup>2</sup>) and group size (GSize-workload of group leader). LCommInc Rate is the commission divided by income from business of the group leader. These variables measure the financial benefit from the program and the workload of the group leader more directly, impacting the quality and quantity of the group leader's monitoring efforts. This ratio implies that the received commission is relatively important to a group leader, incentivizing greater efforts in monitoring by the group leader.

LCommInc Rate<sup>2</sup> is the squared of LCommInc Rate. We expect that commission-on-income ratio has nonlinear impact of the group loan default rate. The number of borrowers within a group may impact the intensity of monitoring by the group leader. Theory suggests that the larger the group size, the higher the probability of members to support each other within a group, leading to higher repayment rate (Zeller, 1994).

Other proxy variables refer to the information for monitoring of the group leader are as follows:

- LIncInfoD is a dummy variable, it equals 1 if group leader has information about income of group members, and 0 if the group leader has no information.
- LVisitD is a dummy variable, it equals 1 if group leader frequently visit houses or premises of group members, and 0 if the group leader not frequently visit.
- LBizInfoD is a dummy variable, it equals 1 if group leader has information about business activities of group members, and 0 if the group leader has no information.
- LAvgDist is average distance between group leader's house to group members' houses or premises in meter. All these monitoring variables is expected to negatively impact on group loan default rate.
- LYrs is the number of years in charge of leadership. Long time holding the position help the group leader produce more information about the group members. It is expected to have negative coefficient.

Screen is a vector of variables representing the screening activities. LPurInfoD is a dummy variable, it equals 1 if group leader has information about borrowing purpose(s) of group members, and 0 if the group leader has no information. GVoteD is a dummy variable, it equals 1 if group members vote to select new member of the group, and 0 if this is not the case. The screening variables is expected to have negative effects on group loan default rate.

GPressureD represents enforcement of the group leader in group loan repayment. This dummy variable equals 1 if group leader indicates that it is difficult to pressure group member in repaying loan, and 0 if this is not the case. This variable has expectedly possitive impact on the dependent variable.

Control is vector of independent control variables representing personal, socio-economic characteristics of group leader, and group characteristics. They consist of the following variables:

- LEdu is education background of group leader, measuring by the number of years of schooling.
- LSexD is a dummy variable, it equals 1 if group leader is male, and 0 otherwise.
- LAge is the age of group leader (in years).

Extant literature suggests that female borrowers have a better repayment history than their male counterparts. Given this backdrop, we expect that loan default is positively associated with male borrowers. For the age and number of years of schooling variables, we assume that they have negative impacts on loan default, implying that literate or older borrowers are more likely to adhere to stated obligations than illiterate or younger members.

The variables measuring the socio-economic characteristics of the group leader include as follows.

- LInc is income from business of group leader (in million VND). We assume that if the group leader's business income is too high, they may become very busy with their own business activities. Furthermore, if their income is excessively high, the group leader may no longer see the incentives received from the group as significant. Consequently, their efforts for monitoring may decrease.

- LLoanD is a dummy variable, it equals 1 if group leader borrows loan from the program, a 0 otherwise. This variable is expected to have a negative correlation with loan defaults. This is because, as a borrower, the group leader is incentivized to monitor the proper use of loans by group members to maintain their position as leader and to receive a commission that helps repay their own loans. –

LOthFinD is a dummy variable, it equals 1 if group leader borrows from other credit source(s), a 0 otherwise. LOthFinD is expected to have a positive sign of the coefficient. Accessing multiple credit sources simultaneously can indeed increase the risk of over-indebtedness, especially when loans have differing terms and repayment schedules.

- LDefD is a dummy variable, it equals 1 if group leader was unable to pay the loan or interest by the due date, and = 0 if there was no late repayment. This variable will negatively impact the repayment behavior of the group members. Finally, group characteristics variables include the following:

- GSavProgD is a dummy variable, = 1 if group has a regular saving program, and 0 otherwise. When a group implements a mandatory periodic savings scheme for its members, it helps establish a habit of saving among them. These savings also serve as a fund for loan repayment, thereby reducing the risk of loan delinquency.

