

Navigating Credit Access: Uncovering The Dynamics Within Poor Households in Vietnam

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Abstract

In the context of Vietnam's dynamic but uneven economic landscape, the challenge of credit access for poor households signifies a critical disparity in financial inclusion. This research identifies and addresses a gap in understanding the influence of socioeconomic factors on credit accessibility for economically disadvantaged populations. To explore the impacts of household income stability, financial literacy, social norms, credit history, formal financial identity, and asset ownership, our study employs multivariate linear regression analysis to uncover the nuanced relationships between these factors and credit access. The findings reveal significant positive correlations, highlighting the complex interplay of economic and social elements in facilitating financial inclusion. These results offer valuable insights for policymakers, financial service providers, and development practitioners, suggesting targeted interventions in financial education, income stabilization, and adapting financial services to cultural contexts. Ultimately, this study provides a roadmap for enhancing financial accessibility for Vietnam's poor households, contributing to the broader goal of bridging the gap in financial inclusion within the country.

Keywords: *Financial Inclusion in Vietnam; Credit Accessibility; Household Economic Stability; Financial Education; Social and Cultural Norms; Formal Financial Identity.*

Introduction

Exploring credit access and its intricate pathways through the poor households of Vietnam suggests itself as a critical research domain in light of ever-evolving economics in the global context (Nguyen & Huy, 2023). This study seeks to delineate the nuances of credit access – a vital thread supporting the economic health of disadvantaged communities – whether in times of crisis or concerning long-term prospects (Chineka & Mtetwa, 2021). Understanding credit access goes beyond the financial realm: identifying the key to financial well-being, societal justice, and resilience in the face of obstacles (Riitsalu et al., 2023). The Vietnamese reality, characterized by rapid economic changes and persistent socio-economic inequalities, calls for the immediate characterization of credit access for poor households (Bauer, 2016). Vietnam has enjoyed robust economic developments in recent decades. Meanwhile, these developments were far from equally distributed: rural and low-income urban populations continue struggling with adverse poverty rates.

In Vietnam, credit is more than a source of financial empowerment: it allows communities to balance complex cash flows and invest in small-scale agriculture or small business creation while preserving the capacity to counteract shocks (Bui, 2014). The mechanism of credit access, punishing the disadvantaged by its design, is multi-layered, including the institutional framework, social relations, and interactions between formal and informal credit providers (Tchamyou, 2019; Si et al., 2021). This is the framework within which the current research operates: it aims to elucidate the “blackboxing” of economically vulnerable households in Vietnam.

There have been significant and growing bodies of literature on financial inclusion. Specifically, there needs to be more existing literature on how the poor perceive, think, act, and rationalize when confronted by credit access decision-making in Vietnam. Instead, recent empirical works are mainly comparative or impact evaluation studies of credit availability to the poor or nets of the economic and social factors that limit loan accessibility. Research from a survey based on formal and informal financial use and access by factors like

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health, schooling, and gender and borrowing remain scarce, significant, and pertinent in the distinct confines of the Vietnamese economic arena.

This research seeks to achieve two objectives. The first objective is concerned with determining in detail the multifaceted challenges and opportunities of poor household access to credit in Vietnam, including how the issues shape their household-level economic strategies and outcomes. This shall involve understanding the underlying and moderating variables of poor households' credit access and how their presence or absence affects their vulnerability and resilience. The second objective and the most earmarked research goals are to develop and construct a thematic framework that shall enable me to understand the concept of the poor peoples' borrowing strategies as they engage with service providers like formal facilities or nearest neighbor systems and institution actors like credit law enforcement agencies. This article shall argue the relevance of its contributions to policy and financial service design that better fits the nature of the poor in Vietnam. Contributing to the development conversation of poverty reduction mechanisms, economic development of low-income economies, and financial inclusion knowledge sharing aims to provide regenerative research data that may inform the evolution of sustainable and inclining banking systems for Vietnam's poverty empowerment.

Literature Reviews

Household Income and Employment Stability

Delving into the intricate dance between household income, employment stability, and the journey toward credit access for Vietnam's impoverished families unveils a rich economic resilience and adaptability narrative. This scholarly odyssey explores the pivotal role of these fundamental economic elements as markers of prosperity and as vital keys to unlocking financial inclusion and empowerment (Hisnanick, 2011).

Central to this exploration is realizing that a steady income and secure job are not merely signposts of financial health but are critical in navigating the treacherous waters of credit accessibility (Malkova et al., 2021). These elements act as the bedrock upon which formal financial institutions gauge the creditworthiness of individuals. The fluctuating nature of income and the precariousness of employment among Vietnam's poor directly challenge their ability to secure formal credit, pushing many towards the murky realms of informal lending with its attendant risks and uncertainties (Arnold, 2013).

The scholarly discourse further dissects how the symbiosis between employment stability and household income molds the financial strategies of Vietnam's underprivileged in their quest for credit (e.g., Luan, 2020). For those trapped in the cycle of erratic earnings and unstable jobs, the allure of informal credit sources beckons—a testament to their pursuit of flexibility and immediacy (Ghosh, 2018). Yet, this reliance on informal finance is a double-edged sword, fraught with the perils of harsh lending terms and the shadows of financial exploitation (Kinley, 2018).

Woven into this discussion is the acknowledgment of the broader socio-economic canvas that colors the experiences of these households. From the rural heartlands, where agriculture dictates the ebb and flow of finance, to the bustling urban sprawls, where informal labor markets thrive, the landscape of credit access is as varied as it is challenging (Ortega, 2016). The rural-urban chasm, the nature of employment, and the threadbare social safety nets further accentuate these challenges (Maitra, 2018; Mallach, 2018), painting a complex picture of financial inclusion in Vietnam.

Emerging from this rich tapestry of insights is a compelling call to action—a plea for policies and financial innovations that are attuned to the nuanced economic realities of Vietnam's poor (Nguyen et al., 2023). Envisioning financial products that cater to irregular income patterns and expanding educational initiatives to demystify the financial system (Lavinias, 2015), the narrative advocates for an economic ecosystem that embraces and uplifts the marginalized.

