

The Study for Factors and Success of Policy on Housing Mortgage Loan for the Low-Income Earners: Case Study of Government Housing Bank

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Abstract

This research study aims to investigate the factors affecting the success of implementing the housing mortgage loan policy for low-income earners and the level of success in implementing the housing mortgage loan policy for low-income earners. Quantitative research methods: Surveys using a questionnaire with a sample of 400 people who use housing mortgage loans for low-income earners of a financial institution in Bangkok and surrounding areas. The data collected from the surveys was then analyzed using Confirmatory Factor Analysis (CFA), variables indicating structural equation models, the harmony of the model, and Structural Equation Model (SEM). The research results found that the consistency of the model was checked with the empirical data (assessment of model fit). The indices used to check the consistency of the model with the empirical data include the Chi-square index, CFI, GFI, AGFI, RMSEA, RMR, IFI, and NFI. The research results found that the Chi-Square value was equal to 78.818, df=60, CMIN/df=1.314, CFI=0.987, GFI=0.972, AGFI=0.957, RMSEA=0.028, RMR=0.047, IFI=0.987, and NFI=0.948, thus accepting the hypothesis that policy process, policy terms, collaboration of the private sector, and resources for implementing policy are positively influenced by success factors. The index is consistent, and the statistical values found the criteria specified for a study of factors affecting the success of the housing mortgage loan policy for low-income and the level of success in implementing the housing mortgage loan policy for low-income earners. The research found that the most influencing factor affecting the success of implementing the housing mortgage loan policy for low-income earners is the policy terms factor, which consists of various rules and conditions, the mortgage loan interest rate, period of policy implementation, and the success level of the factors of implementing the housing mortgage loan policy for low-income earners. These factors were rated very successful, with an average score of 3.55–3.61.

Keywords: Policy, Housing mortgage loans, Low-income earners

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Introduction

Housing is a fundamental necessity in human life, as having a stable place to live is essential for ensuring well-being and quality of life. It directly influences individuals' living standards, occupations, economic opportunities, and income, thereby safeguarding human security at the most basic social unit—the family. Beyond merely having a place to stay, the quality and standards of housing, as well as the opportunity and capacity to access it, remain critical issues requiring government support and promotion. Low-income earners, in particular, continue to face barriers to both housing and mortgage loan accessibility. Thus, housing serves as a vital foundation for life stability and is indispensable for human survival. The conditions of housing and its surrounding environment also reflect people's livelihoods and their need for a secure home to sustain both living and economic activities. (Rattanaworaha, 2015, p. 167). Therefore, housing planning is a pressing priority in which the government plays a crucial role in enabling people particularly low-income earners to attain home ownership. Such efforts are essential for improving quality of life, reducing inequality, addressing social problems, and promoting fairness through the provision of affordable housing for the public.

The government sector's management and performance regarding housing development for the people, particularly low-income earners, still cannot achieve adequate goals. There are still slum communities; the community invades prohibited areas, houses, and rental buildings that are low, not up to standards, and lack public utilities, causing problems with the environment and housing being unsafe and not up to standard. These problems arise from management, the policy setting, and the operating process of those involved, which are still not considered necessary in housing development. In recent years, successive governments have announced policies aimed at poverty eradication and improving the quality of life for low-income groups. These efforts have been promoted and supported through the introduction of various policies and measures designed to facilitate homeownership among low-income earners, thereby enhancing their stability and overall well-being. Policy delivery is seen through two key government agencies: the National Housing Authority, which will carry out the Ban Eua Athorn project, and the Community Organization Development Institute, which will carry out the Baan Mankong project. However, in reality, there is still a problem:

People with low incomes are still unable to access such assistance services as efficiently as they should. (Sae-Ung, 2012).

The current situation also reveals that many low-income Thai earners still face housing problems. There is a housing shortage and lack of ownership of housing in approximately 5.87 million households (20-year Housing Development Strategy 2017-2036, Ministry of Social Development and Human Security, 2017). The government has prioritized addressing poverty, reducing inequality, and fostering social fairness by creating opportunities for access to welfare, public services, economic activities, and stable income, particularly for low-income groups and the underprivileged, with the aim of improving their overall quality of life. A key component of this effort is ensuring stable housing, which serves as a long-term solution for poverty reduction, inequality mitigation, and quality-of-life enhancement. Consequently, housing development was declared a national public policy through the formulation of the 20-Year Housing Development Strategy (2017-2036) (Ministry of Social Development and Human Security, 2017). Coordinating cooperation among government agencies, the business sector, and civil society is essential for addressing social problems and creating new opportunities for the public benefit. According to the principles of the revised National Reform Plan (Royal Gazette, 2010, Announcement of the Office of the Prime Minister on the National Reform Plan (Revised Edition), p. 89), national economic reform is grounded in the pursuit of sustainability across three critical dimensions: (1) enhancing national competitiveness, (2) promoting equality and inclusive growth, and (3) reforming economic institutions. In particular, reform efforts should emphasize the second dimension-equality and inclusive growth-as a means of reducing individual-level inequality, with a strong focus on low-income and underprivileged groups. Central to this goal is the improvement of quality of life, including the provision of stable housing.

