

# Applied Regression Modelling to Recommend Microfinance Development Policies

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## Abstract

Microfinance institutions are formed to help disadvantaged people access financial services, training services, and employment services to eliminate hunger, reduce poverty, and increase people's quality of life. Besides, microfinance activities play an essential role in the socio-economic development of each country through support for poverty reduction. In Vietnam, hunger eradication and poverty reduction under the National Target Program have received attention and implementation in recent years. However, during 2020-2021, Vietnam had several difficulties and hurdles for microfinance organizations, exacerbated by the Covid-19 outbreak, which was hurting the country and all sectors of social life. Microfinance is an excellent instrument for long-term poverty reduction since it teaches the poor how to do business and save and provides essential information. However, microfinance has not yet reached its full potential in our nation. One of the suggested reasons is the legal framework impediment. Thus, the research proposes the State's policies for microfinance operations using a survey of 260 staffs related to microfinance activities from 30 microfinance organizations and 30 commercial banks in Vietnam, with the method for regression modeling from data processed using SPSS 20.0. Besides the achieved results, the operations of microfinance institutions still have many limitations and inadequacies. This situation requires more practical solutions from state management agencies and microfinance institutions. Therefore, the study's contribution suggests microfinance development policies for removing barriers to continued microfinance activity development in Vietnam. These critical policies are an essential component of the financial system and an effective poverty reduction tool.

**Keywords:** Applied Simulation Modeling, Microfinance, Economy, Financial, Development.

## 1. Introduction

The fast growth of technology, especially financial technology, finance banking, and microfinance, has changed significantly in recent years. Around the world, microfinance is adopting more modern models as financial and economic markets change; mainstream commercial banks shrink, particularly banks lending to SMEs, housing, and other sectors, mobile banking, agricultural finance, and microinsurance. New microfinance models combine digital financial services that lower costs with face-to-face interactions that reduce risk through data and algorithm accounting and increase consumer access. Vietnam follows suit. Microfinance institutions like the Bank for Social Policies use digital technologies to increase efficiency.

The advent of microfinance strives to improve economic conditions for impoverished consumer groups by offering financial services to them, allowing them to prosper and better their lives. This objective is founded on the reality that underprivileged individuals frequently have trouble obtaining official financial services owing to various impediments, including the lack of collateral when seeking official loans. Microfinance institutions (MFIs) attempt to assist their clients to have adequate capacity in the long run, in addition to the immediate purpose of providing possibilities for disadvantaged people to directly utilize their financial and non-financial services. Access to formal financial services on a long-term basis. Microfinance is viewed as a development instrument for the poor rather than simply financial assistance, and it tries to achieve specific development goals such as job creation, increased income for the poor, and capacity building for the target customer group, particularly women. Reducing the poor's susceptibility in the face of unanticipated obstacles and hazards assists the underprivileged in developing sustainably. Many policies have been

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implemented by the Government, ministries, and sectors in recent years to stimulate the growth of microfinance operations between 2017 and 2020. Many mechanisms and procedures related to microfinance activities have existed in Vietnam, such as Prime Minister's Decision No. 20/2017/QĐ-TTĐ dated June 12, 2017, stipulating the operation of microfinance programs and projects of political organizations, socio-political organizations, and non-governmental organizations, licensing regulations.

According to the 2022 Operation Report of the Microfinance Working Group (VMWG), in terms of network and number of customers, the total number of branches of 04 microfinance organizations is 62, operating in 25 provinces and city streets across the country. Among them, CEP has an operating network with the broadest coverage, including 35 branches in 9 regions and cities; VMWG includes 21 branches and 39 transaction offices in 13 provinces and cities, serving 190,000 customers with a total loan balance of nearly 2,400 billion VND; M7 - MFI has 03 branches in 02 towns and regions and 04 branches. The operating network of 04 microfinance organizations has some member customers up to 603,590 customers, and some customers receiving loans up to 467,935 customers.

Microfinance institution operations have been identified as an effective strategy for promoting the process of hunger eradication and poverty reduction [1] [2]. Microfinance institutions' operations are expanding in tandem with the expansion of the financial sector, and they are playing an essential role in supplying financing to clients who cannot access official financial services [3][4][21]. To meet this customer group's growing size, demand, and quality, the transition from non-profit microfinance projects and programs sponsored by non-governmental financial institutions to for-profit microfinance organizations has occurred naturally and firmly in Vietnam. This is due to coordinating policies and actions to promote microfinance, the paper analyzes the accomplished outcomes and the issues raised, then proposes policies and methods to support microfinance firms in the future.

## **2. Literature empirical review and research hypothesis**

### **2.1. Literature empirical review**

Microfinance is the provision of modest loans to low-income households to assist them in engaging in productive activities or starting small companies. Because the poor and low-income people have a great need for financial products, but it is difficult to access formal financial institutions, microfinance frequently includes a series of other services such as credit, savings, and insurance. Borrowing funds from credit institutions, financial institutions, and other domestic and international persons and organizations following applicable laws. Customers can open a deposit account with the State Bank or a commercial bank but not create a payment account [5][6]. Other operations include loan entrustment and receipt, providing microfinance-related financial consultancy services [7].

Providing microfinance consumers with collection, payment, and money transfer services. Serve as an agent for insurance services. Because microfinance organizations exist to help people, their interest rates are often lower than those of commercial banks [9][10][22]. Microfinance operations are thought to have substantial and rising societal relevance, allowing the underprivileged to access and become acquainted with financial instruments. Meanwhile, the microfinance business has a low lousy debt percentage, and low-value loans assist microfinance providers in spreading risks more efficiently [11]-[13][24]. Microfinance is considered an adequate prime capital, helping people have a fulcrum, firmly contributing to increasing income, and escaping poverty. It has simple loan conditions, no need for collateral, and funding and receiving capital right where people live [15].

