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### Study on the Impact of Loans from the Vietnam Bank for Social Policies on the Income of Poor Households in Binh Lieu district, Quang Ninh Province, Vietnam

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#### Abstract

Binh Lieu district, Quang Ninh province. It synthesizes previous research and highlights the effects of microcredit on the income of poor households. Building on this foundation, the author investigates the current lending practices of the Social Policy Bank in Binh Lieu district toward poor households in the area. Utilizing the Cobb–Douglas production function and applying Stata software, the author evaluates the impact of loans from the Social Policy Bank on poor households' income. The analysis results indicate that factors such as the age of the household

head, loan amount, number of household members, number of laborers, educational level of the household head, household assets, interest rates, and the region where the poor household resides have significant impacts on their income. Based on the study's findings using both qualitative and quantitative methods, the article proposes several policy recommendations to further enhance the bank's lending activities to poor households, with the aim of helping them expand production, improve income, and enhance living standards.

**Keywords:** Poor Households, Loan Capital

#### Introduction

Poor households often lack collateral, making access to bank credit very difficult. As a result, the opportunity to expand business production to escape poverty is minimal. Governments in many countries have established policy banks, which provide poor people with access to low-interest bank loans, often without the need for collateral. Through this source of funding, many poor households have gradually escaped poverty, creating new jobs, which has greatly contributed to the economic development of the region as well as the country.

According to Pande *et al.* (2012)<sup>[22]</sup>, an investigation was conducted across 152 countries to examine whether access to capital and the use of loans from formal financial institutions benefit the poor. The study revealed that developed countries implement microcredit policies more effectively than less developed countries. The study confirmed that these microcredit policies significantly contribute to income increases and improvements in the living standards of the poor.

In contrast, Tiarniyu (1994)<sup>[26]</sup> published research analyzing the gender-based differences in bank customers' loan usage. The study surveyed 26 female customers utilizing banking services in Nigeria and 26 businesses operating in agriculture, services, and industry in both rural and urban areas. The findings demonstrated that urban businesses used loans more effectively than their rural counterparts.

Liverpool & Winter-Nelson (2010)<sup>[14]</sup> conducted research from a different perspective, focusing on the application of advanced scientific techniques by loan recipients in Ethiopia. The authors based their analysis on standardized reports from Ethiopia, yielding the following results: First, the application of technical advancements in production did not correlate with the effectiveness of microcredit institutions, suggesting that such advancements did not increase income for the poor. Second, the operations of microcredit institutions significantly impacted the income of the poor by improving their living standards and encouraging the adoption of advanced scientific techniques.

In Vietnam, Hung (2015)<sup>[10]</sup> conducted a study to identify factors influencing poor households' access to capital using qualitative and quantitative methods (Probit regression model). The results indicated that access to credit from the Social

Policy Bank positively impacted the lives of citizens, particularly the poor. Similarly In the study by Tran *et al.* (2024), the Probit model was used to evaluate the impact of financial inclusion on poor households using financial products and services. The results show that financial inclusion reduces the poverty level among these households. The study also revealed that poor households, after accessing bank loans, became more responsible in meeting their debt obligations, which serves as a motivation for these households to expand production, generate additional income, and improve their living conditions.

Based on international and domestic literature, this study employs the Cobb-Douglas function to evaluate and identify changes in the lending activities of the Social Policy Bank for poor households. Additionally, it compares changes in the awareness and mindset of households after obtaining loans to expand their business and production activities.

Binh Lieu is a mountainous district in Quang Ninh province, with an average elevation of 500-600 meters above sea level and several peaks exceeding 1,000 meters (e.g., Cao Xiêm 1,330m; Cao Ba Lanh 1,113m; Ngàn Chi 1,160m). It covers an area of 475.1 square kilometers, accounting for about 8% of Quang Ninh province's area. The district comprises seven administrative units: Six communes and one town, with six out of seven communes located along the border and five classified as especially difficult areas. Binh Lieu has the Hoàn Mô border gate and a 43-kilometer border with Fangcheng District, Guangxi Province, China. Ethnic minorities make up 96% of Binh Lieu's population, the highest proportion in Quang Ninh province.