The government has established housing policies to address housing problems and to support the general public-particularly low-income earners, individuals with unstable or irregular incomes, and those in independent occupations who have never owned a residence-in accessing affordable housing that aligns with their financial capacity. These policies have been implemented primarily through the housing mortgage loan programs of state-owned specialized financial institutions, notably the Government Housing Bank (GH Bank). Investigating the housing mortgage loan policies designed for low-income groups within such institutions, along with their distinctive characteristics and strategies, offers valuable insights into the implementation of mortgage policies aimed at addressing housing challenges for disadvantaged groups. The findings of this study can serve as a foundation for making informed recommendations and guidelines to improve the implementation of housing mortgage loan policies for low-income earners in Thailand. Moreover, the study highlights the importance of collaboration between government and private sectors in ensuring that housing mortgage loan policies effectively and sustainably meet the needs of the people.

Objectives

- 1) To study the factors affecting the success for implementation of the policy on housing mortgage loan for low-income earners.
- 2) To study the level of success for implementation of the policy on housing mortgage loan for low-income earners.

Hypotheses

The study tests the following hypotheses at a 0.05 level of significance

- (H1) Policy process factors have a positive relationship on success factors.
- (H2) Policy terms factors have a positive relationship on success factors.
- (H3) Collaboration of the private sector factors have a positive relationship on success factors.
- (H4) Resources for implementing policy factors have a positive relationship on success factors.

Related concepts and theories

Public policy ideas and scholars have given different meanings, including Greenwood (1965), Lasswell & Kaplan (1970), Sharkansky (1970), Uairat (2005), Yawaprapat & Wangmaporn (2009), Dokthaisong (2010), that in summary, “public policy” refers to the guidelines for activities, actions, or decision-making predetermined by the government to direct various undertakings toward achieving established goals. These guidelines are expressed through project planning, management approaches, and operational processes designed to ensure that objectives are accomplished using correct and appropriate methods consistent with real conditions and the needs of the people. The public policy process (or public policy cycle) typically comprises four key stages: policy formation, policy decision, policy implementation, and policy evaluation.

Concepts related to policy implementation emphasize the factors that determine policy success, including the nature and type of the policy as well as its expected benefits. The success or failure of a policy largely depends on the extent to which it is perceived as more beneficial than alternative policies, the alignment of the policy with the needs of those affected, and the degree to which it reflects their preferences. Moreover, the clarity with which the benefits of the policy are articulated plays a crucial role; the clearer and more explicit the perceived benefits, the greater the likelihood of successful policy implementation. Policy objectives and policy clarity are able to set objectives and indicators to ensure success according to objectives and precision in conveying objectives to practitioners. In addition,

technological change's technical or theoretical feasibility often occurs rapidly and has important effects on policy implementation. The adequate resources for policies that will be successful must be supported, both financially and manpowerly. Characteristics of the agency that implements the policy and the structure of the agency that implements the policy will affect the success or failure of the policy. The attitude of leaders toward policy implementation, as well as the alignment between policies and the understanding of practitioners, are critical to successful execution. Policies are more likely to be effectively implemented when practitioners are familiar with and comprehend the policies they are tasked to carry out. Furthermore, the mechanisms and institutional characteristics involved in implementation significantly influence policy outcomes. Key factors include the level of participation by relevant agencies, the clarity of decision-making authority, the quality of interdepartmental relationships, and the degree of intervention by higher-level authorities. Collectively, these elements determine the likelihood of policy success or failure.

The importance of public policy and its implementation lies in examining the mechanisms through which a policy, plan, or project is propelled toward tangible outcomes. Regardless of whether predetermined objectives are achieved, studies on policy implementation aim to collect information and evidence following the execution of such policies or projects. Within this context, theoretical models are employed to illustrate the various factors influencing the success of public policy implementation, as well as to conceptualize different approaches to the policy implementation process. (Chantrasorn, 2011, p. 16).

Thomas R. Dye stated that the continuation of the public policy process does not conclude with the enactment of laws by the legislature but continues through the implementation stage, extending from the offices of national leaders to the bureaucracy. The implementation of public policy involves multiple actors, including the legislative branch, the executive branch or bureaucracy, pressure groups, and community organizations or civil society (Dye et al., 2005). In putting government policies into practice, agencies must first analyze whether the policies align with their institutional missions before setting objectives. This process is considered a strategic issue that requires a direct response from government agencies. Ministries subsequently assign affiliated departments to translate ministerial-level strategic issues into departmental-level strategies. Departments, in turn, must align these strategies with their own missions and visions by establishing clear objectives, success indicators, and strategies to achieve the specified goals. To operationalize these strategies, departments are required to design projects that directly respond to the defined strategic directions. Each project must have a clearly defined objective and produce measurable outputs in accordance with the designated indicators.

Maslow's hierarchy of human needs explains that human requirements exist at multiple levels, progressing from basic necessities of life to higher-order needs that are intangible and not physically observable. This concept is illustrated through the *pyramid of needs*, which suggests that individuals in society continuously strive to move upward from fulfilling their fundamental physiological needs—commonly referred to as the “four factors” of life, including *housing* as a core component—toward higher levels of satisfaction, ultimately reaching self-actualization. (Pongsat, 1995).