Microfinance is an essential component of many nations' financial systems and a successful instrument for poverty eradication. Low-income, disadvantaged, and vulnerable people in society have access to economic goods and services through microfinance operations [16]-[18][26]. Microfinance operations have been identified as an effective technique for promoting poverty reduction in Vietnam, considerably contributing to the country's poverty reduction. The actions and aims of microfinance are growing closer to the goal of financial universalization as they are formed and developed. As a result, microfinance has become critical in achieving financial universalization in nations such as Vietnam.

### **2.2. Research hypothesis**

X1: Need to expand more business areas: Build facilities and expand electronic payments to create conditions to help women quickly access finance. Accordingly, it is necessary to improve payment system infrastructure to keep pace

with national economic development. More effective use of technology, innovation, and retail outreach network growth to reach underserved populations, improve utilization, and reduce the cost of payment services maths [19]. Thus, the authors proposed hypothesis 1:

H1: Need to expand more business areas affecting microfinance activity development.

X2: Enhance information transparency and protect customers' interests: Review lending interest rates thoroughly and accelerate the promulgation of legal documents on microfinance. In particular, focuses on 3 regulations, including the Legal capital level for microfinance institutions, Regulations on the network of microfinance institutions, and Regulations on micro-insurance implementation by socio-political organizations [20]. Besides lending interest rates, the Government also amended and supplemented many other contents and regulations in Decree No. 78/2023/ND-CP, such as Loan terms, loan guarantees, laws on restructuring debt repayment terms, exemption and reduction of loan interest; risk provisioning; credit risk handling; State investment credit capital plan. Thus, the authors proposed hypothesis 2:

H2: Enhance information transparency and protect customers' interests affecting microfinance activity development.

X3: Diversify and increase the quality of products and services: Microfinance institutions should diversify their products and services. For lending services, it is necessary to develop products suitable for small loans, such as installment loans and loans with accumulated interest rates. Payment, insurance, and money transfer services... need to be designed according to the needs and capacity of microfinance institutions. In the future, it is necessary to promote the development of derivative financial products to prevent risks and increase operational efficiency [21]. Thus, the authors proposed hypothesis 3:

H3: Diversify and increase the quality of products and services affecting microfinance activity development.

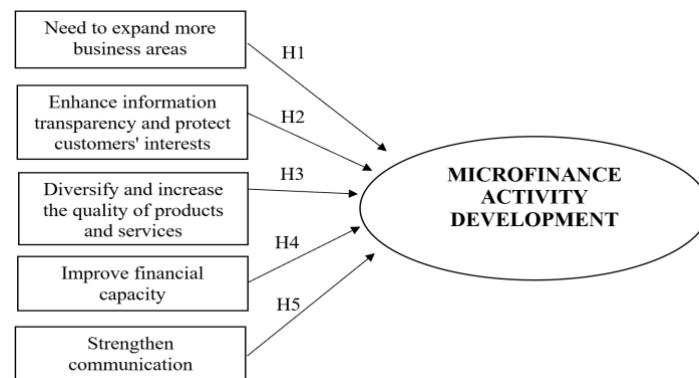
X4: Improve financial capacity: Gradually and steadily expand the scope of operations based on mobilizing capital and credit. At the same time, build a roadmap to increase capital from capital contributions and support from the State, socio-political organizations, unions, and international organizations and mobilize other legal capital sources in society and the savings of loan members [22]. In addition, build and amend the legal framework for microfinance in Vietnam to implement the principles stated in the National Comprehensive Financial Strategy and the Vietnam Banking Industry Development Strategy to promote fair competition and cooperation according to market principles. Thus, the authors proposed hypothesis 4:

H4: Improve financial capacity affecting microfinance activity development.

X5: Strengthen communication: Focus on applying information technology to payment activities, credit capital management, and reform of loan and repayment processes for each member to improve control and operational efficiency and create more favorable conditions for members in accessing and using products and services [23]. Cooperate with credit institutions and Fintech to increase opportunities to access financial services for people, innovate information technology systems at organizations to be ready to meet these requirements; Strengthen capacity-building activities for members, especially in the field of digital technology, helping people access and effectively use financial services on digital platforms. Thus, the authors proposed hypothesis 5:

H5: Strengthen communication affecting microfinance activity development.

Microcredit is considered an activity of microfinance. Microcredit activities aim to help borrowers produce, do business, get jobs, and escape poverty. The activities of microfinance institutions in Vietnam today still face some limitations in organizing and granting microcredit and instructing people how to manage and use the supported money efficiently. The authors propose the research model below based on theory and practical situations in Vietnam.



**Source:** Authors proposed the model

**Figure 1.** A research model for critical factors affecting microfinance activity development.

Figure 1 shows five critical factors affecting microfinance activity development in Vietnam. Five elements include X1: Need to expand more business areas, X2: Enhance information transparency and protect customers' interests, X3: Diversify and increase the quality of products and services, X4: Improve financial capacity, and X5: Strengthen communication.

### 3. Methodology and data

The study uses some basic general research methods used in social science research in general and economics in particular qualitative analysis (applied in combination with descriptive statistical techniques, methods of statistical analysis, comparative analysis, and synthesis) combined with qualitative analysis quantity. In addition, the study also carried out sociological surveys and in-depth interviews to analyze and evaluate the current situation of microfinance development in Vietnam [8].