According to the 2023 socio-economic development report for Binh Lieu District, based on the central government's multidimensional poverty criteria, the district has 96 near-poor households and no poor households. According to the provincial poverty criteria, there are 69 poor households (0.89%) and 1,166 near-poor households (14.99%). In 2024, the district aims to eliminate poor households and reduce the number of near-poor households to 7.58% (585 households) according to the 2023-2025 multidimensional poverty criteria. To achieve this goal, Binh Lieu will continue to mobilize resources, effectively implement socio-economic development projects and policies, and improve essential infrastructure in difficult communes and villages. The district will also support poor and near-poor households in developing production and increasing income. Households will be classified into groups to better understand their needs and guide economic development.

Based on the literature review and case study, this research highlights the significance of effective lending practices and the positive impact of loans from the Social Policy Bank on the livelihoods of poor households. It also emphasizes the need for continued support and resource mobilization to achieve sustainable poverty reduction and economic development goals in regions like Binh Lieu District.

## Literature Review

### Microcredit

According to Ledgerwood *et al.* (2013) <sup>[12]</sup>, microcredit involves providing small-scale loans to the poor with the aim of enabling them to undertake business projects. This allows the poor to improve their quality of life, ensuring daily living needs are met and facilitating investment in their children's education. However, research has shown that lending from financial institutions has only reached about

25% of the population, leaving the remaining percentage without access to these financial services.

Awimbo & Daley-Harris (2006) <sup>[11]</sup> identified several reasons why low-income individuals and poor households struggle to access loans from financial institutions: (1) Poor households often lack collateral to secure loans. (2) There is limited understanding of the loan process and how to utilize funds for business activities. (3) Geographic distance poses a barrier, making it difficult for poor households to access formal financial institutions. (4) The complex procedures and extensive paperwork required by formal credit institutions further impede access.

Based on these findings, Awimbo & Daley-Harris (2006) <sup>[11]</sup> proposed that the most effective solution for enabling the poor to borrow funds for business activities and improve their living standards is through the establishment of microfinance institutions (MFIs). MFIs can offer loans to the poor with more accessible procedures and closer geographic proximity, better understanding the unique needs of this demographic.

When operational, MFIs have overcome many shortcomings faced by traditional financial institutions in aiding the poor and low-income individuals. They have facilitated access to loans for business expansion and other banking services such as insurance, credit, and savings.

The establishment of MFIs aims to alleviate the difficulties faced by the poor when borrowing money. MFIs typically operate with non-profit motives, and if there is a profit motive, it is generally to cover operational costs. The primary funding for these activities comes from government and donor agencies. These funds are channeled through MFIs to provide loans to the poor for business activities, thereby stabilizing their lives and increasing the income of poor households in each country.

### Social Policy Bank Credit

Social Policy Bank credit has the following characteristics:

**Firstly**, loans for the poor are offered at interest rates lower than those of commercial banks.

**Secondly**, when the poor engage in loan procedures or participate in activities of microfinance institutions (MFIs) such as insurance or savings, they are not required to pay any fees.

**Thirdly**, according to regulations for MFIs, loans to the poor do not require collateral (as the poor often lack assets for collateral or possess assets of low value).

Given these basic characteristics, it is evident that countries with substantial budget resources that allocate a high percentage to the operations of MFIs will effectively implement poverty alleviation and economic development initiatives in rural and remote areas.

### Concept of Poor Households

Morduch (2006) <sup>[16]</sup> defines a person as poor if their annual income is less than half of the country's annual per capita income (PCI).

Chatterjee (2005) <sup>[3]</sup> states that poverty is the condition in which a segment of the population is unable to satisfy basic human needs, which depend on the level of economic and social development, customs, and traditions of each region, and these customs are socially recognized.

Shaw (2007) <sup>[25]</sup> defined poor individuals as those with incomes below \$1 (USD) per day per person, an amount considered sufficient to purchase essential survival products. Sen & Himanshu (2004) <sup>[24]</sup> argues that poverty is the lack of opportunity to participate in the community's development

process. This suggests that the difference between the poor and the wealthy lies in their goals and choices. The wealthy have more opportunities to engage in business activities, whereas the poor have fewer opportunities due to limited knowledge, capital, and ability to utilize borrowed funds effectively.