- GRegD is a dummy variable, = 1 if group has a written charter that must be sent to all group members, and 0 otherwise. Providing every member with written regulations makes it easier for them to comply with rules related to the use of borrowed funds, reducing the likelihood of loan misuse.

- GMeetingD is a dummy variable, = 1 if group holds meeting regularly, and 0 otherwise. Regularly scheduled group meetings facilitate better management by the group leader and fosters mutual support among members in repaying loans.

## 5. Empirical Results

### 5.1. Descriptive statistics

Based on the data of interviewed 225 groups in the Mekong River Delta, the descriptive statistics of dependent and independent variables are calculated and summarized in Table 1. The average loan default rate is 3.97%, with a minimum rate of zero and a maximum rate of 20%. In terms of delegated monitoring variables, the average commission rate on business income for group leaders is 16.2%, ranging from a minimum of 2.1% to a maximum of 84.55%. On average, each group comprises about 45.76 members, with group sizes varying from a minimum of 23 members to a maximum of 60 members, the latter being the highest allowed by the program. Additionally, 39.0% of group leaders are well-informed about the business income of their members, while 65.0% are knowledgeable about their members' business activities. However, only 46.0% of group leaders regularly visit the homes or business premises of their members. Group leaders have held their leadership positions for an average of 10.02 years, with the longest tenure being 24 years and the shortest being 3 years.

Table 1 Descriptive statistics

	Mean	Min	Max	SD
Dependent variable				
<i>GDefRate</i>	3.97	0.00	20.00	4.64
Monitoring variables				
<i>LCommIncRate</i>	16.21	2.12	84.55	13.10
<i>GSize</i>	45.76	23.00	60.00	9.64
<i>LIncInfoD</i>	0.39	0.00	1.00	0.49
<i>LVisitD</i>	0.46	0.00	1.00	0.50
<i>LBizInfoD</i>	0.65	0.00	1.00	0.48
<i>LAvgDist</i>	872.80	125.00	4505.00	648.86
<i>LYrs</i>	10.02	3.00	24.00	3.68
Screening variables				
<i>LPurInfoD</i>	0.97	0.00	1.00	0.16
<i>GVoteD</i>	0.77	0.00	1.00	0.42
Enforcing variable				
<i>GPressureD</i>	0.84	0.00	1.00	0.37
Control variables				
<i>LEdu</i>	8.23	3.00	16.00	2.88
<i>LSexD</i>	0.75	0.00	1.00	0.43
<i>LAge</i>	52.01	27.00	80.00	10.69
<i>LIncM</i>	99.38	12.00	336.00	56.37
<i>LLoanD</i>	0.88	0.00	1.00	0.33
<i>LOthFinD</i>	0.27	0.00	1.00	0.44
<i>LDefD</i>	0.20	0.00	1.00	0.40
<i>GSavProgD</i>	0.81	0.00	1.00	0.39
<i>GRegD</i>	0.47	0.00	1.00	0.50
<i>GMeetingD</i>	0.46	0.00	1.00	0.50

Source: the authors

For screening variables, group leaders were aware of the loan purposes of their members at a rate of 97.0%. Moreover, 77% of the group are allowed group members to vote for accepting new members.

The control variables are personal, socio-economic characteristics variables of the group leaders, and group characteristics. The education level of group leaders ranges from third grade to university graduation, with an average of eighth grade. The majority of group leaders are male, accounting for 75.0% of the total. The youngest leader is 27 years old, and the oldest is 80 years old, with an average age of 52.01.

Group leaders earned an average income of 99.4 million VND per household from business activities. There is a significant disparity in income among group leaders, with the lowest income being 12.0 million VND and the highest income being 336.0 million VND. Furthermore, 88% of group leaders borrow loans from the program, while 27% have other sources of credit besides the program loans. Only 80.0% of group leaders successfully repaid their debt and interest obligations on time.

Among the groups interviewed, 81% have a savings program. However, only 47% of the groups have a written charter provided to all members, and just 46% hold regular meetings.

## 5.2. Tobit Results

This study employs the Tobit model to estimate the effects of screening, delegated monitoring, and enforcing on group loan default rate of the group-based lending program. Table 2 presents the Tobit estimation results.