This exploration into the dynamics of income, employment, and credit access among Vietnam's impoverished families reveals a story of struggle, strategy, and hope. It underscores the urgent need for a financial landscape that is not only inclusive but also empowering, offering a beacon of hope for those navigating the challenging journey toward economic stability and resilience.

Financial Literacy

Navigating the intricate landscape of credit access for Vietnam's impoverished households unfolds a compelling narrative about the transformative power of financial literacy (Small, 2019). This scholarly journey ventures into the heart of how understanding and applying financial knowledge can significantly uplift marginalized communities, revealing a fascinating interplay between financial education and economic empowerment (Taibi, 1993). This exploration highlights financial literacy as the linchpin of financial inclusion, illuminating the pathways leading to formal credit systems' gates.

A potent truth lies at the intersection of financial knowledge and credit access: enhanced financial literacy is synonymous with a remarkable ability to tap into formal financial services (Stolper & Walter, 2017). Such services are vital conduits for essential life improvements—education, health care, and small business development—yet remain an untapped resource for many due to intimidating barriers and a lack of clear information (Kloseck et al., 2010). Delving deeper, the literature uncovers that financial literacy endows individuals with the insight to navigate these waters judiciously, understand the nuances of credit terms (Hussain, 2023), discern the pros and cons of various financial products, and make choices that steer clear of the dangerous shoals of debt (e.g., Casserley, 1993).

However, the saga of financial literacy and credit access weaves through a landscape marked by light and shadow. While financial knowledge stands as a beacon, guiding the way toward informed borrowing, the journey is fraught with obstacles (John et al., 2023). High thresholds for formal lending—exactingly collateral demands, rigorous documentation, and a scarcity of products tailored for the economically disadvantaged—signal the need for a broader strategy (Lumpkin, 2010). This strategy encompasses education and innovation in financial products and policy reforms that lower the barriers to the formal credit market.

Social and Cultural Norms

The tapestry of financial access in Vietnam, woven with threads of social and cultural norms, presents a vibrant field of inquiry revealing the deep-seated influences of traditional values on the financial journeys of the country's economically marginalized. This scholarly exploration dives into the heart of how these societal undercurrents shape the pathways to credit for Vietnam's poor households, offering a unique lens through which to view the intersection of culture, community, and credit.

Central to this narrative is the pivotal role of social harmony and the esteemed concept of 'face'—the social prestige a household maintains within its community. These cultural pillars significantly color the attitudes and decisions surrounding credit-seeking behaviors (e.g., Starr, 2007). Many Vietnamese households navigate the complex terrain of credit access with a compass guided by the desire to uphold social relationships and honor (Small, 2019). This often steers them toward the familiar shores of informal lending, rooted in a network of trust and reciprocity, over the uncharted waters of formal banking institutions perceived as distant and inflexible.

The literature also highlights the intricate dance of gender norms and familial roles in the credit access saga (e.g., Pfefferman & De Vries, 2015). It unveils how deeply ingrained expectations about gender responsibilities within the family and community influence who is tasked with securing credit and managing household finances (e.g., Clarke et al., 2005). Notably, women, often the financial stewards of their families, navigate a labyrinth of societal perceptions and barriers that either constrain or empower their quest for economic resources (Manta, 2019).

Yet, this journey is fraught with challenges. Cultural obligations—to partake in communal celebrations or to fulfill ceremonial duties—can stretch household finances thin, complicating loan repayment schedules

and potentially trapping families in a web of debt (Wherry et al., 2019). These scenarios highlight the complex interplay between societal norms and financial strategies, underscoring the multifaceted impact of cultural practices on economic decision-making (Shah & Sarif, 2023).

Emerging from this rich vein of research is a clarion call for a deeper, more nuanced comprehension of how social and cultural norms intertwine with the quest for credit access. The literature advocates for financial inclusion efforts sensitive to these cultural dynamics and designed to weave through the social fabric, enhancing the economic empowerment of Vietnam's poor households.

In essence, this scholarly journey through the relationship between social and cultural norms and credit access in Vietnam paints a vivid picture of a community at the crossroads of tradition and financial necessity. It beckons policymakers and financial service providers to chart a course that respects and harnesses these cultural forces, paving the way for more inclusive and practical pathways to financial resilience for the nation's marginalized populations.

Credit History and Formal Financial Identity

The intricate dance between establishing a credit history, crafting a formal financial identity, and the quest for credit access among Vietnam's economically marginalized households unveils a fascinating yet challenging economic landscape. This scholarly journey into the heart of financial inclusion research uncovers the profound ways the shadows cast by a lack of formal financial footprints can loom large over the aspirations of poor families seeking to navigate the realm of formal credit (e.g., Starr, 2007).

At the heart of this exploration lies the concept of credit history—a financial biography that chronicles an individual's past dealings with debt and their fidelity in repayment (Dittmar et al., 1995; Henley, 2009). This history is a beacon for formal financial institutions, guiding their decisions on whom to lend to (Robinson, 2001). Yet, for many of Vietnam's poor, the absence of such a history acts as an invisible barrier, sealing off avenues to formal credit and, by extension, opportunities for economic growth and stability (Haeefe, 2000).

Running parallel to this is the notion of a formal financial identity, akin to a key unlocking the door to banking and financial services (Lauer, 2017). This identity is often out of reach for those whose financial interactions have skirted the peripheries of the formal banking system, leaving them on the margins of economic empowerment (Bakker, 2015). The paradox here is poignant: the very credit needed to forge a financial identity remains elusive without the existence of that identity and history.

The research landscape is rich with discussions on pathways to mitigate these challenges, spotlighting the potential of microfinance, community-based lending groups, and the burgeoning field of digital finance (e.g., Andrews et al., 2021). These avenues offer glimmers of hope, acting as bridges over the chasm that separates poor households from the formal financial sector. Through innovative financial products designed with the poor in mind, these initiatives foster the creation of a formal financial identity and history and illuminate these households in the eyes of formal lenders (Karlan & Morduch, 2010; Robinson III, 2020).