McNamara (1980) [15] presented his own viewpoint, stating that absolute poverty is living on the edge of survival. The absolutely poor are those who struggle to survive in dire deprivation, neglect, and loss of dignity, surpassing the imagination of the fortunate intellectual class worldwide. Each country has different measures for defining poverty, based on legal regulations and income levels. In the Caribbean, individuals earning less than \$4 USD per day are considered poor, while in Latin America, those earning less than \$2 USD per day are classified as poor. Thus, in higher-income or more developed countries, the income threshold for defining poverty is higher than in less developed countries.

According to Decree 07/2021/NĐ-CP, the standards for poor and near-poor households for the period 2022-2025 are as follows:

Poor Household Standard:

**Rural Areas:** Households with an average monthly income per capita of 1,500,000 VND or less and experiencing deficits in three or more indicators measuring basic social service deprivation.

**Urban Areas:** Households with an average monthly income per capita of 2,000,000 VND or less and experiencing deficits in three or more indicators measuring basic social service deprivation.

Near-Poor Household Standard:

**Rural Areas:** Households with an average monthly income per capita of 1,500,000 VND or less and experiencing deficits in fewer than three indicators measuring basic social service deprivation.

**Urban Areas:** Households with an average monthly income per capita of 2,000,000 VND or less and experiencing deficits in fewer than three indicators measuring basic social service deprivation.

To achieve the ultimate goal of increasing the income of poor households through Social Policy Bank loans, thereby improving their living standards and income, this research aims to identify factors related to the characteristics of poor households and factors associated with the Social Policy Bank. Based on this, the study proposes solutions to help poor households access bank credit most effectively in the future.

## Methods

The Cobb-Douglas production function was introduced by Charles W. Cobb and Paul H. Douglas in 1928. This is a highly important production function in economic research and is widely used by researchers to analyze the impact of input and output factors in a specific field (Nguyen *et al.*, 2018; Huang *et al.*, 2019 [9]; Nguyen & Nguyen, 2019 [19]). Therefore, many researchers have also employed the Cobb-Douglas production function to examine the factors influencing household income and poverty levels across various countries (Ogundari & Ojo, 2009; Biam *et al.*, 2016) [21, 2]. Currently, microfinance plays a very important role in the production and business processes of poor households, as it supplements their own capital, allowing these households to expand their production and gradually

increase income, thus escaping poverty. This capital often comes with numerous benefits, such as extended repayment periods, low interest rates, and diverse loan structures. Therefore, this capital source is always the best option for poor households. However, poor households often lack collateral, have low production experience, and even misuse capital, leading to difficulties in repayment (Levine, 2005 [13]; Nguyen *et al.*, 2018). These are also the reasons behind the instability in providing this financial source by banks. Thus, it is necessary to evaluate accurately, based on solid evidence, the role of credit in poor households. To assess the impact of loans on the income of poor households in Binh Lieu district, Quang Ninh province, the author uses the Cobb-Douglas production function because:

The Cobb-Douglas production function reflects the relationship between input and output factors, formulated as follows:

$$Y = A \cdot \prod_{i=1}^n X_i^{\alpha_i} e^{\sum_{j=1}^m \beta_j D_j} \quad (1)$$

Where: Y represents the income of poor households; A is a constant;  $X_i$  ( $i = 1-n$ ) denotes the  $i$ th input quantity; n represents the number of input factors;  $\alpha_i$  ( $i = 1-n$ ) are the coefficients that reflect the impact of the independent variables  $X_i$  on Y;  $D_j$  ( $j = 1-m$ ) are the  $j$ th dummy variables;  $\beta_j$  ( $j = 1-m$ ) are the coefficients that reflect the impact of the variables  $D_j$ . From the Cobb-Douglas production function, taking the natural logarithm of both sides, we get ln

$$Y = \ln A + \sum_{i=1}^n \alpha_i \ln X_i + \sum_{j=1}^m \beta_j D_j \quad (2)$$

Thus, equation (2) takes the form of a linear function  $Y = \beta_0 + \beta_1 X_1 + u_1$  and is estimated using the Ordinary Least Squares (OLS) method. Estimating the parameters of the production function in a linear model form using OLS allows for the determination of the relationship between the income of poor households with loans and various investment levels, such as loan capital, number of laborers, and loan interest rates...