The study interviewed 10 experts in the banking sector (leaders and managers at 10 commercial banks in Vietnam) and conducted a questionnaire survey with staffs related to microfinance activities from 30 microfinance organizations and 30 commercial banks in Vietnam. Banking leaders from 30 commercial banks in Vietnam surveyed have deep expertise in microfinance and years of experience in microfinance at 30 banks from November 2022 to January 2023. The study was conducted with 260 questionnaires sent directly to 260 staffs related to microfinance activities from 30 microfinance organizations and 30 commercial banks in Vietnam [8].

The sociological survey questionnaire was created after conferring with the ten experts mentioned above and performing mock interviews before the large-scale survey. The descriptive statistical methods employed in this investigation were mean value and standard deviation. A Likert scale is used when developing a questionnaire where the replies are categorized as follows. (1) Strongly disagree, (2) Disagree, (3) Neutral, (4) Agree, and (5) Agree strongly. Finally, Descriptive statistics is one of the most often used data processing approaches, offering precise information and summarizing data, allowing us to generate scientific statistics of obtained data faster and easier to process [8].

The independent variables include X1: Need to expand more business areas, X2: Enhance information transparency and protect customers' interests, X3: Diversify and increase the quality of products and services, X4: Improve financial capacity, and X5: Strengthen communication.

The dependent variables: Y: microfinance activity development.

### 4. Results and Discussion

Microfinance institutions provide essential financial services to meet the primary needs of low-income and poor people with small loans but contribute to improving living standards and creating jobs for society, helping reduce poverty sustainably in Vietnam. At present, the activities of microfinance institutions still exist, especially the microfinance institutions established under the law on credit institutions. The scale and area of operation are still small compared to the microfinance market in Vietnam.

The area and scale of operation of microfinance institutions are still modest: Currently, only four have been established, mainly in the North and Southeast, and the number of customers is only a few hundred thousand people. The total charter capital is a small value, and there are a lot of branches, showing that the scale is still too small compared to a small commercial bank in Vietnam.

Information of microfinance institutions is not really transparent: Microfinance institutions have not made information transparent by regularly publishing data and financial statements. Products and services are not diversified, and working capital is limited: The products and services are primarily focused on lending, mainly used for production and business purposes, and do not pay much attention to developing consumer loan products. Microfinance institutions' deposit methods and interest rates are less attractive than commercial banks. Microfinance institutions mobilize savings deposits mainly on a relatively small scale.

The socio-economic environment causes many negative impacts on microfinance organizations and customers: Vietnam often faces a high inflation rate, which increases the cost of capital of microfinance institutions and directly affects the income and life of low-income customers of microfinance institutions. Issues of epidemics, natural disasters, environmental pollution, and population growth... most directly affect microfinance customers.

Lack of connection between organizations operating microfinance: Due to various reasons, such as lack and weakness of financial resources, human resources do not have the skills to manage the network, the mechanism, and the capacity to create good resources are not ready to join the association of microfinance organizations, so the operation is only local. The problem of propaganda for customers and the community has not been done well: Only those who are already customers can feel the strengths of this type due to the limited scope of activities of microfinance institutions, sources with limited resources and personnel, the social community, in general, has not really understood the benefits and characteristics of microfinance.

**Table 1.** Descriptive statistical results for microfinance development in Vietnam

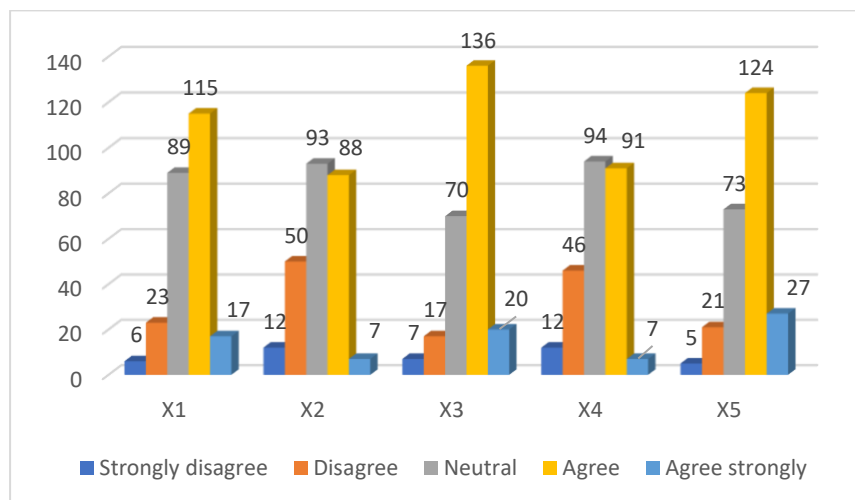
Factors of microfinance activity development	N	Min	Max	Mean	Std. Deviation
X1: Need to expand more business areas	250	1.00	5.00	3.4560	0.84553
X2: Enhance information transparency and protect customers' interests	250	1.00	5.00	3.1120	0.92024
X3: Diversify and increase the quality of products and services	250	1.00	5.00	3.5800	0.84288
X4: Improve financial capacity	250	1.00	5.00	3.1400	0.91419
X5: Strengthen communication	250	1.00	5.00	3.5880	0.86559
Y: Microfinance activity development	250	1.00	4.00	2.4960	0.61604

**Notes:** Average values for determinants of the microfinance development; n = 260 (260 samples but 250 values, 10 lack of information). The Std. Deviation is given in parentheses.