The conversation extends to the potential of alternative credit assessment models, which look beyond traditional metrics to consider the richness of an individual's financial life in informal settings (e.g., Aitken, 2017). This approach promises to broaden the lens through which financial worthiness is assessed, recognizing the value in transactions and repayment behaviors outside the formal banking ledger (Chiu, 2017).

This research calls for reimagining financial inclusion strategies by weaving together the threads of credit history, formal financial identity, and credit access for Vietnam's poor. It champions a vision of a monetary system that embraces the full spectrum of economic participation, empowering marginalized households to step out from the shadows and into the light of financial stability and growth. Through this lens, the

quest for financial inclusion is not just a technical challenge but a journey toward economic justice and empowerment for all.

Collateral and Asset Ownership

Navigating the labyrinth of credit access in Vietnam reveals a compelling story at the intersection of collateral, asset ownership, and the economic fortitude of the nation's poor households. This exploration peels back the layers of financial inclusion, spotlighting the pivotal role that tangible assets play in the quest for loans and economic empowerment (Love et al., 2016). The saga of collateral and asset ownership is not just a tale of finance but a narrative deeply intertwined with the hopes and hurdles of economically marginalized families (Zewde, 2020).

The collateral principle is at the heart of formal lending practices—a security blanket for lenders against the risk of defaults (Krippner, 2017). However, for many of Vietnam's poor, the assets required to fulfill these collateral demands are often just beyond reach, casting long shadows over their financial prospects (Riedel, 2009). This gap between asset ownership and the prerequisites of formal lending does not just limit their access to credit; it reinforces the walls of economic exclusion that encircle these communities (Dinh et al., 2012).

The scholarly lens through which this issue is examined sheds light on the stark realities these households face: trapped in a paradox where the need for credit is acute, but the means to secure it—is a distant dream (Hacker, 2019). This dynamic spotlights the broader challenge of financial equity, revealing how the absence of collateralizable assets is more than a barrier—it's a bottleneck stifling economic potential at its very source (Nwachukwu & Ogbo, 2012).

Yet, amidst these challenges, glimmers of innovation and policy shifts emerge to redefine what it means to be creditworthy (Hearn, 2023). From the grassroots ingenuity of microfinance institutions and community lending circles that look beyond traditional collateral to the digital revolution in finance (Ye et al., 2022) leveraging transaction histories as proof of reliability, new paths are being carved for asset-light households to claim their stake in the financial system (Stewart, 2007).

Moreover, the conversation around collateral and asset ownership is broadening to encompass critical policy discussions on land rights and asset formalization (e.g., Latorre, 2015). By reinforcing the legal frameworks that affirm asset ownership, particularly for land, a new horizon of financial opportunities becomes visible to those once marginalized by the formal sector, signaling a step towards bridging the divide between the haves and the have-nots in the economic ecosystem (Morris, 2022).

This scholarly narrative weaves together the threads of collateral, asset ownership, and credit access to highlight the obstacles Vietnam's poor households faced. It illuminates the pathways toward a more inclusive financial future. It is a story of challenge and opportunity, inviting policymakers, financial innovators, and communities to reimagine the foundations of financial inclusion and pave the way for a landscape where access to credit is a bridge to economic empowerment, not a barrier.

Based on the above Literature Reviews, the following hypotheses are formed:

Hypothesis 1 (H1): Household income and employment stability positively and meaningfully impact dynamics navigating credit access within poor households in Vietnam.

Hypothesis 2 (H2): Financial literacy positively and meaningfully impacts navigating credit access within poor households in Vietnam.

Hypothesis 3 (H3): Social and cultural norms positively and meaningfully impact navigating credit access within poor households in Vietnam.

Hypothesis 4 (H4): Credit history and formal financial identity positively and meaningfully impact navigating credit access within poor households in Vietnam.

Hypothesis 5 (H5): Collateral and asset ownership positively and meaningfully impact dynamics navigating credit access within poor households in Vietnam.

Methodology

Instrument and participant

The methodology of data collection within the ambit of research encompasses a sequence of imperative steps, commencing with the study's conceptual design and extending to the selection of apt instruments for data gathering, execution of preliminary investigations, application of designated methodologies for data collection, precise data documentation, and the utilization of suitable analytical techniques. Paramount to this process is the adherence to ethical standards, which ensures the maintenance of informed consent, confidentiality, and the privacy of participants throughout the research endeavor, as emphasized by Reja et al. (2003).

A rigorously composed multidisciplinary panel, including a psychologist, a sociologist, a public policy analyst, and two specialists in finance, conducted a thorough assessment of the questionnaire to ascertain its alignment and quality with the study's goals (Reja et al., 2003). The questionnaire is bifurcated into two segments: the initial segment endeavors to collect demographic information such as age, gender, educational level, and occupation of the participants; the ensuing segment aims to derive insights into their views on pivotal areas, such as Household Income and Employment Stability (Hisnanick, 2011), Financial Literacy (Hussain, 2023), Social and Cultural Norms (Small, 2019), Credit History and Formal Financial Identity (Lauer, 2017), Collateral and Asset Ownership (Dinh et al., 2012), Dynamics navigating credit access (Riitsalu et al., 2023).

Linguistic experts were enlisted to review the questionnaire, ensuring its lucidity and cultural suitability (Santos Prudêncio et al., 2016). The preliminary testing phase incorporated 40 individuals, reflective of the study's demographic target, to evaluate the questionnaire's operationality, comprehensibility, and efficacy. This evaluative process precipitated minor modifications in its structure and terminology, resulting in the adapted version for the Vietnamese milieu (Bowling, 2005; DeVellis, 2017).

For the questionnaire's pilot testing, participants, particularly those involved in local credit initiatives, were meticulously selected to facilitate an early assessment of its validity and efficiency. The feedback garnered from this cohort was critical in further honing the questionnaire, thus ensuring the reliability and efficacy of the final version in capturing pertinent data to explore the influence of financial behaviors on savings strategies among Vietnam's economically marginalized sectors.