The total elasticity coefficient  $\alpha_i$  has significant economic implications:

If the sum of the elasticity coefficients  $\sum_{i=1}^n \alpha_i = 1$ , the production function indicates constant returns to scale, meaning that the percentage increase in input factors equals the percentage increase in output.

If the sum of the elasticity coefficients  $\sum_{i=1}^n \alpha_i > 1$ , the production function indicates increasing returns to scale, meaning that the percentage increase in input factors is less than the percentage increase in output.

If the sum of the elasticity coefficients  $\sum_{i=1}^n \alpha_i < 1$ , the production function indicates diminishing returns to scale, meaning that the percentage increase in input factors is greater than the percentage increase in output.

## Methodology

The article employs a combination of qualitative and quantitative research methods using both primary and secondary data collected. The qualitative research serves as the foundation for model development and complements the interpretation of quantitative results. To assess the impact of loans on poor households, the author uses the Cobb-Douglas production model, which includes the variables listed in

**Table 1.**  
*Selecting a Research Sample*

According to the report from the Vietnam Bank for Social Policies (VBSP) in Binh Lieu district, as of December 31, 2023, there are 955 poor and near-poor households currently borrowing from the bank in the district. To ensure statistical significance, the author uses the Slovin’s formula to calculate the sample size as follows:  $n = N/(1+Ne^2)$

Where: n: The required sample size for the survey; N: The total population surveyed; e: The allowed margin of error  
With a total survey population of 955 poor households borrowing from VBSP (N=955), and a margin of error

$e=5%$  (minimum confidence level of 95%), the result of this calculation is approximately 282 households. The survey questionnaires were distributed proportionally among the poor households borrowing in Binh Lieu district as follows: Dong Tam: 35 questionnaires, Dong Van: 45 questionnaires, Hoanh Mo: 48 questionnaires, Huc Dong: 45 questionnaires, Luc Hon: 38 questionnaires, Tinh Huc: 35 questionnaires, and Vo Ngai: 36 questionnaires.

A total of 282 questionnaires were distributed, and upon review, 2 questionnaires were found to be incomplete, resulting in 280 valid questionnaires.

**Table 1:** Explanation of Variables

Variable	Description	Expectation
AGE	The age of the head of a poor household borrowing from the Social Policy Bank.	+
SVV	The amount of Social Policy Bank loans for poor households.	+
SNK	The number of household members of poor households borrowing from the Social Policy Bank.	-
TD	The education level of the head of the household borrowing: Calculated by the duration of formal schooling and participation in vocational training courses and guidance sessions...	+
SLD	The number of laborers in poor households borrowing from the Social Policy Bank.	+
TS	Assets of poor households with loans	+
LS	Interest rates for poor households borrowing from the Vietnam Bank for Social Policies	-
VM	A dummy variable that takes the value of 1 if the household is located in disadvantaged areas such as those classified under programs 30a, 135, etc., and 0 otherwise.	
GT	A dummy variable that takes the value of 1 if the household head is male, and 0 if the household head is female.	
KC	Distance from the poor household to the nearest Vietnam Bank for Social Policies (VBSP) branch.	-

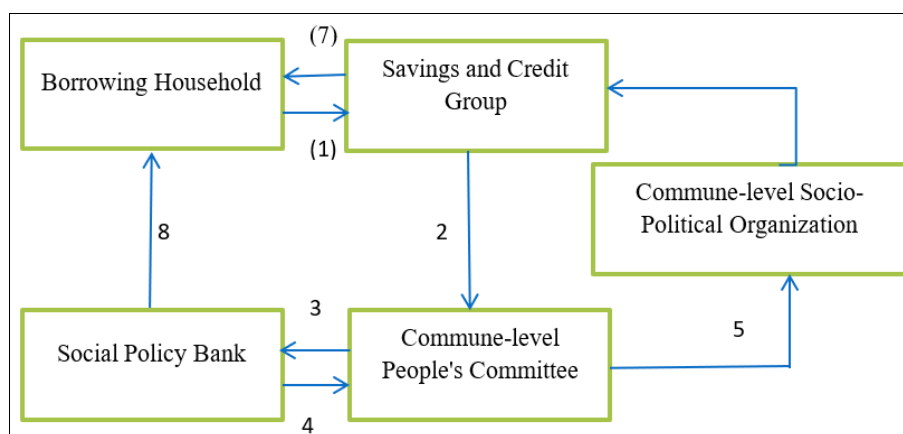
**Results and Discussion**

**The Current Situation of Lending by the Social Policy Bank to Poor Households**

Based on the current situation and survey of poor households borrowing loans in Binh Lieu District, Quang Ninh Province, the author can summarize the lending procedures for poor households by the Social Policy Bank as illustrated in Fig 1 as follows:

- Step 1:** Poor households submit a loan application form to the Savings and Credit Group.
- Step 2:** The Savings and Credit Group evaluates and selects eligible households, then compiles a list of poor households for submission to the Poverty Reduction Committee and the Commune People's Committee.
- Step 3:** The Commune Poverty Reduction Committee and Commune People's Committee verify and forward the list to the Social Policy Bank.

- Step 4:** The bank reviews, approves, and announces the list of approved households, establishing savings and loan accounts according to the approved list. After completing the loan documentation, the bank notifies the disbursement schedule and location to the Commune People's Committee.
- Step 5:** The Commune People's Committee informs the results of the Social Policy Bank’s approval to the entrusted unit.
- Step 6:** The entrusted unit notifies the Savings and Credit Group of the Social Policy Bank’s approval results.
- Step 7:** The Savings and Credit Group informs the borrowing households of the approval results and notifies the disbursement time and location to the households.
- Step 8:** The bank, together with the entrusted unit and the Savings and Credit Group, disburses funds directly to each borrowing household.



Source: Vietnam Bank for Social Policies

**Fig 1:** Lending Process and Procedures for Poor Households by the Social Policy Bank

Lending activities of the Social Policy Bank’s transaction office in Binh Lieu District are primarily conducted through partial entrustment to political and social organizations under entrustment contracts. These social organizations act as a bridge, coordinating with the Social Policy Bank to disburse preferential loans to poor households. They play a crucial role in helping poor households better access the bank, complete loan procedures, and monitor the use of funds. The actual lending situation to poor households through social organizations is presented in Table 2. From the above data table, it can be observed that the capital disbursed to poor households through the Women's Union and the Farmers' Union accounts for a large proportion. The

Women's Union and the Farmers' Union have a high number of participating members, and, additionally, poor households living in rural areas often borrow capital through the Women's Union. Due to the low membership numbers of the Association of the Blind and the Business Association, the proportion of loans disbursed through these associations is relatively small.

**Evaluation of the Impact of Social Policy Bank Loans on the Income of Poor Borrowing Households**

To accurately assess the impact of loans on the income of poor households, the author conducted a regression analysis, with the results presented in Table 3.

**Table 2:** Lending Situation by Social Organizations

Unit: Billion VND

Organizations	2021	2022	2023	Comparison (increase/decrease)	
				2022 2021	2023 2022
Women's Union	40.3	44.3	45.7	+4.0	+1.4
Farmers' Union	52.5	54.6	60.4	+2.1	+5.8
Veterans' Association	20.4	18.5	23.6	-1.9	+5.1
Youth Union	25.5	26.4	20.2	+0.9	-6.2
Business Association	10.2	8.8	9.6	-1.4	+0.8
Association of the Blind	3.4	2.7	3.0	-0.7	+0.3

Source: Calculated results by the author

**Table 3:** Regression Results

Variables	Coefficient β	T	p> t
Ln(AGE)	0.1911	2.32	0.021
Ln(SVV)	0.1275	4.94	0.000
Ln(SNK)	-0.3749	-3.48	0.001
Ln(TD)	0.1371	3.31	0.001
Ln(SLD)	0.5023	6.38	0.000
Ln(TS)	0.4683	8.88	0.000
Ln(LS)	-0.0930	-1.91	0.057
VM	0.0743	2.03	0.043
GT	0.0200	0.55	0.582
Ln(KC)	0.5849	0.80	0.424

Source: Calculated results by the author

After conducting the regression with 280 observed variables, we obtained an R-squared of 0.4456 and an Adjusted R-squared of 0.4289, which indicates that the independent variables explain 42.89% of the dependent variable.

Following the regression results, the author proceeded to check for model deficiencies to ensure that the model was free from defects and that the estimation results were robust.