Table 1 shows all items have a mean value of around 3.0. Besides, the Std. Deviation has a value of approximately 1.0. This data is perfect for microfinance development in Vietnam.

Microfinance institutions are increasingly promoting their operational efficiency to meet the needs of individuals, low-income households, and small businesses, but their operations still have many limitations that need to be improved. Besides, to effectively develop microfinance, it is necessary to continue to improve the legal framework, review and amend the Law on Credit Institutions, and regulations related to the organization and operations of microfinance organizations, thereby removing difficulties, problems and creating conditions to develop microfinance programs and projects more sustainably, actively contributing to comprehensive financial development in Vietnam. Besides the opportunities to promote microfinance development, the development trend of credit branches has also posed many challenges to the development of microfinance in Vietnam. The legal framework of microfinance and credit branch activities has not been completed, and there are still many gaps.

Therefore, it is necessary to have a more open mechanism to facilitate the establishment and development of microfinance institutions nationwide, contributing to sustainable poverty reduction and escape for Vietnam in the coming time. Besides, microfinance services include Microcredit services, micro-savings services, microinsurance, payment services, and other non-financial services. Microcredit service is the leading credit supply activity for microfinance customers in many different loan forms: Individual loans, mutual group loans, and indirect loans in joint groups supported through a third intermediary. Micro-savings service aims to mobilize small and retail capital sources for microfinance institutions from the perspective of customer contributions through compulsory savings, voluntary savings, and savings of small and micro enterprises. Microinsurance services include life, health, property, agricultural, and mixed insurance. Microfinance institutions offer payment services when providing savings services, i.e., customers have accounts at microfinance institutions to make payment transactions. In addition, microfinance institutions provide non-financial services to micro customers, such as agricultural technical consulting services for rural areas.



**Source:** Authors process data using SPSS 20.0 and Excel

**Figure 1.** Frequency of statistical results for microfinance activity development in Vietnam

Figure 1 shows that research results had over 65 percent from level 3 to level 5. This is the scientific basis for leaders to make appropriate decisions and recommendations for microfinance development in Vietnam. Besides, microfinance has achieved positive results, such as an increase in the number of borrowers throughout the period. However, over many years, there was a slight decrease in the number of organizations due to two reasons: the increase in competition with other types of credit institutions and the decline in the number of poor customers who need loans, but the growth of total outstanding loans is always high, especially for large microfinance operating in many areas; low credit risk. However, micro-saving activities are still modest in both the number of customers and the value of savings.

In Vietnam, there are currently more than 100 organizations providing microfinance services divided into 3 groups: (i) Official organizations, (ii) Semi-formal organizations, and (iii) Informal organizations. Official organizations include the Bank for Social Policies, People's Credit Fund, and Vietnam Bank for Agriculture and Rural Development. Semi-official organizations have domestic and international non-governmental organizations programs of social organizations such as the Vietnam Women's Union, Vietnam Farmers' Association, and Vietnam Veterans Association Male.

With the current scope of operations (mainly receiving savings and loans), microfinance organizations have difficulty diversifying products and services to suit customer needs. Regulations on new establishment conversion of microfinance programs and projects need to be researched and reviewed to be consistent with current conditions and more feasible. Most microfinance organizations still operate independently and are not well connected, thus not creating a standard overall strength to fully exploit the potential of this activity. Therefore, microfinance programs need to meet the needs of the poor for loans as well as other financial products.

**Table 2.** Testing critical factors affecting microfinance activity development

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	0.388	0.231		1.67	0.095		
X1	0.152	0.055	0.208	2.74	0.007	0.495	2.02
X2	0.107	0.036	0.159	2.93	0.004	0.967	1.03
X3	0.105	0.039	0.143	2.67	0.008	0.994	1.00
X4	0.127	0.043	0.188	2.91	0.004	0.684	1.46
X5	0.134	0.049	0.188	2.70	0.007	0.592	1.68

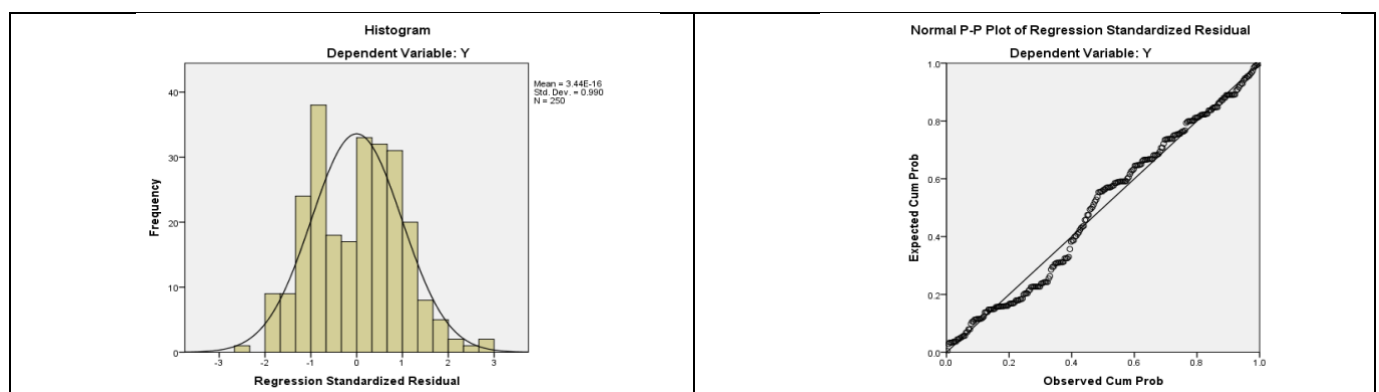
a. Dependent Variable: Y: Microfinance activity development

**Source:** Authors process data using SPSS 20.0 and Excel

Table 2 shows five factors affecting microfinance activity development with Sig. 0.01, and there are five hypotheses accepted. Microfinance aims to improve economic conditions for poor customer groups, helping them have the opportunity to develop and improve their lives through providing financial services to them. This goal is based on the fact that poor people often have difficulty accessing formal financial services due to several barriers, especially not having collateral when accessing credit services official.