Table 2 Estimated Results of the Tobit Model

Variables	Coefficient	St.Err	z-value
Monitoring variables			
<i>LCommIncRate</i>	-0.3023260***	0.048949	-6.18
<i>LCommIncRate</i> <sup>2</sup>	0.0037538***	0.000585	6.42
<i>GSize</i>	-0.0960320***	0.018577	-5.17
<i>LIncInfoD</i>	0.2424960	0.437638	0.55
<i>LVisitD</i>	-0.5643172	0.374100	-1.51
<i>LBizInfoD</i>	-0.0009264	0.476216	0.00
<i>LAvgDist</i>	-0.0006463**	0.000261	-2.47
<i>LYrs</i>	-0.0165283	0.044925	-0.37
Screening variables			
<i>LPurInfoD</i>	0.9170418	0.958388	0.96
<i>GVoteD</i>	-0.6041487	0.393856	-1.53
Enforcement variables			
<i>GPressureD</i>	0.2143612	0.442215	0.48
Control variables			
<i>LEdu</i>	0.0546269	0.056965	0.96
<i>LSexD</i>	-0.1714779	0.387933	-0.44
<i>LAge</i>	-0.0091822	0.015667	-0.59
<i>LIncM</i>	0.0327892***	0.004549	7.21
<i>LLoanD</i>	0.4245925	0.488677	0.87
<i>LOthFinD</i>	0.1871676	0.368653	0.51
<i>LDefD</i>	2.0770040***	0.518953	4.00
<i>GSavProgD</i>	-1.6055640***	0.416567	-3.85
<i>GRegD</i>	-0.1651076	0.348574	-0.47
<i>GMeetingD</i>	0.0463360	0.310548	0.15
Constant	9.3561470***	1.928567	4.85
Number of obs	225		
LR chi2(21)	347.99***		
Pseudo r-squared	0.2619		

\*\*\*, \*\*, and \* indicate significance at 1%, 5% and 10% levels, respectively.

Source: the authors

Generally, the results show that all variables related to screening and enforcement are statistically insignificant. The significant variables are monitoring and control variables. This indicates that only delegated monitoring activities of the group leader statistically impact the group loan default rate.

The pair variables *LCommIncRate* (commission-on-income rate) and *LCommIncRate*<sup>2</sup> (squared commission-on-income rate) exhibit negative and positive coefficients at a 1% significance level, respectively. In this study, *LCommIncRate* represents the delegated motivation monitoring efforts of group leaders. The coefficients indicate a U-shaped relationship between the commission divided by business income of the group leaders and the group loan default rate. These findings suggest that an increase in commission reduces the group loan default rate up to a certain percentage (40.3%). Beyond this percentage, the effect reverses. This implies that commissions initially motivate the group leaders in monitoring the group effectively. However, when the

commission rate exceeds 40.3%, the group loan default rate increases. A high commission rate, which corresponds with a large group size, exceeds the monitoring capacity of the group leader. Additionally, a high commission rate also indicates that the income from business activities of the group leader is relatively low, suggesting that the group leader's capability in business activities is limited. This limitation further constrains the monitoring capacity of the group leaders. Berns et al. (2021) found that higher average salaries for MFI staff correlate with improved loan repayment rates. However, our findings suggest that if the commission rate exceeds a certain percentage, the repayment rates of the group worsen.

Another proxy variable for the delegated monitoring intensity of the group leader is group size (GSize), which is strongly significant at the 1% level. The negative coefficient indicates that larger group sizes decrease the likelihood of group loan default rate. This finding aligns with Zeller (1998), suggesting that larger group sizes may ensure maximum surplus for the group leader, compensating their monitoring efforts through remunerations.

The last significant variable referring to the monitoring is the average distance (LAvgDist). This variable is significant at the 5% level. It implies that if the group leader lives closely together with the group members, he or she may easily collect proper information from the members.