The definition of low- and middle-income earners in Thailand remains ambiguous. The current definition of low-income earners primarily emphasizes individuals whose income is insufficient for basic subsistence, which may not be appropriate in contexts such as “low-income earners with their own residences.” This definition does not adequately account for the capacity of low-income groups to attain or maintain homeownership. Moreover, there is still no clear or standardized definition of low- to middle-income earners, as the same principles are applied nationwide without distinction. Different agencies continue to establish their own definitions in alignment with their specific target groups. In terms of housing support, the government has introduced several measures to address the housing needs of low-income earners. These include the First Home Project, which provides mortgage loan support through the Government Housing Bank and the Ministry of Finance; the Baan Eua-Athorn Project and Community Housing Project implemented by the National Housing Authority (NHA); and the Baan Mankong Project operated by the Community Organizations Development Institute under the Ministry of Social Development and Human Security. However, the government has not clearly defined the income thresholds of the target groups for most of these initiatives. Only the Baan Eua-Athorn Project specifies an income criterion, limiting eligibility to households earning no more than 40,000 Baht per month. In many cases, housing prices are instead used as indicators to define target groups. For instance, the First Home Project provides a loan ceiling of 1,000,000 Baht per person, while Eua-Athorn houses are priced between 400,000 and 1,000,000 Baht. Meanwhile, the Baan Mankong Project focuses on improving slum communities and supporting low-income groups who are otherwise unable to attain homeownership.

Literature review

A study on the operation of low-income housing under the Ban Thanarak Pracharat Project (Sirisant, 2018) found that although developers were able to construct residential units at price levels affordable to the target group, only the first phase of construction was completed. Subsequent phases could not proceed due to the limited participation in the initial phase. Furthermore, the majority of participants were not from the intended low-income group, which was the project's primary target. These findings suggest the need for further studies to better understand and identify the actual needs of target groups. Such insights would support the development of more appropriate housing projects that respond effectively to low-income populations. Aligning these projects with public policies, including mechanisms such as the State Welfare Card, could contribute to improving the quality of life for low-income earners and ensuring the sustainability of future initiatives (Thianchutinan & Mungmuang, 2019). It was found that in helping low-income

people mainly. In addition, support for low-income groups in accordance with policies, organizational factors, government officials, information and communication process. The concept of improving the quality of life of state welfare cardholders consists of four-dimensional opportunities: Creating and promoting jobs, 2nd dimension, vocational training and education, 3rd dimension, access to system funding, and 4th dimension, access to basic needs for quality of life to reduce public order.

In addition, a study on housing inequality in the northern suburbs of Bangkok (Techa-phothivarakun, 2015) The study of the North Bangkok Residential Community Consciousness found that in terms of housing planning, the delivery of only quality housing with sufficient space at prices accessible to low-income earners may be concluded to be insufficient due to the development and delivery process. The residential process is the only complex process. Allowing low-income people to participate in the process, by allowing low-income people to participate in land acquisition, will help choose their residential location within the vicinity of work, public facilities and services. The Bank's demand for homes was 72 percent higher than for rentals. In the study of low-income housing loan demand for low-income earners, a study was conducted on consumer loans under the Baan Ua Arthorn Project (Mekvorawut, 2009) Reflecting the fact that there is a certain level of income that can accommodate instalment payment obligations, most buyers do not plan for their daily lives and have little savings. Therefore, the demand for loans with the lowest interest rates, followed by the highest level of loans in the Bangkok Metropolitan Government (Prawanta, 2015) The sampling group of 257 Bangkok government officials found that five factors influencing housing preferences for low-income earners were incentives, environmental factors, demand factors, and socio-cultural factors. Purchaser personality, attitude, awareness, family and marketing incentives have no effect on the concept of buying low-income housing. The recommended approach is that related agencies be appropriate incentives and supportive measures to enable low-income individuals to attain homeownership in a sustainable manner.

Research on support for low-income populations has also examined the role of housing development organizations in Thailand. A case study of the *Thai Housing Foundation* (Rojanamethaswan, 2013) revealed that the foundation had been operating for 15 years and supported approximately 500 families. Its operations included: (1) fundraising through both local and international organizations, (2) mobilizing volunteers to assist with fundraising and housing construction, (3) selecting low-income families based on organizational criteria, (4) undertaking housing design and construction with strict budget and timeline control, and (5) monitoring loan repayment from beneficiaries in order to sustain the housing fund for future low-income earners.

In addition, comparative research on low-income groups in neighboring countries includes a study on access to housing loans for low-income earners (LIEs) in Malaysia (Ebekozien et al., 2019). The study revealed that approximately 70% of housing loan applications from LIEs were denied. The main reasons included insufficient income, lack of financial credibility, high initial repayment requirements, fear of loan default, operating costs related to property auctions, lack of verifiable income documentation, absence of collateral, and inability to provide a down payment. The factors leading to the rejection of housing loan applications are consistent with the findings of a study on access to low-cost housing loans in Malaysia (Ebekozien et al., 2019). The research investigated both the causes of loan inaccessibility among Low-Income Earners (LIEs) and potential policy solutions. Based on 40 interviews, the main reasons for loan rejection were the inability to meet eligibility requirements and the failure to provide down payments. Additional causes included the lack of verifiable fixed income, absence of collateral, inability to provide down payments, loan defaults, and operating expenses associated with property auctions. The study further revealed that approximately 70% of loan applications from LIEs were denied. As a practical solution, it was recommended that the government purchase low-cost houses through auction mechanisms and establish rent-to-own schemes managed by independent agencies. Such measures would improve access to homeownership for LIEs by providing alternative housing finance pathways.