**Results of Multicollinearity Test**

From Table 4, it can be observed that all variables included

have a VIF value of less than 2. Therefore, there is no multicollinearity present in the model introduced by the author.

**Results of Heteroscedasticity Test**

Results from Table 5 indicate the presence of heteroscedasticity. Therefore, to address this issue, the author employs the Robust Standard Error Estimation method to obtain more reliable results.

**Table 4:** Results of Multicollinearity Test

Variables	VIF	1/VIF
Ln(AGE)	1.11	0.9003
Ln(SVV)	1.08	0.9146
Ln(SNK)	1.54	0.6505
Ln(TD)	1.17	0.8577
Ln(SLD)	1.56	0.6417
Ln(TS)	1.10	0.9120
Ln(LS)	1.09	0.9146
VM	1.10	0.9120
GT	1.05	0.9488
Ln(KC)	1.02	0.9795

Source: Calculated results by the author

**Table 5:** Results of Heteroscedasticity Test

Source	chi2	Df	P
Heteroskedasticity Index	98.60	63	0.0028
Skewness Index	22.26	10	0.0138
Kurtosis Index	4.31	1	0.0378
Total	125.18	74	0.0002

**Source:** Calculated results by the author

*Results of Robust Standard Error Estimation*

The impact results of the loans from the Vietnam Bank for Social Policies are presented in Table 6.

**Table 6:** Results of Robust Standard Error Estimation

Variables	Coefficient $\beta$	T	$P >  t $
Ln(AGE)	0.1812	2.45	0.012
Ln(SVV)	0.1362	4.84	0.000
Ln(SNK)	-0.4210	-3.28	0.001
Ln(TD)	0.1422	3.13	0.002
Ln(SLD)	0.5401	6.47	0.000
Ln(TS)	0.4788	6.99	0.000
Ln(LS)	-0.0820	-1.80	0.068
VM	0.0743	2.08	0.034
GT	0.0200	0.54	0.621
Ln(KC)	0.5849	0.90	0.423

**Source:** Calculated results by the author

Based on the production function theory, the article developed a model of the factors affecting loan capital from the Vietnam Bank for Social Policies (VBSP) on the income of poor households in Binh Lieu district, Quang Ninh province. The research findings highlighted the following key points:

The variable Ln(AGE) has a coefficient  $\beta = 0.1812$ , indicating that age positively affects household income. This is consistent with previous studies and practical observations, especially in rural areas where most poor households are located. Older household heads often possess more experience in production due to years of hands-on practice or participation in training on livestock and crop cultivation (Le *et al.*, 2024; Quyen, 2019) <sup>[11, 23]</sup>.

The variable Ln(SVV) (loan amount) has a coefficient  $\beta = 0.1362$ , indicating that the loan amount positively correlates with household income; a 1% increase in loan amount raises household income by 0.1362%. This aligns with previous studies and local realities where poor households have been supported with policies on seeds, fertilizers, technical guidance, and market access, enhancing production efficiency and income (Nguyen *et al.*, 2007; Dapice, 2023) <sup>[17, 6]</sup>.

The variable Ln(SNK) has a coefficient  $\beta = -0.4210$ , showing a negative impact on household income. Poor households, often located in remote and disadvantaged areas, face challenges such as limited access to technology and prevalent issues like having three or four children, elderly non-working members, and people with disabilities, creating a financial burden. Therefore, stronger family planning education and the elimination of outdated customs favoring male children are recommended (Tran, 2023) <sup>[28]</sup>.

The variable Ln(TD) has a coefficient  $\beta = 0.1422$ , indicating that the education level positively impacts household income. As technology advances, more knowledge is being applied to production, shifting from reliance on experience to informed decision-making. Local authorities have collaborated with relevant organizations to provide training

that significantly enhances household production decisions and income (Le *et al.*, 2024; Demombynes & Vu, 2015; Dufhues *et al.*, 2002) <sup>[11, 7, 8]</sup>.

The variable Ln(SLD) has a coefficient  $\beta = 0.5401$ , indicating a positive effect on household income. In rural areas, where production largely depends on manual labor despite some technological applications, the number of laborers significantly influences income (Nguyen *et al.*, 2007; Demombynes, 2015) <sup>[17, 7]</sup>.