Regarding control variables, all personal characteristics of the group leader show statistically insignificant results. Business income of the group leader (LIncm) positively corresponds to the dependent variable at the 1% level, indicating that an increase in business income will lead to an increase in the likelihood of group loan default. High business income implies that the group leader may spend more time on his/her main business and, therefore, spend less time supervising the group.

Loan default of the group leader (LDefD) is positively associated with group loan default rate. This result indicates that when the leader defaults, other group members are also likely to default in loan repayment.

Concerning the group characteristics variables, only the variable GSavProgD is significant at the 1% level. This indicates that groups with regular savings programs are less likely to default on loans. The regular savings scheme helps borrowers develop a habit of saving and provides an additional financial source for loan repayment.

## 6. Conclusions

The study investigates the impacts of the screening, monitoring, and enforcement roles of group leaders on the group loan default rate within the group-based lending program of the VBSP. The empirical analysis indicates that only delegated monitoring by the group leader significantly impacts loan default rates. Conversely, screening and enforcement activities do not effectively reduce the group loan default rate. Specifically, an increase in the commission for the group leader leads to a decrease in group loan default rates. However, beyond a certain percentage (40.3%) of commissions divided by business income, the effect is reversed. Additionally, group size and the average distance between the group leader and the members' houses or premises have significant negative effects on the loan default rate of the group. Furthermore, the business income of group leaders, their loan default status, and the presence of a regular savings scheme in the group have strong impacts on the loan default rate.

Based on the empirical findings, several implications can be considered for the VBSP, socio-political organizations, and local authorities. In practice, the Bank tends to select group leaders based on their social prestige, often measured by success in business and high incomes. However, the group leader should not necessarily be a high-income earner. The U-shaped relationship of the commission rate also implies that the Bank should not select leaders with very low business income. Moreover, the Bank may maintain large group sizes to provide incentives for group leaders through commissions to enhance repayment rates. However, the commissions should not exceed 40% of the business income of the group leaders. In forming groups and selecting members, close geographic proximity should be a major consideration. Additionally, the Bank should replace group leaders who do not fulfill their financial obligations. Finally, a compulsory savings program should be applied to all borrowers to improve repayment rates.

While this study has broadened understanding of the roles of group leaders in delegated group-lending programs, it has limitations that should be addressed in future research. Since our survey was conducted during the COVID-19 pandemic, we only interviewed group leaders in rural areas of five provinces in the Mekong Delta region, characterized by a relatively high level of business homogeneity. Most of the data regarding the group and group members were collected from the group leaders' records. Future studies should expand the research area and include interviews with group members to obtain a more comprehensive view.