Considering state policies that provide support—such as initiatives through agencies like the National Housing Authority, the Community Development Institute, or direct government subsidies—low-income groups can attain homeownership with appropriate assistance. In particular, public education and awareness regarding housing subsidy programs for low-income earners, including those administered through national housing initiatives, are essential to ensure that target groups can effectively access and benefit from such support mechanisms. (Ronnaroong, 2009). Findings indicate that there are three primary forms of housing subsidies for low-income groups administered through the Housing Authority. The first form consists of government subsidies for infrastructure and public utilities, which represents the standard model that has been studied and applied consistently since the 5th–8th National Development Plans. In this approach, the government determines the number of housing units and the subsidy amount allocated per unit as part of a special policy initiative. The three types of subsidies are as follows: (1) Subsidies for public utilities, (2) Interest subsidies, provided through low-interest financing sources, and (3) Low-cost government land leases, which are implemented under two types of projects: (a) new housing construction projects for lease or hire-purchase, and (b) slum community upgrading projects. These subsidies are directed exclusively toward low-income groups unless the government serves as the primary sponsor. However, the establishment of additional funding mechanisms to support low-income earners could further reduce disparities and enhance equity in housing accessibility.

A study on the implementation of housing development policies for low-income groups compared the Baan Ua-Arthorn Project with the Baan Samrong Project (Sae-Ung, 2012). The findings revealed that the Baan Ua-Arthorn Project, while accommodating low-income residents who did not always meet eligibility criteria, failed to achieve its intended outputs and final outcomes. This shortcoming was largely attributed to the establishment of community service cooperatives that did not adhere to appropriate social principles and procedures. In contrast, the Stable Housing Project (Baan Samrong) succeeded in producing both intermediate and final outcomes. Its success was driven by community collaboration, which enhanced housing stability and overall quality of life. The project's achievements in improving quality of life can be explained by three key factors: (1) responsiveness to the genuine needs of the community, (2) solidarity among community members who shared common goals, and (3) the presence of strong community leaders possessing sustained knowledge, determination, and public-mindedness. By comparison, the Baan Ua-Arthorn Project was unsuccessful in improving residents' quality of life.

In terms of housing supply related to low-income housing, a study was conducted on the success patterns of housing construction policies for low-income people in the case of a study in Prachuap Khiri Khan Province (Pannimitjitsaman et al, 2020) Factors affecting the success of low-income housing policies include the public mind of the community, savings discipline, communication, community development, community organization, community leadership, loans, reduction of rules and regulations of related government agencies. The policy implementation success level is at an average of 3. 53 Factors affecting the success of low-income housing policies are positively linked to the success of low-income housing policies, including the monthly income of interested persons, standards and objectives of the policy. Communication between organizations and law enforcement, the nature of the agencies that implement policies, the commitment of policy leaders, but have a negative relationship with public participation.

According to literature review, four independent variables have been determined: (1) the process of the policy (KX1) (KX1: consist of Consideration process (X1.1), Policy agreement contract (X1.2), Public relations (X1.3)), (2) Policy terms (KX2) (KX2: consist of Rules and conditions (X2.1), Loan interest rate (X2.2), Duration of policy implementation (X2.3)), (3) the collaboration of the private sector (KX3) (KX3 consist of Number of housing units (X3.1), Housing selling prices (X3.2)) , and (4) the resources for policy implementation (KX4) (KX4 consist of Officers (X4.1), Equipment/System (X4.2), Budget (X4.3)). The dependent variable is the success of the policy (SY) consist of Loan approval (Y1) and Satisfaction (Y2).