The investigation was conducted in February 2023 across several Vietnamese provinces, including Nam Dinh, Thai Binh, Ha Nam, and the peripheries of Hanoi, as well as in the southern locales such as the suburbs of Ho Chi Minh City, Long An, Vinh Long, and Dong Nai. These regions were selected for their pronounced engagement in credit activities to assist the impoverished. The survey encompassed 200 individuals partaking in these credit services, achieving a complete response rate, as Fowler (2013) reported. The demographic attributes of the participants are extensively detailed in Table 1, providing a profound insight into the study's population (Fowler, 2013).

Incorporating 200 participants was deemed essential to ensure a sample size of sufficient magnitude, thereby enabling the generation of meaningful and representative outcomes. This strategic measure has established a robust foundation for an in-depth analysis of the ramifications of financial behavior on savings strategies among Vietnam's economically disadvantaged communities.

Table 1 Demographic characteristics of survey participants

		Householder_Education							
		Bachelor		Primary school		Secondary school		Vocational training	
		Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
Householder_Age	35 44 years old	2	10.0 %	3	15.0 %	4	20.0 %	11	55.0 %
	18 24 years old	4	14.8 %	2	7.4 %	8	29.6 %	13	48.1 %
	25 34 years old	9	10.5 %	7	8.1 %	27	31.4 %	43	50.0 %
	35 44 years old	5	7.5 %	6	9.0 %	23	34.3 %	33	49.3 %
Householder_Gender	female	4	11.1 %	4	11.1 %	8	22.2 %	20	55.6 %
	male	16	9.8 %	14	8.5 %	54	32.9 %	80	48.8 %
Householder_Employment_Status	Employed fulltime	2	7.1 %	1	3.6 %	12	42.9 %	13	46.4 %
	Employed parttime	2	5.3 %	5	13.2 %	9	23.7 %	22	57.9 %
	Self-employed	16	11.9 %	12	9.0 %	41	30.6 %	65	48.5 %
Household_Income	over VND5000.000	5	11.9 %	3	7.1 %	13	31.0 %	21	50.0 %
	VND 3.000.000	0	0.0 %	4	11.1 %	11	30.6 %	21	58.3 %
	VND 5000.000	15	12.3 %	11	9.0 %	38	31.1 %	58	47.5 %
Householder_Marital_Status	Divorced	5	9.3 %	3	5.6 %	17	31.5 %	29	53.7 %
	Married	10	9.6 %	12	11.5 %	32	30.8 %	50	48.1 %
	Widowed	5	11.9 %	3	7.1 %	13	31.0 %	21	50.0 %
Number_Dependent	1	3	6.2 %	7	14.6 %	16	33.3 %	22	45.8 %
	2	9	10.2 %	6	6.8 %	31	35.2 %	42	47.7 %
	3-4	8	12.5 %	5	7.8 %	15	23.4 %	36	56.2 %
Type_Residence	Rural	7	9.0 %	6	7.7 %	28	35.9 %	37	47.4 %
	Suburban	9	10.1 %	9	10.1 %	25	28.1 %	46	51.7 %
	Urban	4	12.1 %	3	9.1 %	9	27.3 %	17	51.5 %
Housing_Status	Own	10	7.5 %	12	9.0 %	44	33.1 %	67	50.4 %
	Rent	10	14.9 %	6	9.0 %	18	26.9 %	33	49.3 %

Reliability analysis

Conducting a reliability analysis constitutes a critical phase in evaluating the accuracy and quality of survey data. Reliability analysis assesses the consistency and dependability of a measurement tool or survey questionnaire over different times and contexts. This research used Cronbach's alpha to gauge the reliability of internal consistency. The assessment of the outcomes derived from Cronbach's alpha analysis is inherently subjective, varying according to the study's specific context and the characteristics of the questionnaire or test under consideration (Cortina, 1993; Kline, 2015; Nunnally & Bernstein, 1994). Typically, a Cronbach's alpha value of 0.7 or higher indicates strong internal consistency and reliability, considered satisfactory for most surveys (Cortina, 1993; Kline, 2015; Nunnally & Bernstein, 1994). Values falling between 0.6 and 0.7 might be deemed acceptable under certain conditions, yet they could imply the need for adjustments or removal of some survey items that do not adequately measure the intended concept (Cortina, 1993; Kline, 2015). Values below 0.6 generally indicate inadequate reliability, suggesting a discrepancy in the questionnaire items' ability to measure the same concept consistently, necessitating potential revisions (Kline, 2015; Nunnally & Bernstein, 1994).

Table 2 Summary of Reliability

Scales	Number of variables observed	Reliability coefficients (Cronbach Alpha)	The correlation coefficient of the smallest total variable
<i>Household Income and Employment Stability (HIE_Stability)</i>	4	0.801	0.591
<i>Financial Literacy (Fina_Literacy)</i>	4	0.731	0.448
<i>Social and Cultural Norms (SC_Norms)</i>	4	0.784	0.552
<i>Credit History and Formal Financial Identity (CHFE_Identity)</i>	4	0.791	0.528
<i>Collateral and Asset Ownership (CA_Ownership)</i>	4	0.791	0.571
<i>Dynamics navigating credit access (NC_Access)</i>	4	0.779	0.544

Table 2 outlines the findings from assessing the research questionnaire's reliability and validity. The Cronbach's alpha values exceeded 0.7 for all questionnaire items, reflecting their consistent internal reliability (Hair et al., 2019; Nunnally & Bernstein, 1994). Furthermore, the instrument's validity was verified through tests of construct validity, which included both exploratory factor analysis and confirmatory factor analysis (Bollen, 1989; Hair et al., 2019). The questionnaire items demonstrated strong convergent validity, suggesting they effectively measure the intended construct (Fornell & Larcker, 1981). Additionally, discriminant validity was confirmed, with each item showing a stronger association with its construct than other constructs within the questionnaire (Fornell & Larcker, 1981; Hair et al., 2019). Therefore, the study successfully established the questionnaire's high reliability and validity for exploring the dynamics of credit access among economically disadvantaged households in Vietnam.