In addition to the above results, official microfinance institutions still have some limitations in business performance, such as (1) Medium-sized organizations do not ensure self-sustainability long-term operations according to World Bank standards; (2) The area and scale of operation of microfinance institutions are still modest and have not expanded their scope in the Central region; (3) Some microfinance institutions have not implemented information transparency by publishing information and regular financial reports; (4) Products and services are not diverse, almost concentrated focus on lending; (5) Operating capital is limited.

These shortcomings come from the management and operation of microfinance institutions and factors outside microfinance institutions, such as the legal environment, which is still inconsistent with the characteristics of microfinance institutions. In this specific type, the technological environment requires official microfinance institutions to increase the application of technology to bring financial services to remote areas. The development of the banking system has become a significant competitor of microfinance institutions.



**Source:** Authors process data using SPSS 20.0 and Excel

**Figure 2.** Testing for standardized residual for microfinance activity development in Vietnam

Figure 2 and Table 2 above mention the results of model testing show that the research model has practical meaning, is consistent with theory and does not violate the hypotheses in the model. This is a fundamental scientific basis for policymakers to refer to to make recommendations to help microfinance institutions develop sustainably. In addition



to the direct goal of creating opportunities for poor people to directly access their financial and non-financial services, they also aim for the long-term objective of helping their customers have enough capacity and sustainable access to formal financial services. Therefore, policy recommendations for microfinance, which is considered a development tool for the poor, not simply a financial service, and it targets specific development goals such as creating jobs and increasing income for the poor, enhance the capacity of target customer groups, especially women; Reduce vulnerability for the poor when encountering difficulties and unexpected risks; Help the poor develop sustainably.

**Table 3.** Testing Bootstrap for coefficients for critical factors affecting microfinance activity development

Model	B	Bootstrap				
		Bias	Std. Error	Sig. (2-tailed)	95% Confidence Interval	
					Lower	Upper
(Constant)	0.388	-0.004	0.242	0.106	-0.087	0.859
X1	0.152	-0.003	0.057	0.002	0.033	0.261
X2	0.107	0.002	0.035	0.006	0.029	0.171
X3	0.105	0.001	0.047	0.002	0.016	0.193
X4	0.127	0.003	0.041	0.003	0.053	0.212
X5	0.134	-0.001	0.048	0.004	0.038	0.227

**Note:** 5000 bootstrap samples

**Source:** Authors process data using SPSS 20.0

Table 3. Testing Bootstrap for coefficients for critical factors affecting microfinance activity development with Sig. 0.01, all the hypotheses accepted. Besides, the activities of organizations' microfinance in general and the sustainability of organizations in particular have achieved many remarkable results; Vietnam's microfinance industry still faces many challenges to achieving sustainable development goals. Therefore, there is a need for solutions to develop microfinance institutions that harmoniously combine profit-seeking and social purposes, meeting customer needs and, more importantly, becoming a force that actively contributes to the cause of poverty reduction and inequality gap among Vietnamese population classes in the coming time, the policy implications that need to be prioritized are below.

## 5. Conclusions and recommendations

### 5.1. Conclusions

These shortcomings come from the management and operation of microfinance institutions and factors outside microfinance institutions, such as The legal environment, which is still inconsistent with the characteristics of microfinance institutions. In this specific type, the technological environment requires official microfinance institutions to increase the application of technology to bring financial services to remote areas. The development of the banking system has become a significant competitor of microfinance institutions. The research results have shown the operational status of microfinance institutions in Vietnam raised the existing problems as the basis for practical recommendations for microfinance institutions. Related entities in the field of microfinance relations, especially with central and local authorities, to have an overall view from which to have synchronous recommendations to help develop microfinance institutions, contributing to hunger eradication and sustainable poverty reduction in Vietnam, the following suggestions are implemented. Based on the research and development results of a system of safe, sustainable, market-oriented microfinance institutions, expanding access to quality microfinance services for micro-enterprises and poor households and low-income people to enhance economic development opportunities for people, implementing the Party and State's policies on ensuring social security and sustainable poverty reduction. At the same time, the authors had many lessons from international experiences. To solve and limit the challenges and difficulties that



microfinance is facing in the development trend of the financial industry, the study contribution offers some recommendations for developing microfinance in the coming period according to a group of solutions, including Building a synchronous legal environment suitable to the characteristics of microfinance activities; improve policy planning and management capacity of state management agencies and enhance the ability of microfinance organizations.