Conceptual Framework

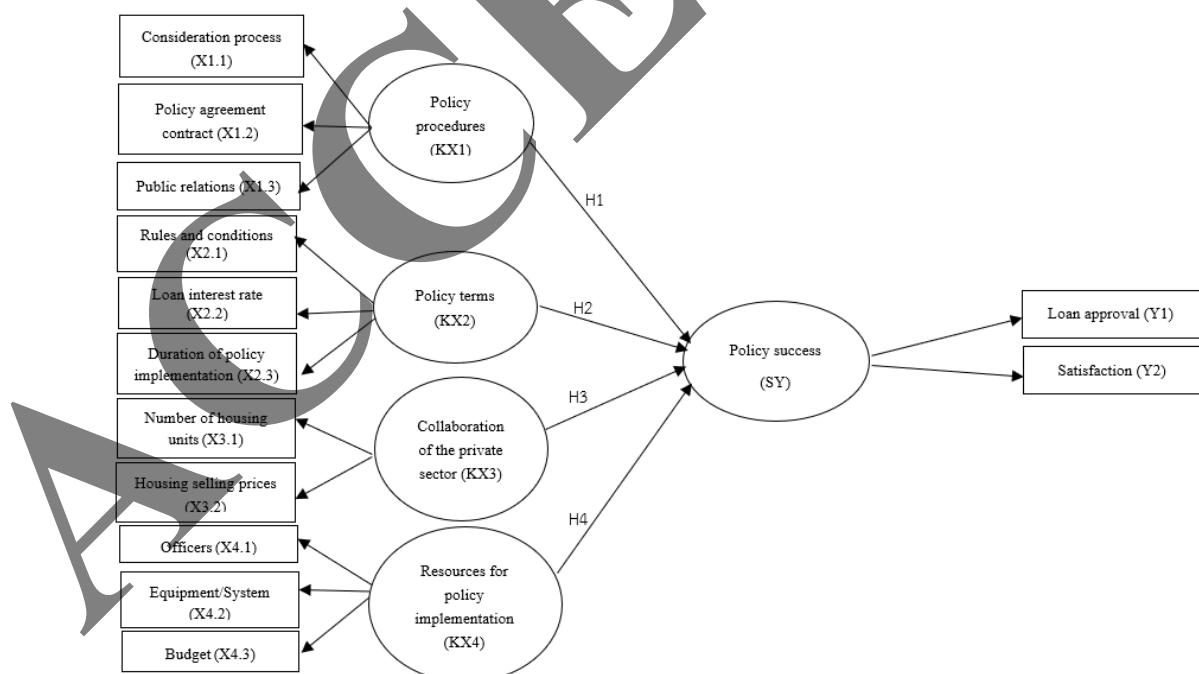


Figure 1 Research concept framework improved from literature review and related research

Research Methodology

1. Population and Samples

This quantitative research focuses on service users who apply for loans under the home mortgage loan policy designed to support low-income earners, implemented through the Government Housing Bank as a state-owned specialized financial institution. The study population consists of approximately 94,000 users in Bangkok and its surrounding areas, based on data from the Million Houses Project, Government Housing Bank, 2022). The specific sample groups were selected by determining the formula calculating the sample size in cases where the exact population is known by Taro Yamane (Yamane, 1967), cited in (Wanichbancha, 2016), a total sample size of 400 earners was calculated. Therefore, in this research, a specific sampling group was selected. The researcher defined the sample group as loan applicants under the housing loan policy for low-income earners, implemented by the Government Housing Bank as a state-owned specialized financial institution. The study was conducted in the Bangkok Metropolitan Region and surrounding areas, with a total of 400 participants. Data were collected from various community housing projects, including BOI-supported housing projects, affordable housing projects, National Housing Authority projects, and the *One Million Homes Project*.

2. Research Instrument

The questionnaire was adapted from related research to cover the research objectives with three qualified experts, who were considered and examined by checking for compliance values by the Item Objective Congruency (IOC) method; both values of the IOC must be greater than 0.5 after the questionnaire has been administered. Adjusted the questionnaire based on feedback from three experts and conducted a pilot test with a sample group of 30 individuals who share similarities with the target group to measure confidence levels. The accuracy value of the questionnaire is greater than 0.67. The Cronbach's alpha coefficient for the questionnaire was calculated to be 0.921, indicating high internal consistency reliability.

3. Collection of Data

The data for this research was collected from December 2023 to February 2024 by sending documents in Google form and a letter requesting assistance from officials of financial institutions that specifically provide housing mortgage loan services. The letter asked service users to answer a survey, and then the preliminary data were checked for accuracy that could be analyzed. The 400 copies, accounting for 100 percent, were collected. The obtained data was used to analyze each variable's statistical values, fundamental analysis, confirmatory factor analysis techniques, and the relationship between variables.

4. Data Analysis

This research investigates the relationship among variables by analyzing the structure of the relationship between the variables (Structural Equation Modeling: SEM). Statistics are used in the analysis, including Confirmatory factor analysis (CFA), System Equation Model (SEM), checking the harmony of the research model with empirical data (Model Fit), and the harmony of the model with empirical data (Assessment of Model Fit). Adjust the model to be complete by connecting variables modification indices: The indices used to check the consistency of the model with the empirical data include the Chi-Square index, CMIN/df, CFI, GFI, IFI, NFI, AGFI, RMSEA, and RMR and as the criteria for validating the harmony of the model. Structural equation modeling (SEM) is a model for examining the fit of the research model with empirical data (Model fit). The researcher evaluated the consistency of the proposed model with the empirical data (*assessment of model fit*) by employing a range of indices that measure the goodness of fit between the model and the observed data. These indices include Chi-square, CFI, GFI, AGFI, RMSEA, RMR, IFI, and NFI. The criteria used for assessing the model's goodness of fit are specified as follows:

(1) The Chi-square statistic (χ^2 -test) is known to be highly sensitive to large sample sizes; therefore, researchers often evaluate the ratio of Chi-square to degrees of freedom (χ^2/df) alongside the overall model fit. According to Hair et al. (1988) a χ^2/df ratio of less than 2.00 is generally considered an indicator of good model fit, reflecting consistency between the proposed model and the empirical data, according to the concepts of Hair et al. (1998), Bollen (1989)

(2) The Comparative Fit Index (CFI) is an incremental index used to assess the relative fit of a model by comparing it to a baseline model. A CFI value of 0.90 or higher is generally considered indicative of a good relative fit, demonstrating that the proposed model adequately represents the empirical data, according to the ideas of Hair et al. (1998).

(3) The Goodness of Fit Index (GFI) reflects the proportion of variance and covariance in the observed data that is accounted for by the model. According to the guidelines proposed by Hair et al. (1998) and Mueller (1996), a GFI value of 0.90 or higher indicates that the model demonstrates a good relative fit to the empirical data.

(4) The Adjusted Goodness of Fit Index (AGFI) indicates the proportion of variance and covariance explained by the model after adjusting for degrees of freedom. Following the criteria outlined by Hair et al. (1998) and Mueller (1996), an AGFI value of 0.90 or higher is considered to represent a good relative fit. However, according to Gefen et al. (2000), a threshold above 0.80 may also be acceptable, suggesting that the model adequately fits the empirical data.