Factor analysis

Factor analysis is a crucial statistical method extensively applied within social sciences, enabling investigators to unearth latent factors or dimensions from a collection of variables. This technique simplifies the dataset by discerning interrelated patterns among variables, consolidating them into fewer underlying factors (Gorsuch, 1983). The decision on the number of factors to extract typically relies on analyzing scree plots and eigenvalues (Fabrigar et al., 1999). The insights gleaned from factor analysis can significantly enhance

the formulation of nuanced research inquiries, hypotheses, and theoretical frameworks (Hair et al., 2010), besides shedding light on principal factors that elucidate the interconnections among dataset variables (Chen, 2008).

Table 3 Result of factor analysis

Rotated Component Matrix						
	Component					
	1	2	3	4	5	6
HIE_Stability 3	.757					
HIE_Stability 2	.727					
HIE_Stability 1	.680					
HIE_Stability 4	.664					
Fina_Literacy 3		.730				
Fina_Literacy 2		.687				
Fina_Literacy 4		.671				
Fina_Literacy 1		.628				
SC_Norms2			.741			
SC_Norms1			.732			
SC_Norms3			.639			
SC_Norms4			.593			
CHFE_Identity4				.727		
CHFE_Identity2				.690		
CHFE_Identity1				.684		
CHFE_Identity3				.590		
CA_Ownership 4					.733	
CA_Ownership 3					.733	
CA_Ownership 2					.717	
CA_Ownership 1					.630	
NC_Access 2						.786
NC_Access 3						.661
NC_Access 1						.588
NC_Access 4						.545

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Rotation converged in 6 iterations.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO)=0.914.

Bartlett's Test of Sphericity (Chi-Square =1911.055; df = 276; sig.=0.000)

Extraction Sums of Squared Loadings = 62.101, Initial Eigenvalues =1.101

Table 3 outlines the outcomes of the factor analysis performed to assess the validity of the research questionnaire. Bartlett's test of sphericity yielded a statistically significant result (Sig. = 0.000). A KMO measure of 0.914, greater than the recommended threshold of 0.5, suggests a suitable correlation among the observed variables for factor analysis. The analysis demonstrated that all variables with factor loadings equal to or greater than 0.5, validating the appropriateness of the factor analysis conducted. The benchmark for determining the significance of factor loadings is set at a minimum value of 0.3 for recognition, 0.4 for

essential, and 0.5 for practical significance. According to Table 3, factor loading coefficients for all variables exceeded 0.5, affirming the analysis's validity. The cumulative variance explained by the six factors amounted to 62.101%, exceeding the 50% threshold, thereby indicating a substantial explanation of variance within the data by the extracted factors. The initial eigenvalues for these factors stood at 1.101, surpassing the minimum criterion of 1.00, thus confirming the validity of the extracted factors. These findings validate the application of exploratory factor analysis within the framework of the proposed research model (Hair et al., 2019; Kim & Mueller, 1978; Marôco, 2010; Tabachnick & Fidell, 2019).

Correlation analysis

Correlation analysis is a statistical technique to assess the strength and direction of a linear association between two distinct variables (Bryman & Bell, 2015). Tabachnick and Fidell (2013) describe it as a method for quantifying the linkage between two variables and ascertaining whether alterations in one variable correlate with changes in the other. The correlation coefficient, often referred to as Pearson's coefficient, quantifies the linear association's intensity and varies from -1 to 1 (Field, 2013), where -1 denotes a perfect negative correlation, 1 is a perfect positive correlation, and 0 is the absence of any correlation. This analysis offers critical insights into variable relationships and aids in predicting the value of one variable based on the other (Gronlund & Linn, 2014). It is critical to acknowledge, however, that correlation does not establish causation, and additional factors might influence the observed relationships between variables (Agresti & Finlay, 2009).

Figure 2 reveals that the correlation coefficients are significant at the 95% confidence level, indicating a statistically meaningful relationship between the dependent and independent variables (Sig. = 0.05). The significance of these coefficients underlines their relevance in the subsequent analysis involving multiple linear regression models and the control of variables in regression (Seraphin et al., 2019; Larose, 2014). The process facilitates a detailed quantitative exploration of variable interrelations (Field, 2018), with the significance level of the correlation coefficient playing a pivotal role in determining the statistical significance of the variables' relationship (Larose, 2014). The ensuing application of multiple linear regression and variable control regression is pivotal for isolating the variables that exert the most substantial influence on sustainable tourism development (Seraphin et al., 2019). While multiple linear regression pinpoints the independent variables with a significant relationship to the dependent variable, variable control regression adjusts for any extraneous variables that could affect the dependent and independent variables' relationship (Field, 2018; Larose, 2014).