The variable Ln(TS) has a coefficient  $\beta = 0.4788$ , showing that assets positively affect household income. Before making any production decisions, households consider their assets, which directly impact their spending capabilities. Greater assets facilitate easier exploitation of opportunities in production and business (Le *et al.*, 2024; Tran, 2023) <sup>[11, 28]</sup>.

The variable Ln(LS) has a coefficient  $\beta = -0.0820$ , suggesting a negative impact on income. Although VBSP offers lower interest rates than commercial banks, some microfinance institutions have slightly higher rates, affecting the income of poor households when borrowing (Le *et al.*, 2024; Demombynes, 2015) <sup>[11, 7]</sup>.

The variable VM affects household income. Binh Lieu, a mountainous district with a significant ethnic minority population and challenging living conditions, often benefits from preferential loans compared to other regions. However, regional customs and production practices also influence income outcomes (Tran, 2023; Dufhues, 2002) <sup>[28, 8]</sup>.

The variable GT was statistically insignificant, indicating that household income is not affected by the gender of the borrower (Quyen, 2019; Demombynes, 2015) <sup>[23, 7]</sup>.

The variable KC was statistically insignificant, suggesting that the proximity of poor households to the bank does not significantly influence their income (Le *et al.*, 2024) <sup>[11]</sup>.

**Conclusion and Suggestions**

This study evaluated the contributions of loan capital to the income of poor households in Binh Lieu district, Quang Ninh province, Vietnam. To address this issue, the study employed the Cobb-Douglas production model. The results indicated that the amount of loan capital had a positive impact on the income of households. Additionally, variables such as the household head's age, the number of members in poor households, the education level of the household head, the number of laborers, assets, interest rates, and regional factors were statistically significant. Therefore, we propose several solutions to enhance the effectiveness of loan capital from policy banks on the income of poor households in the coming period:

Continued Promotion of Public Awareness Regarding Social Policy Bank's Preferential Loans: Strengthen collaboration with functional organizations to promote awareness among citizens about these preferential loans. Educate people to enhance their awareness and responsibility in utilizing these funds, contributing to income improvement and helping families and individuals escape poverty.

Diversification of Loan Sources for Poor Households: Implement multiple objectives to increase loan sources. Currently, loans for poor households mainly rely on funding from the Central budget, with provincial and district funds being limited. There is a need to diversify these sources further and enhance cooperation with non-governmental organizations to provide poor households with access to low-cost loans.

Enhancement of the Role and Impact of Preferential Loans: In recent years, preferential loans have assisted many households in escaping poverty and gaining employment for production. Therefore, it is crucial to strengthen management to ensure effective use of these funds, ensuring the ability to repay, reducing overdue and bad debts, and extending loan reach to poor households in remote areas.

Strengthened Coordination Between Local Authorities and the Bank: Continue to coordinate with political and social organizations to organize training classes that improve production knowledge and capital management for households, particularly those with limited access to science and technology. Enhance the supervision of local authorities over the use of funds to avoid misuse and improve the responsibility and spirit of repayment to the Social Policy Bank.

#### Authors' Contributions

All the authors have equally contributed in this work.

#### Conflicts of interest

There is no conflict of interest.