(5) The Root Mean Square Error of Approximation (RMSEA) measures the extent of model misfit relative to the population covariance matrix. According to Hair et al. (1998) and Browne & Cudeck (1993), an RMSEA value below 0.05 indicates a close fit, while values between 0.05 and 0.08 are considered acceptable, suggesting that the model demonstrates a good relative fit.

(6) The Standardized Root Mean Square Residual (SRMR), or Root Mean Square Residual (RMR), represents the average magnitude of residuals, reflecting the degree of fit between the hypothesized model and the empirical data. According to Diamantopoulos & Siguaw (2000), an SRMR or RMR value below 0.05 indicates a good model fit with the observed data.

(7) Normed Fit Index (NFI) is an increasing fit index, with an acceptable NFI value typically greater than 0.90, indicating that the model has a good relative fit according to Hair et al. (1998). The Normed Fit Index (NFI) is an incremental fit index that evaluates the relative improvement of a specified model over a null model. According to Hair et al. (1998), an NFI value greater than 0.90 is generally considered acceptable, indicating that the model demonstrates a good relative fit to the empirical data.

(8) The Incremental Fit Index (IFI) evaluates the relative fit of a proposed model compared to a baseline model in which all variables are assumed to be uncorrelated. According to Hair et al. (1998), an IFI value greater than 0.90 is considered acceptable, indicating that the theoretical model adequately explains the relationships among variables. In this study, the IFI value was 1.001, which exceeds the recommended threshold of 0.90, thereby confirming that the model demonstrates a good relative fit.

Results

1. The research results show the components of the policy process (KX1), the policy requirements (KX2), private sector cooperation (KX3), resources in policy implementation (KX4), and policy success (SY). The results of Confirmatory Factor Analysis found that the model is consistent with the empirical data using the consistency index criteria, namely $\chi^2/df < 2$, CMIN/df. < 2, CFI > 0.90, GFI > 0.90, IFI > 0.90, NFI > 0.90, AGFI > 0.90, RMSEA < 0.05 and RMR < 0.05 (Hair, et al., 1998)(Bollen, 1989) (Jöreskog, et al., 1996)(Diamantopoulos & Siguaw, 2000), (Durrande-Moreau & Usunier, 1999)(Harrison-Walker, 2001)(Mueller, 1996) and (Browne & Cudeck, 1993), as shown in Figure 2.

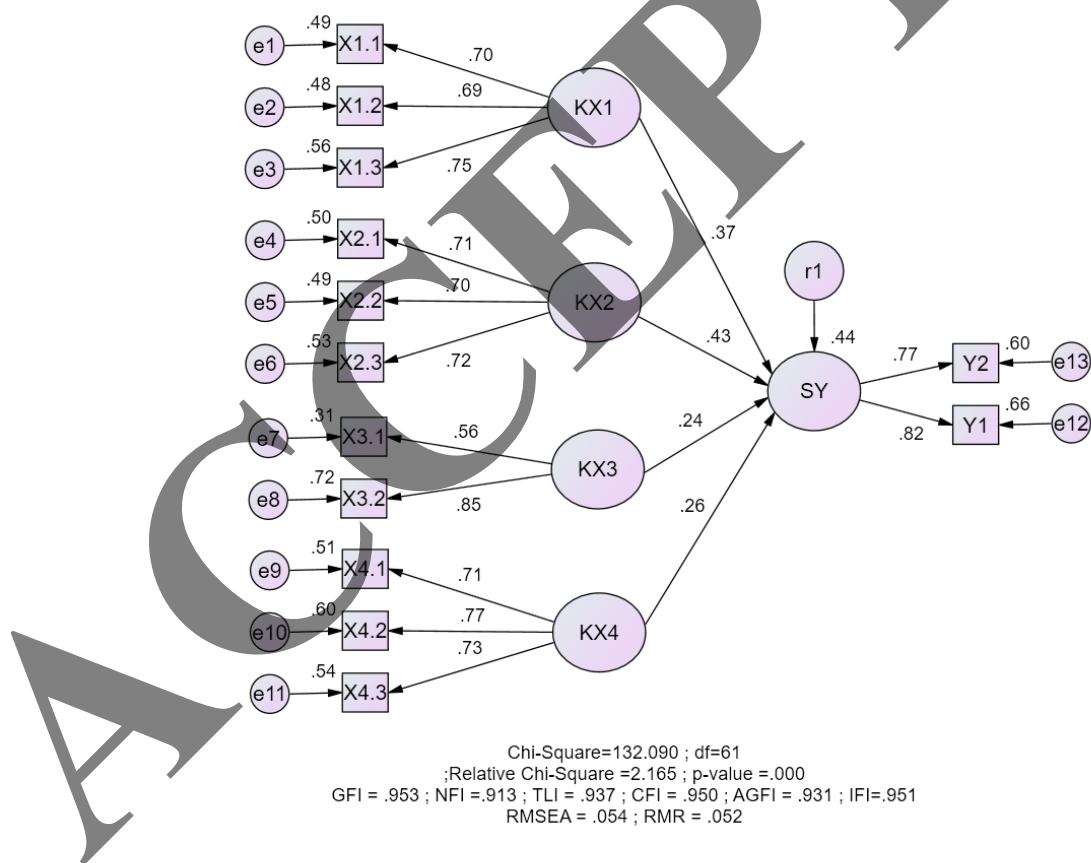


Figure 2 Structural equations before adjusting the model.