## 5.2. Recommendations

Based on the orientation of building and developing a system of safe and sustainable microfinance organizations according to market orientation, expanding access to quality microfinance services for micro-enterprises and poor households and low-income people to enhance economic development opportunities for people, implementing the Party and State's policies on ensuring social security and sustainable poverty reduction:

(1) Need to expand more business areas: X1 with a standardized estimate of 0.208, an average of 3.4560, and sig. < 0.007 (Table 1 & 2). X1: there is a positive relationship between “Need to expand more business areas” and “Microfinance activity development” at the 1% significance level, and this result accepts hypotheses H1 (Table 2), and these results are consistent with practice and previous studies [24]. Therefore, microfinance institutions in Vietnam should expand their scope of operations to increase opportunities to access microfinance services for people, especially in remote rural and mountainous areas. Only 04 official microfinance institutions exist, mainly in the North and the South. It is necessary to research micro-product diversification to meet customer needs. Products and services mostly focus on lending with the main purpose of use for production and business without paying much attention to developing consumer loan products. Loan products need to be diverse in terms of interest payment methods. Interest calculation methods can be for less than one month, such as weekly or semi-monthly. Besides, microfinance organizations should expand to the Central region, primarily focusing on the Central Highlands, because this area is where many poor, near-poor households and ethnic minorities are concentrated. Strengthening the management and administration and improving the quality of human resources. Organizations should continue to improve their organizational structure and administration, building effective control and organization mechanisms to ensure safe and healthy operations. Microfinance institutions need to pay attention to human resource development policy through the improvement of recruitment, training, use, and selection of human resources, and a reward system to improve the level and skills of the microfinance institutions leading cadres, build a team of staff who have both excellent expertise and ethical qualities and love for the profession. Finally, review, complete, and accelerate the promulgation of legal documents on microfinance. In particular, focuses on 3 regulations: Legal capital level for microfinance institutions, regulations on the network of microfinance institutions, and Regulations on micro-insurance implementation by socio-political organizations.

(2) Microfinance organizations should enhance information transparency and protect customers' interests: X2 with a standardized estimate of 0.159, an average of 3.1120, and sig. < 0.004 (Table 1 & 2). X2: there is a positive relationship between “Microfinance organizations should enhance information transparency and protect customers' interests” and “Microfinance activity development” at the 1% significance level, and this result accepts hypotheses H2 (Table 2), and these results are consistent with practice and previous studies [25-26]. Therefore, Microfinance institutions must continue to carry out their mission of reducing poverty for individuals and low-income households through more diverse financial and non-financial services, more suitable for each customer-specific product, taking the combination of responsibility and love as the core value for the operating method, taking improving lives and reducing the poverty rate as the final result of microfinance activities. To protect customers' interests and increase the organization's reputation, it is necessary to make essential information about the microfinance institution transparent, such as interest rates, contract terms, and financial statements that ensure all loan terms are known and explained clearly. The rights and obligations of customers in depositing and borrowing capital are clearly stated in regulations and publicly listed. Finally, research and issue a new circular, review, amend, and supplement some points in Circular No. 03/2018/TT-NHNN, such as exemption from business licensing fees. According to the provisions of Article 5 of this Circular, microfinance institutions must pay a licensing fee. To contribute to sustainable poverty reduction, it is necessary to encourage the development of the microfinance market so the license fee can be waived. At the same time, expand the "room" for the number of capital-contributing members and foreign capital contributors to microfinance organizations, creating conditions for the strong and sustainable development of microfinance.

(3) Microfinance organizations should diversify and increase the quality of products and services: X3 with a standardized estimate of 0.143, an average of 3.5800, and sig. < 0.008 (Table 1 & 2). X3: there is a positive relationship between “Microfinance organizations should diversify and increase the quality of products and services” and “Microfinance activity development” at the 1% significance level, and this result accepts hypotheses H3 (Table 2), and these results are consistent with practice and previous studies [27-28], [29]. Therefore, microfinance organizations should continue to apply information technology to payment activities, credit capital management, and reforming the borrowing and repayment process for each member to improve management and operational efficiency and create new opportunities. More favorable conditions for members to access and use products and services and constantly improve service quality and customer care. Microfinance institutions need to increase savings mobilization among the population with different mobilization methods and diversify forms of capital mobilization with varying interest rates. In addition, microfinance organizations need to strengthen market research, improve and apply new products and services, and develop several benefits, such as money transfers via the Internet, insurance agents, collection and payment agents, etc., to meet the needs of the poor and low-income households. Finally, loan guarantees at microfinance institutions should comply with regulations on loan guarantees. Accordingly, microfinance institutions can lend in the form of collateral. All legal assets of customers can be used as loan security at microfinance institutions in the form of a pledge or mortgage; Security of clearance guaranteed by third-party assets, including financial guarantees and/or guarantees by assets; compulsory savings are in this category. Loans without collateral, including loans without collateral decided by microfinance institutions based on the customer's reputation; Loans not secured by assets entrusted by the Government or other organizations; Loans secured by trust from mass organizations.

(4) Microfinance organizations should improve financial capacity: X4 with a standardized estimate of 0.188, an average of 3.1400, and sig. < 0.004 (Table 1 & 2). X4: there is a positive relationship between “Microfinance organizations should improve financial capacity” and “Microfinance activity development” at the 1% significance level, and this result accepts hypotheses H4 (Table 2), and these results are consistent with practice and previous studies [30-31], [35]. As Vietnam's economy develops, aid capital and capital assigned to microfinance programs and projects in equity tend to become increasingly narrow and difficult to access. In addition, capital allocated by socio-political organizations for microfinance programs and projects is also limited. Therefore, the banks need a lot of support from ministries, departments, and branches and have annual budget allocation plans for the activities of microfinance organizations and programs. There needs to be attractive policies to call for domestic and foreign investors to invest in microfinance activities and have policies to mobilize investment for social development from businesses and philanthropists. Besides, microfinance institutions should increase relatively cheap sources of capital mobilization in the market, such as capital from donors, investors for development, trust money of other organizations, and credit institutions. There are policies to mobilize investment for social development from businesses, benefactors, local councils, or those who go far away to build their homeland. Finally, it will build facilities and expand electronic payments to create conditions to help women quickly access finance. Accordingly, it is necessary to improve payment system infrastructure to keep pace with national economic development, more effective use of technology, innovation, and growth of retail outreach networks to reach underserved populations and improve utilization and reduce the cost of payment, including money transfer.