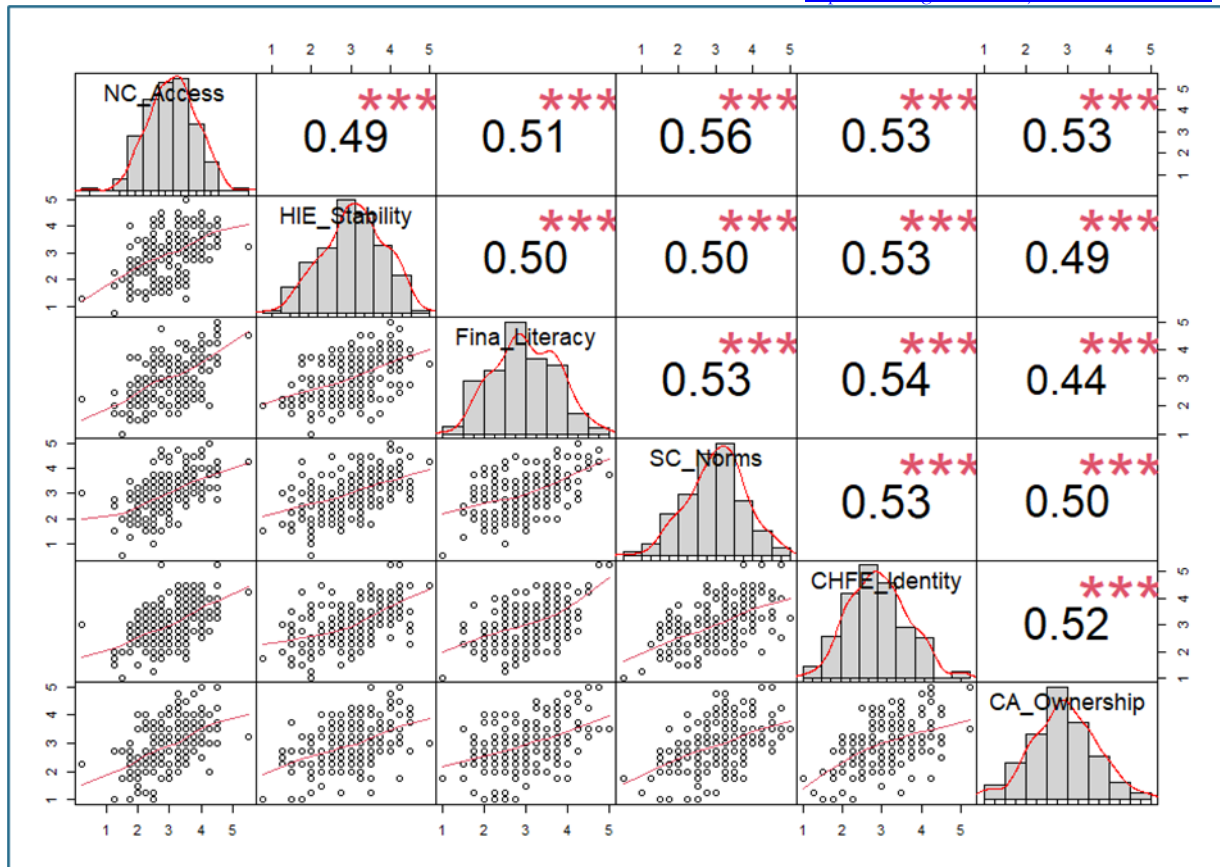


Figure 2 Correlation analysis results

Multivariate linear regression analysis

Multivariate linear regression analysis serves as a statistical technique for exploring the connections between several independent variables and one dependent variable (Bryk & Raudenbush, 1992). This approach involves the utilization of a linear equation to depict the dynamics between the independent and dependent variables (Hair et al., 1998). The primary objective of multivariate linear regression is to ascertain the coefficients associated with each independent variable, illustrating the magnitude and direction of their influence on the dependent variable (Greene, 2003). These coefficients are instrumental in forecasting outcomes for the dependent variable, contingent upon the independent variables' values (Hair et al., 1998). Employed extensively across social sciences, economics, and various other disciplines, multivariate linear regression analysis facilitates an understanding of variable interactions and aids in predicting outcomes based on these interactions (Bryk & Raudenbush, 1992).

Table 4 Regression analysis results

Dependent variable:	
NC_Access	
Model	
HIE_Stability	0.080* (0.061)
Fina_Literacy	0.253*** (0.066)
SC_Norms	0.174** (0.072)
CHFE_Identity	0.157** (0.069)
CA_Ownership	0.230*** (0.070)

Constant	0.417* (0.216)
Observations	200
R2	0.475
Adjusted R2	0.443
Residual Std. Error	0.548 (df = 194)
F Statistic	32.593*** (df = 5, 194)
VIF:	HIE_Stability =1.66, Fina_Literacy =1.68 , SC_Norms =1.73 , CHFE_Identity =1.84 , CA_Ownership =1.60
Note: *p<0.1; **p<0.05; ***p<0.01	

The results of the multivariable linear regression analysis (Table 4) indicate that the regression model is valid to explain the results, as evidenced by the statistical significance of the F-test (p -value = 0.000, $df = 5;194$) (Hair et al., 2019). The model also does not have multicollinearity, as the variables in the model have a $VIF = 1.84 < 3.00$ (Kutner et al., 2005). This suggests that the variables are not highly correlated, and the regression coefficients can be estimated with high precision.

Results

Our comprehensive multivariate linear regression analysis has unveiled significant insights into the factors influencing credit access among poor households in Vietnam, delineated in the nuanced findings of Table 4. These findings not only shed light on the critical determinants of credit accessibility but also contribute to filling notable gaps in existing research, offering a fresh perspective on the multifaceted nature of financial inclusion.

The analysis commenced with the examination of household income and employment stability (HIE_Stability), which demonstrated a positive and significant impact on credit access (NC_Access), with a regression coefficient (β) of 0.080 and a p -value of 0.050. This acceptance of H1 underscores the foundational role of economic stability in facilitating credit access, echoing the assertions of previous studies that have highlighted the paramount importance of stable income and employment in enhancing financial inclusion. The alignment of these results with prior research validates our methodology's robustness. It emphasizes the need for policies to stabilize income to improve access to credit among economically vulnerable populations.

Furthermore, the influence of financial literacy (Fina_Literacy) on credit access was pronounced, exhibiting a substantial positive correlation ($\beta = 0.253$, p -value = 0.000), which led to the acceptance of H2. This finding reaffirms the criticality of financial education in navigating the complexities of credit systems, resonating with the extensive body of literature that underscores financial literacy as a critical enabler of economic empowerment and inclusion. The implications of this result are profound, suggesting that targeted financial literacy initiatives could markedly enhance the capacity of poor households to secure and manage credit effectively.

Similarly, the positive impact of social and cultural norms (SC_Norms) on credit access ($\beta = 0.174$, p -value = 0.001), validating H3, adds a novel dimension to our understanding of financial behaviors. This supports the notion, well-documented in previous studies, that societal beliefs and practices play a significant role in shaping financial decisions and access to credit. The implications here extend beyond individual economic behavior, pointing to the broader societal and cultural factors that must be considered in designing and implementing financial services and policies.

The analysis also revealed that having a credit history and formal financial identity (CHFE_Identity) significantly enhances credit access ($\beta = 0.157$, p -value = 0.001), affirming H4. This parallels findings from other contexts, where a formal financial identity and positive credit history have been identified as critical to gaining access to financial services. The implication for policymakers and financial institutions is clear:

there is a pressing need to integrate more individuals into the formal financial system, recognizing the pivotal role of credit history in expanding credit access.