The model analysis before adjusting the model, the analysis results found that there is no consistency with empirical data. The analysis data is compared with the measurement criteria: $\chi^2/df = 2.165$, CMIN/df. = 2.165, CFI = 0.950, GFI = 0.953, TLI = 0.937, NFI = 0.913, AGFI = 0.931, IFI = 0.951, RMSEA = 0.054 and RMR = 0.052. It was found that some of these indices did not pass the specified criteria. It can be said that the initial model does not have

empirical consistency at a statistically significant of 0.05. According to the specified criteria, the discrepancy between the two variables was adjusted using the Modification Index statistic to develop a structural equation model for factors affecting the success of implementing a housing mortgage loan policy for low-income earners with empirically consistent, as shown in Figure 3.

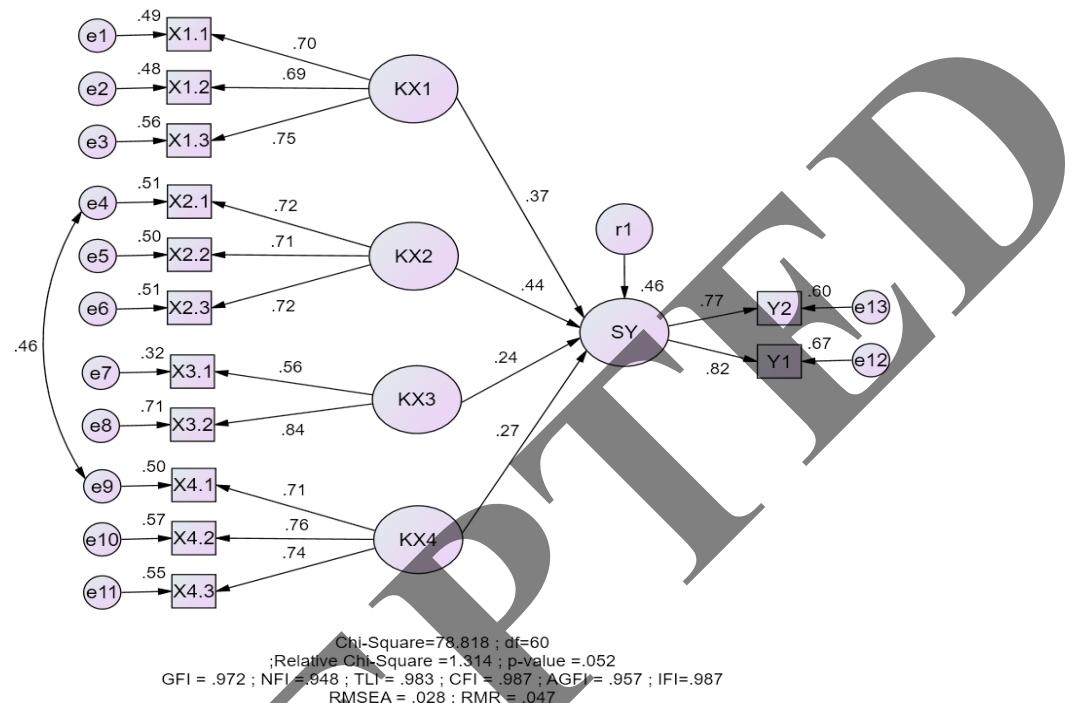


Figure 3 Structural equations after adjusting the model

From Figure 3, the statistical values for evaluating the structural equations of the model of factors affecting the success of the implementation of the housing mortgage loan policy for low-income earners (SY) include Policy process (KX1), Policy terms (KX2), Collaboration of the private sector (KX3), Resources for implementing policy (KX4), using the model adjustment index method with an R^2 value of 46%, Chi-Square equal to 78.818, df.=60, $\chi^2/df=1.314$, CMIN/df=1.314, CFI=0.987, GFI=0.972, TLI=0.983, NFI=0.948, AGFI=0.957, IFI=0.987, RMSEA=0.028 and RMR=0.047. The structural equation model after model adjustment is consistent with the empirical data, indicating the consistency with the empirical data and confirming the model's accuracy. Structural equation analysis and influence testing results are summarized and shown in Figure 4.