#### References

- Awimbo A, Daley-Harris S. (Eds.). *More Pathways Out of Poverty*. Kumarian, 2006.
- Biam CK, Okorie A, Nwibo SU. Economic efficiency of small scale soyabean farmers in Central Agricultural Zone, Nigeria: A Cobb-Douglas stochastic frontier cost function approach. *Journal of Development and Agricultural Economics*. 2016; 8(3):52-58.
- Chatterjee S. Poverty reduction strategies—lessons from the Asian and Pacific region on inclusive development. *Asian Development Review*. 2005; 22(01):12-44.
- Cobb CW, Douglas PH. *A theory of production*, 1928.
- Daley-Harris S, Laegreid L. *State of the microcredit summit campaign: Report 2006*. Washington, DC: Microcredit Summit Campaign, 2006.
- Dapice D. Poverty reduction and inequality in Vietnam. *Vietnam: Navigating a rapidly changing economy, society, and political order*, 2023, 251-274.
- Demombynes G, Vu LH. *Demystifying poverty measurement in Vietnam*. World Bank Group, 2015.
- Dufhues T, Dung PTM, Hanh HT, Buchenrieder G. Fuzzy information policy of the Vietnam Bank for the Poor in lending to and targeting of the poor in Northern Vietnam. In *International Symposium Sustaining Food Security and Managing Natural Resources in Southeast Asia-Challenges for the 21st Century*, January, 2002.
- Huang A, Zhang C, Liu P, Wang J, Ren W, Zheng Y. Input-output analysis of Chinese national agricultural science and technology park. In *Artificial Intelligence and Security: 5th International Conference, ICAIS 2019, New York, NY, USA, July 26-28, 2019, Proceedings, Part II 5* (pp. 509-523). Springer International Publishing, 2019.
- Hung nt. Value chain analysis of pig industry in quang dien district, thua thien hue province. *Hue university journal of science (hu jos)*. 2015; 109(10).
- Le VTP, Van Tuan P, Hai NC. Factors affecting sustainable poverty reduction livelihoods in rural areas in the mekong delta, Vietnam. *GeoJournal of Tourism & Geosites*. 2024; 52(1).
- Ledgerwood J, Earne J, Nelson C. (Eds.). *The new microfinance handbook: A financial market system perspective*. World Bank Publications, 2013.
- Levine R. *Finance and Growth: Theory and Evidence*. *Handbook of Economic Growth*. 2005; 1.
- Liverpool LSO, Winter-Nelson A. Poverty status and the impact of formal credit on technology use and wellbeing among Ethiopian smallholders. *World Development*. 2010; 38(4):541-554.
- McNamara RS. *Address to the Board of Governors*. World Bank, 1980.
- Morduch J. Concepts of poverty. *Handbook on poverty statistics: Concepts, methods and policy use*, 2006, 23-50.
- Nguyen C, Bigman D, Van den Berg M, Vu T. *Impact of micro-credit on poverty and inequality: The case of the Vietnam Bank for Social Policies*, 2007.
- Nguyen LT, Hoai Nguyen AP, Van Passel S, Azadi H, Lebailly P. Access to preferential loans for poverty reduction and rural development: Evidence from Vietnam. *Journal of Economic Issues*. 2018; 52(1):246-269.
- Nguyen TV, Nguyen CN. Current Situation of the Efficiency of the National Budget Allocation in Vietnam. *Vnu Journal of Economics and Business*. 2019; 35(3).
- Nguyen VH, Nguyen KT, Vo CV, Phan BT. Forecast on 2030 Vietnam Electricity Consumption. *Engineering, Technology & Applied Science Research*. 2018; 8(3).
- Ogundari K, Ojo SO. An examination of income generation potential of aquaculture farms in alleviating household poverty: Estimation and policy implications from Nigeria. *Turkish Journal of Fisheries and Aquatic Sciences*. 2009; 9(1).
- Pande R, Cole S, Sivasankaran A, Bastian G, Durlacher K. Does poor people's access to formal banking services raise their incomes?—A systematic review. *DFID Systematic Review EPPI-Centre, Social Science Research Unit, Institute of Education, University of London, London*, 2012.
- Quyen NH. Reducing rural poverty in Vietnam: Issues, policies, challenges. In *Mekong Development Research Institute, Written for the Expert Group Meeting on Eradicating Rural Poverty to Implement the*. 2019; 2030:1-7.
- Sen A, Himanshu. Poverty and inequality in India: II: Widening disparities during the 1990s. *Economic and Political Weekly*, 2004, 4361-4375.
- Shaw DJ. *World summit for social development, 1995*. In *World Food Security: A History since 1945* (pp. 328-333). London: Palgrave Macmillan UK, 2007.
- Tiamiyu MF. A Bank for the "Poor": Perceptions of the female clients of the People's Bank of Nigeria. *Community Development Journal*. 1994; 29(1):47-61.
- Tran HTT, Le HTT, Nguyen NT, Pham TTM, Hoang HT. The effect of financial inclusion on

- multidimensional poverty: The case of Vietnam. *Cogent Economics & Finance*. 2022; 10(1):2132643.
28. Tran TK. Does microfinancing, financial inclusion, and educational loans alleviate poverty and inequality: evidence from Vietnam. *Technological and Economic Development of Economy*. 2023; 29(6):1687-1707.