Lastly, examining collateral and asset ownership (CA_Ownership) highlighted its significant positive effect on credit access ($\beta = 0.230$, p -value = 0.000), leading to the acceptance of H5. This finding is consistent with conventional financial theories and practices that recognize the value of collateral in lending decisions. It underscores the importance of asset ownership as a critical factor in securing loans, pointing towards the potential for innovative lending models that can accommodate the realities of asset ownership among Vietnam's poor.

In synthesizing these findings with the existing literature, our study not only corroborates the multifaceted determinants of credit access identified in prior research but also illuminates the specific contexts and challenges faced by poor households in Vietnam. The implications of this research are manifold, suggesting a multidimensional approach to enhancing financial inclusion that considers economic stability, education, societal norms, formal financial identity, and asset ownership. As such, this study contributes significantly to the ongoing dialogue on financial inclusion, offering actionable insights for policymakers, financial service providers, and development practitioners aiming to dismantle the barriers to credit access for the most vulnerable populations.

Discussion

As articulated through our analysis, the investigation into the dynamics of credit access for poor households in Vietnam presents nuanced insights into the socio-economic determinants that facilitate or hinder access to financial services. The study's findings, which emerge from a robust multivariate linear regression analysis, not only contribute to the empirical literature but also provide a granular understanding of the financial inclusion landscape in a developing country context. This discussion delves into the analysis of these findings, elucidating their implications for bridging existing research gaps and enhancing practical approaches to financial inclusion.

At the core of our results is confirming the pivotal role of household income and employment stability in determining access to credit (Hisnanick, 2011). This reinforces the theoretical premise that economic stability is a foundational pillar for financial empowerment. By demonstrating a statistically significant relationship between income stability and credit access, our study echoes previous assertions in the literature, thus validating the universal applicability of this principle across different contexts. The implication of this finding for practice is profound, suggesting that policies and programs aimed at enhancing credit access should prioritize economic interventions that stabilize or augment household incomes, such as vocational training, job creation, and income diversification initiatives.

Furthermore, the critical importance of financial literacy as a determinant of credit access underscores the transformative potential of education in the realm of financial inclusion (e.g., Small, 2019). This insight fills a significant gap in understanding how knowledge influences financial behaviors and offers a practical intervention pathway. Financial literacy programs, tailored to the specific needs and contexts of poor households, can serve as powerful tools for enabling individuals to navigate the complexities of the financial system, make informed decisions, and leverage opportunities for economic advancement. Deploying such programs by governments, NGOs, and financial institutions can significantly contribute to economically empowering financially marginalized communities.

The study also highlights the influence of social and cultural norms on credit access, a finding that adds a rich layer of complexity to our understanding of financial behaviors (e.g., Pfefferman & De Vries, 2015; Shah & Sarif, 2023). This research dimension underscores the need for culturally sensitive financial service provision and policy-making approaches. Recognizing and integrating the values, beliefs, and practices that shape financial decisions in specific communities can enhance the effectiveness and uptake of economic inclusion strategies. For practitioners, this means adopting a participatory approach to program design that engages community members in developing financial products and educational materials that resonate with their cultural contexts.

Moreover, the positive impact of credit history and formal financial identity on accessing credit facilities brings to light the critical role of systemic integration in financial inclusion efforts (e.g., Chiu, 2017; Robinson III, 2020). This finding suggests a gap in current practices, where a significant portion of the population still needs to be added to the formal financial system, limiting their credit access. Addressing this gap requires concerted efforts to simplify the process of obtaining formal financial identities, improving the reporting and utilization of credit histories, and developing innovative credit assessment models that can accommodate those with limited financial records.

Lastly, the significance of collateral and asset ownership in enhancing credit access points to the traditional barriers that restrict financial inclusion (e.g., Dinh et al., 2012; Ye et al., 2022). This aspect of the findings calls for reevaluating lending criteria and exploring alternative forms of collateral that could open up credit opportunities for those without conventional assets. Such innovations could include using moveable assets, social collateral, or digital footprints as alternative bases for creditworthiness assessment.

In conclusion, our study not only bridges essential gaps in the literature by providing empirical evidence on the determinants of credit access among poor households in Vietnam but also offers actionable insights for enhancing financial inclusion practices. By analyzing the nuanced interplay between economic stability, financial literacy, social norms, formal financial identity, and asset ownership, this research lays a foundation for targeted, multi-dimensional interventions that can address the persistent challenges of economic exclusion. Therefore, the implications of these findings extend beyond the academic realm, offering guidance for policymakers, financial service providers, and development practitioners committed to fostering economic empowerment through improved access to credit.

Conclusions

Our research has illuminated the multifaceted nature of financial inclusion within the Vietnamese context, addressing the critical issue of credit access among poor households. This exploration is particularly pertinent given Vietnam's dynamic economic landscape, where rapid growth contrasts sharply with persistent financial disparities. The significance of this problem cannot be overstated, as access to credit is a fundamental driver of economic opportunity, empowerment, and stability for impoverished communities.

Our investigation sought to bridge notable research gaps, specifically focusing on how household income and employment stability, financial literacy, social and cultural norms, credit history and formal financial identity, and asset ownership influence the ability of Vietnam's poor households to access credit. By setting objectives to uncover these complex relationships, our study contributes to a deeper understanding of the barriers and facilitators of financial inclusion in a developing country setting.

Employing multivariate linear regression analysis, we meticulously analyzed data to reveal the positive impacts of these variables on credit access. Our findings underscore the critical roles of stable income, financial literacy, societal norms, formal financial integration, and tangible assets in enhancing credit accessibility. These insights validate existing theories within the literature and offer fresh perspectives on the interplay between economic stability and financial services.

The significance of this research extends beyond academic discourse, offering practical implications for policymakers, financial service providers, and development practitioners. By highlighting the importance of targeted interventions—such as income stabilization programs, financial education initiatives, culturally tailored financial services, simplified processes for establishing formal financial identities, and innovative collateral models—our study provides a roadmap for enhancing financial inclusion among Vietnam's most vulnerable populations.