(5) Microfinance organizations should strengthen communication: X5 with a standardized estimate of 0.188, an average of 3.5880, and sig. < 0.007 (Table 1 & 2). X5: there is a positive relationship between “Microfinance organizations should strengthen communication” and “Microfinance activity development” at the 1% significance level, and this result accepts hypotheses H5 (Table 2), and these results are consistent with practice and previous studies [31-32], [33-44]. Many small and medium enterprises and individual business households have difficulty accessing bank loans due to insufficient loan standards, lack of financial transparency, lack of effective business plans, and lack of feasibility of debt repayment plans. To easily access credit from microfinance institutions, businesses, and individual households should choose small credit packages suitable to the business's reputation and financial situation in the short term. In the long term, there needs to be transparency between the finances of individuals and business owners and the business's finances. Enterprise financial statements must be audited by reputable auditing companies. Enterprises must improve their management, organization, and capital management skills to improve production and business capacity so that microfinance institutions can evaluate the reputation and feasibility of their methods of business projects and debt repayment, and then they will lend business capital. Therefore, propaganda should focus on critical issues in

microfinance to both customers and implementing and monitoring units. Clarifying the difference between microfinance and traditional finance provides clear and transparent information on interest rates and transaction fees. Strengthen propaganda about benefits for customers and the community, develop programs to improve the population's financial knowledge, and leverage the power of local Government and unions to optimize operations. Finally, microfinance organizations should diversify their products and services. For lending services, it is necessary to develop products suitable for small loans, such as installment loans and loans with accumulated interest rates. Payment, insurance, and money transfer services need to be developed according to the needs and capacity of microfinance institutions. In the future, it is necessary to promote the development of derivative financial products to prevent risks and increase operational efficiency.

## 6. Declarations

### 6.1. Author Contributions

Conducted conception and methodology and employed academic methods: N.Q.H; Resource utilization, data curation, and original draft production: L.P.N.; Reviewed, drafted, and revised the work: P.T.T.; All authors have read and agreed to the published version of the manuscript.

### 6.2. Data Availability Statement

The data given in this study may be found in the publication and the data collected by the authors.

### 6.3. Funding

The research conducted in this study received financial assistance from Lac Hong University (LHU), located in Vietnam.

### 6.4. Institutional Review Board Statement

Not applicable

### 6.5. Informed Consent Statement

Not applicable

### 6.6. Declaration of Competing Interest

The authors stated that there are no conflicts of interest in the publication of this paper. Furthermore, the ethical concerns encompass other aspects such as plagiarism, informed consent, research misconduct, data fabrication, data falsification, adherence to proper authorship guidelines for publishing and submission, and redundancy avoidance.

## References

- [1] O. F. E. Abayie, K. Amanor, and J. M. Frimpong, "The measurement and determinants of economic efficiency of microfinance institutions in Ghana: A stochastic frontier approach", *African Review of Economics*, vol. 2, no. 2, pp. 149-166, 2011.
- [2] M. Brown, B. Guin, and K. Kirschenmann, "Microfinance banks and financial inclusion", *Review of Finance*, vol. 20, no. 3, pp. 907-946, 2016.
- [3] G. D. Bruton, S. Khavul, and H. Chavez, "Microlending in emerging economies: building a new line of inquiry from the ground up", *Journal of International Business Studies*, vol. 42, no. 5, pp. 718-739, 2011.
- [4] A. K. Chakrabarty, "Islamic microfinance: An interest-free microfinance model for poverty alleviation", *Journal of Economics and Business Research*, vol. 21, no. 2, pp. 15-31, 2015.
- [5] T. Chiu, "Putting responsible finance to work for Citi microfinance", *Journal of Business Ethics*, vol. 119, no. 2, pp. 219-234, 2014.
- [6] M. J. Garmaise, and G. Natividad, "Cheap credit, lending operations, and international politics: The case of global microfinance", *The Journal of Finance*, vol. 68, no. 4, pp. 1551-1576, 2013.