### References

- [1]. Akerlof, G. (1970). The market for lemon: Qualitative uncertainty and the market mechanism. *Quarterly Journal of Economics*, 84(3), 488–500. <https://doi.org/10.2307/1879431>
- [2]. Berns, J. P., Shahriar, A. Z. M., & Unda, L. A. (2021). Delegated monitoring in crowdfunded microfinance: Evidence from Kiva. *Journal of Corporate Finance*, 66, 1–21. <https://doi.org/10.1016/j.jcorpfin.2020.101864>
- [3]. Bouasria, M., Ashta, A., & Ratsimalahelo, Z. (2020). Bottlenecks to Financial Development, Financial Inclusion, and Microfinance: A Case Study of Mauritania. *Journal of Risk and Financial Management*, 13(10). <https://doi.org/10.3390/jrfm13100239>
- [4]. Chowdhury, P. R. (2005). Group-lending: Sequential financing, lender monitoring and joint liability. *Journal of Development Economics*, 77(2), 415–439. <https://doi.org/10.1016/j.jdeveco.2004.05.005>
- [5]. Coleman, A. D. F., Esho, N., & Sharpe, I. G. (2006). Does bank monitoring influence loan contract terms? *Journal of Financial Services Research*, 30(2), 177–198. <https://doi.org/10.1007/s10693-006-0017-5>
- [6]. de Aghion, B. A., & Morduch Jonathan. (2010). *The Economics of Microfinance* (2nd ed.). MIT Press.
- [7]. de Aghion, B. A., & Morduch, J. (2000). Microfinance beyond group lending. *Economics of Transition*, 8(2), 401–420. <https://doi.org/10.1111/1468-0351.00049>
- [8]. Diagne, A. (1999). Determinants of household access to and participation in formal and informal credit markets in Malawi. (67). <https://doi.org/10.22004/ag.econ.94524>
- [9]. Eijkel, R. van, Hermes, N., & Lensink, R. (2012). Group lending and the role of the group leader. *Small Business Economics*, 36, 299–321. <https://doi.org/10.1007/s11187-009-9223-5>
- [10]. Hermes, N., Lensink, R., & Mehrteab, H. T. (2006). Does the Group Leader Matter: The Impact of Monitoring Activities and Social Ties of Group Leaders on the Repayment Performance of Group-based Lending in Eritrea. *African Development Review*, 18(1), 72–97. <https://doi.org/10.1111/j.1467-8268.2006.00133.x>
- [11]. Hoff, K., & Stiglitz, J. E. (1990). Introduction: Imperfect Information and Rural Credit Markets—Puzzles and Policy Perspectives. *The World Bank Economic Review*, 4(3), 235–250. <https://doi.org/10.1093/wber/4.3.235>
- [12]. Lee, K. W., & Sharpe, I. G. (2009). Does a Bank’s Loan Screening and Monitoring Matter? *Journal of Financial Services Research*, 35(1), 33–52. <https://doi.org/10.1007/s10693-008-0041-8>
- [13]. Sharma, M., & Zeller, M. (1997). Repayment performance in group-based credit programs in Bangladesh: an empirical analysis. *World Development*, 25(10), 1731–1742. [https://doi.org/10.1016/S0305-750X\(97\)00063-6](https://doi.org/10.1016/S0305-750X(97)00063-6)
- [14]. Stiglitz, J. E., & Weiss, A. (1981). Credit rationing in markets with imperfect information. *The American Economic Review*, 71(3), 393–410.
- [15]. Wenner, M. D. (1995). Group credit: a means to improve information transfer and loan repayment performance. *Journal of Development Studies*, 32(2), 263–281. <https://doi.org/10.1080/00220389508422414>
- [16]. Wydick, B. (1999). Can Social Cohesion be Harnessed to Repair Market Failures: Evidence from Group based Lending in Guatemala. *The Economic Journal*, 109, 463–475. <https://doi.org/10.1111/1468-0297.00457>
- [17]. Zeller, M. (1994). Determinants of Credit Rationing: A Study of Informal Lenders and Formal Credit Groups in Madagascar. In *World Development* (Vol. 22, Issue 12). [https://doi.org/10.1016/0305-750X\(94\)90181-3](https://doi.org/10.1016/0305-750X(94)90181-3)
- [18]. Zeller, M. (1998). Determinants of Repayment Performance in Credit Groups: the Role of Program Design, Intragroup Risk Pooling and Social Cohesion. *Economic Development and Cultural Change*, 6(3), 599–620. <https://doi.org/10.1086/452360>

**Author Contributions:** TBT: Conceptualization, methodology, software, formal analysis, resources, data curation, writing—original draft preparation; TDL: writing—original draft preparation, review and editing, project administration; PPT: writing—original draft preparation, review and editing. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research received no external funding.

**Data Availability Statement:** The data that support the findings of this research are available from the corresponding author upon request.

**Conflicts of Interest:** The authors declare no conflict of interest



#### **Author Profile**

**Tran Ba-Tri**, A Lecturer at the Department of Finance – Banking, School of Economics, Can Tho University, Vietnam. His research interest includes firm performance and financial management. He has taught some courses on Financial Management and Business Analysis.

**Truong Dong Loc**, Associate Professor of Finance. He is Vice-Dean of School of Economics, Can Tho University, Vietnam. His research interest includes firm performance, stock market, financial management. He has taught some courses on Financial Management, Financial behavior, Econometrics, and Financial Service.

**Pham Phat Tien**, A Lecturer at the Department of Finance – Banking, School of Economics, Can Tho University, Vietnam. His research interest includes innovation, firm performance, and fintech. He has taught some courses on Financial Management, Business Analysis, Bank Management, and Financial Service.