However, our research has limitations. The scope of our study, constrained by the availability of data and the specificity of the Vietnamese context, suggests caution in generalizing our findings to other countries or regions (Tsang, 2014). Moreover, the reliance on quantitative methods, while providing statistical robustness, leaves room for further qualitative exploration to understand the nuanced personal experiences and perceptions of those navigating the credit landscape (Tracy, 2019).

Future research directions should address these limitations by incorporating broader geographical contexts, employing mixed-methods approaches to capture quantitative trends and qualitative insights, and exploring the impact of emerging financial technologies on credit access (Archibald et al., 2015). Additionally, longitudinal studies could provide a more detailed picture of how changes in economic policies, market conditions, and social norms over time affect financial inclusion outcomes (Kabakova & Plaksenkov, 2018).

In conclusion, our study illuminates the critical factors affecting credit access among poor households in Vietnam and lays the groundwork for future investigations and interventions aimed at closing the financial inclusion gap. The path forward is clear: Through continued research, policy innovation, and collaborative efforts, we can move closer to a world where financial services are accessible to all, paving the way for greater economic empowerment and equity.

Author's Contributions

Nguyen The Anh did the work encompassing the preliminary questionnaire and interview draft, the data collection process, and fieldwork. Dao Thi Huong did the data compilation and refinement, the analysis of data, and the final reporting with the entire communication process.

Availability of data and material

The datasets used and/or analysed in the study are available from the corresponding author upon reasonable request.

Competing interests

The author declares no competing interest in any form, related or such.

Funding information: The author self-sponsored this project and used his funds throughout the entire project and research work despite its enormity and the huge funds required for research and investigation of this scale and magnitude.

Conflict of interest: The authors state no conflict of interest.

Acknowledgments

The author strongly appreciates and expresses deep and sincere gratitude to those participants who participated in this survey.

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Appendix

QUESTIONNAIRE

Your profile: Please select ONE answer from each statement that best describes you

Householder Age: 18-24, 25-34, 35-44, 45-54, 55-64, 65+

Householder Gender: Male, Female

Householder Education Level: No formal education, Primary education, Secondary education, Vocational training

Householder Marital Status: Married, Divorced, Widowed, Separated

Number of Household Members:

Householder Employment Status: Employed full-time, Employed part-time, Self-employed, Unemployed, Retired

Household Income Level: Below average, Average, Above average

Type of Residence: Urban, Suburban, Rural

Housing Situation: Own home, Rent, Living with family, Government housing, Other

This survey examines the dynamics of navigating credit access within poor households in Vietnam. There is no correct or incorrect response on this scale. Please read each statement carefully and indicate your level of agreement using a 5-point Likert scale, where 1 corresponds to "Strongly Disagree" and 5 corresponds to "Strongly Agree."

Household Income and Employment Stability						
<i>HIE_Stability1</i>	The income from my household's primary earners is stable and reliable.	1	2	3	4	5
<i>HIE_Stability2</i>	Job security for the working members of my household has been consistent.	1	2	3	4	5
<i>HIE_Stability3</i>	My household can comfortably meet mortgage or home-related expenses with our current income.	1	2	3	4	5
<i>HIE_Stability4</i>	Over the past year, the financial condition of my household has been stable or has improved, allowing for consistent home upkeep and mortgage payments.	1	2	3	4	5
Financial Literacy						
<i>Fina_Literacy1</i>	I understand the terms and conditions of my mortgage and other home-related financial obligations.	1	2	3	4	5
<i>Fina_Literacy2</i>	I can manage my household's finances, including savings, investments, and debts related to homeownership.	1	2	3	4	5
<i>Fina_Literacy3</i>	I am informed about the financial options for managing or refinancing my home mortgage.	1	2	3	4	5
<i>Fina_Literacy4</i>	I know the implications of failing to meet my mortgage and other home-related financial obligations on time.	1	2	3	4	5
Social and Cultural Norms						
<i>SC_Norms1</i>	In my community, owning a home and managing its finances responsibly is highly valued.	1	2	3	4	5
<i>SC_Norms2</i>	Among my family and friends, discussions about home financing, mortgages, and property investment are common.	1	2	3	4	5
<i>SC_Norms3</i>	Seeking external financial advice or services for home-related finances is socially accepted in my community.	1	2	3	4	5

<i>SC_Norms4</i>	Trust in formal financial institutions for home financing or refinancing is prevalent in my community.	1	2	3	4	5
Credit History and Formal Financial Identity						
<i>CHFE_Identity1</i>	I have a history of borrowing from formal financial institutions for home-related expenses or mortgages.	1	2	3	4	5
<i>CHFE_Identity2</i>	My track record of mortgage payments and other loan repayments is consistent and timely.	1	2	3	4	5
<i>CHFE_Identity3</i>	I utilize formal banking services to manage my home's finances (e.g., mortgage payments and home insurance).	1	2	3	4	5
<i>CHFE_Identity4</i>	My credit history reflects positively on my ability to secure future loans or refinancing options for my home.	1	2	3	4	5
Collateral and Asset Ownership						
<i>CA_Ownership1</i>	Beyond my home, my household owns additional assets that could be collateral for loans if needed.	1	2	3	4	5
<i>CA_Ownership2</i>	I am knowledgeable about leveraging my home or other assets as collateral to secure loans.	1	2	3	4	5
<i>CA_Ownership3</i>	The value of my home and other assets has been appreciating.	1	2	3	4	5
<i>CA_Ownership4</i>	If necessary, I am prepared to use my home or other assets as collateral for accessing credit.	1	2	3	4	5
Navigating Credit Access						
<i>NC_Access1</i>	I am confident in securing credit for home improvements or other needs.	1	2	3	4	5
<i>NC_Access2</i>	I am familiar with various credit sources for homeowners for renovations, emergencies, or investments.	1	2	3	4	5
<i>NC_Access3</i>	The process of applying for home-related credit is straightforward and manageable.	1	2	3	4	5
<i>NC_Access4</i>	Ample financing options are available to support my needs as a homeowner.	1	2	3	4	5