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- [7] General Research Department - Office of the State Bank, "Microfinance supporting poverty reduction in Vietnam - Challenges and prospects", October 29, 2018.
- [8] J. F. Hair, B. W. C., B. J. Babin, and R. E. Anderson, *Multivariate Data Analysis*, 1st ed, vol. 1, 1 Vols. Upper Saddle River, NJ, USA: Pearson Prentice Hall, 2021.
- [9] V. Hartarska, and R. Mersland, "What governance mechanisms promote efficiency in reaching poor clients? Evidence from rated MFIs", *European Financial Management*, vol. 18, no. 2, pp. 218-239, 2012.
- [10] N. Hermes, R. Lensink, and A. Meesters, "Outreach and efficiency of microfinance institutions", *World Development*, vol. 39, no. 6, pp. 938-948, 2011.
- [11] S. Iqbal, A. Nawaz, and S. Ehsan, "Financial performance and corporate governance in microfinance: evidence from Asia", *Journal of Asian Economics*, vol. 60, no. (C), pp. 1-13, 2019.
- [12] X. Jia, R. Cull, P. Guo, and T. Ma, "Commercialization and mission drift: evidence from a large Chinese microfinance institution", *China Economic Review*, vol. 40, no. 1, pp. 17-32, 2016.
- [13] P. Kaur, "Outreach and sustainability of microfinance institutions in India in pre and post-Andhra Pradesh microfinance crisis in the context of South Asia", *Global Journal of Finance and Management*, vol. 6, no. 6, pp. 569-574, 2014.
- [14] L. Koju, R. Koju, and S. Wang, "Macroeconomic determinants of credit risks: Evidence from high-income countries", *European Journal of Management and Business Economics*, vol. 29, no. 1, pp. 41-53, 2020.
- [15] S. Kosgei, J. Cheboi, and A. Kemboi, "Does portfolio quality influence financial sustainability? A case of microfinance institutions in Kenya", *Journal of Economics and Financial Analysis*, vol. 3, no. 2, pp. 23-39, 2019.
- [16] M. A. Mia, and V. G. R. Chandran, "Measuring financial and social outreach of microfinance institutions in Bangladesh", *Social Indicators Research*, vol. 127, no. 2, pp. 505-527, 2016.
- [17] S. Mirpourian, A. Caragliu, G. Di Maio, P. Landoni, and E. Rusinà, "Determinants of Loan repayment performance among borrowers of microfinance institutions: Evidence from India", *World Development Perspectives*, vol. 1, no. C, pp. 49-52, 2016.
- [18] S. D. Muhammad, "Microfinance challenges and opportunities in Pakistan", *European Journal of Social Sciences*, vol. 1 no. 1, pp. 88-97, 2010.
- [19] B. Mukhopadhyay, and S. Rath, "Role of MFIs in financial inclusion", *Review of Market Integration*, vol. 3, no. 3, pp. 243-286, 2012.
- [20] G. N. C. Munthali, and X. L. Wu, "Covid-19 lockdown measures on least developing economies in Africa - A case of Malawi economy", *Technium Social Sciences Journal*, vol. 7, no. 1, pp. 295-301, 2020.
- [21] T. Mutambanadzo, T. Bhiri, and S. Makunike, "An analysis challenges faced by Zimbabwean microfinance institutions in providing financial services to the poor and informal sector in the dollarized regime", *Global Institute of Research and Education*, vol. 2, no 1, pp. 154-159, 2013.
- [22] D. Naggaya, and B. A. Rao, "Microfinance through self-help groups and financial inclusion", *Journal of Rural Development*, vol. 35, no. 3, pp. 341-375, 2016.
- [23] D. Ousombangi, "Challenges that face the operations of microfinance institutions in Kenya: a case study of microfinance institutions in Nairobi county", *International Journal of Business and Management Invention*, vol. 7, no. 9, pp. 69-77, 2018.
- [24] Prime Minister, Decision No. 20/2017/QĐ-TTg dated May 12, 2017, "Regulating the activities of microfinance programs and projects of political organizations, socio-political organizations, non-governmental organizations", Hanoi, 2017.
- [25] H. Sekabira, N. R. Economics, and A. Sciences, "Capital structure and its role on the performance of microfinance institutions: the Ugandan case", *Sustainable Agriculture Research*, vol. 2, no. 3, pp. 86-100, 2013.
- [26] S. Shankar, "Financial inclusion in India: Do microfinance institutions address access barriers?", *Journal of Entrepreneurship Perspectives*, vol. 2, no. 1, pp. 60-74, 2013.
- [27] C. A. Shu, and B. Oney, "Outreach and performance analysis of microfinance institutions in Cameroon", *Economic Research-Ekonomska Istraživanja*, vol. 27, no. 1, pp. 107-119, 2014.

- [28] State Bank, Circular No. 03/2018/TT-NHNN, “Regulating licensing, organization, and operation of microfinance institutions, dated February 23, 2018”, Hanoi, 2018.
- [29] State Bank, Circular No. 33/2015/TT-NHNN dated December 31, 2015, “Regulating safety ratios in the operations of microfinance institutions”, Hanoi, 2015.
- [30] M. Tavanti, “Before microfinance: The social value of micro-savings in Vincentian poverty reduction”, *Journal of Business Ethics*, vol. 112, no. 2, pp. 697-706, 2013.
- [31] H. Tchakoute-Tchuigouha, “Is there a difference in performance to the legal status of microfinance institutions?”, *Quarterly Review of Economics and Finance*, vol. 50, no. 4, pp. 436-442, 2010.
- [32] O. Teferi, “Determinants of microfinance institutions loan portfolios quality: Empirical evidence from Ethiopia”, *European Journal of Business and Management*, vol. 11, no. 25, pp. 15-25, 2019.
- [33] M. Tutino, “Matching outreach and financial sustainability: An assessed accounting framework in evaluating the performance of microfinance project”, *International Journal on Business Review*, vol. 2, no. 3, pp. 46-50, 2013.
- [34] M. Wijesiri, L. Vigano, and M. Meoli, “Efficiency of microfinance institutions in Sri Lanka: A two-stage double bootstrap DEA approach”, *Economic Modelling*, vol. 47, no. C, pp. 74-83, 2015.
- [35] S. K. Wiryono, and K. A. Effendi, “Islamic bank credit risk: Macroeconomic and bank specific factors”, *European Research Studies Journal*, vol. 21, no. 3, pp. 53-62, 2018.