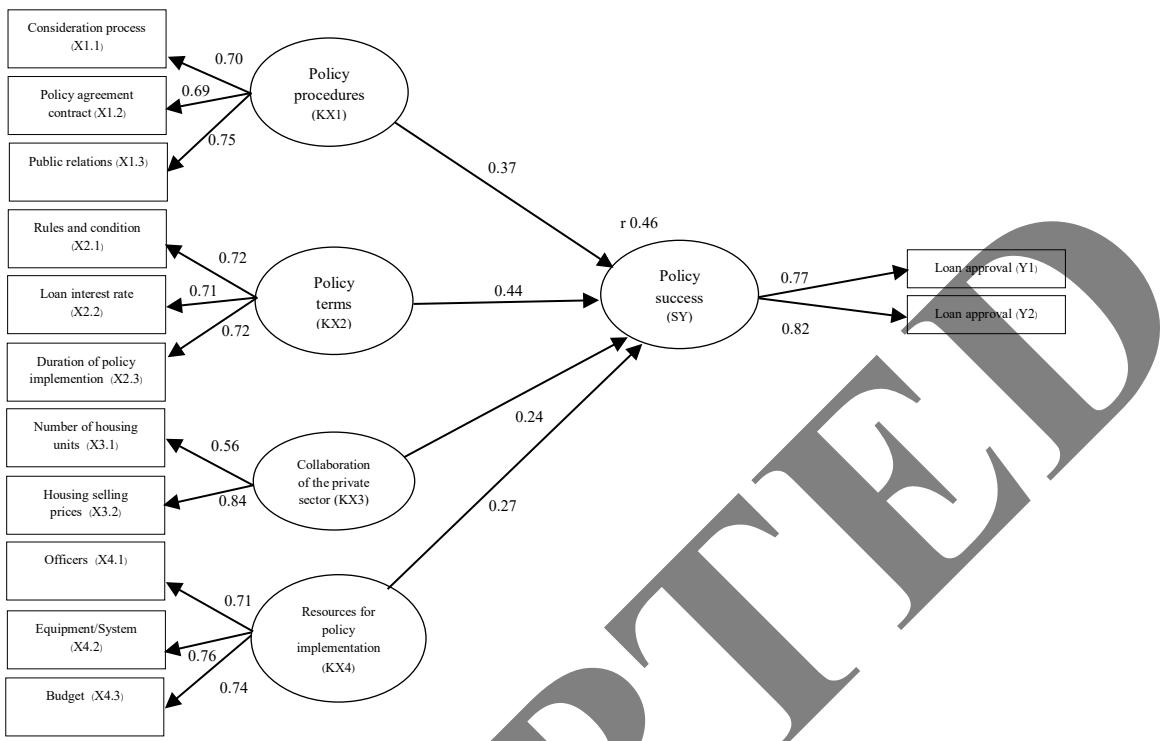


Figure 4 Structural equation model and factors affecting the success of implementing a housing mortgage loan policy for low-income earners

Figure 4 presents an analysis of the structural equation model and factors affecting the successful implementation of housing mortgage loan policies for Low-Income Earners (SY) accepted the hypothesis 1-4 (H1-H4), which are as follows:

1) The factor of policy terms (KX2), H2 which was the best positive relationship on the success of implementing housing mortgage loan policies for low-income earners, has a path coefficient of 0.44, indicating a positive direct influence. This finding is consistent with the previous research (Techaphothivarakun, 2015) (Pannimitjitsaman et al., 2020), (Phowathong, 2019). The study found that the most influential requirement factors affecting the success of implementing the housing mortgage loan policy for low-income earners were the rules and conditions, loan interest rates, and the policy implementation period.

2) The policy process factor (KX1), H1 has a path coefficient of 0.37 as a direct positive relationship on the success of implementing housing mortgage loan policies for low-income earners. The test results are consistent with previous research (Techaphothivarakun, 2015) (Pannimitjitsaman, et al., 2020) (Sreevipasthit, 2014). The study stated that the second most influential factors were process-related, comprising the loan consideration process, policy agreement contracts, and public relations, all of which affect the success of implementing the housing mortgage loan policy for low-income earners.

3) The factors in resources for policy implementation (KX4), H4 have a path coefficient of 0.27 as a direct positive relationship on the success of implementing housing mortgage loan policies for low-income earners. The test results are consistent with previous research (Pannimitjitsaman et al., 2020) (Sae-ung, 2012). The study stated that the third most influential factors were resource-related, consisting of staff, equipment and systems, and budget, all of which affect the success of implementing the housing mortgage loan policy for low-income earners. The results are summarized and shown in Figure 4.

4) The private sector cooperation factor (KX3), H3 has a path coefficient of 0.24 as a direct positive relationship on the success of implementing housing mortgage loan policies for low-income earners. The test results are consistent with the previous research (Sirisant, 2018) (Sreevipasthit, 2014) (Sae-ung, 2012) stated that the least influential factors are the cooperation factors, consist of a number of housing units, housing selling price, which affect the success of implementing the housing mortgage loan policy for low-income earners.

2. The results of the analysis on the success level of the policy-measuring the implementation of the housing loan policy for low-income earners through observable variables-can be summarized as follows:

Table 1 Measuring the level of success of the implementation of the housing loan policy for low-income earners.

Latent variable	Observable variables	Mean (\bar{x})	Std. Error (S.E.)	Std. Deviation (SD)	Variance	results
Policy success (SY)						
	Receiving loan approval (Y1)	3.61	0.0538	1.07672	1.159	High Level
	Satisfaction of low-income earners (Y2)	3.55	0.05324	1.06474	1.134	High Level

From table 1, The findings revealed that the level of success in implementing the housing loan policy for low-income earners, as measured by loan approval, was at a high level, with a mean (\bar{x}) of 3.61 and a standard deviation (S.D.) of 1.07672. In addition, satisfaction with the use of housing loan services among low-income earners was also found to be at a high level, with a mean (\bar{x}) of 3.55 and a standard deviation (S.D.) of 1.06474.

Table 2 defining independent and dependent variables.

Independent Factor (latent variable)	Components of the independent variable (observable variable)
Policy process (KX1)	1. Loan consideration process (X1.1)
	2. Policy agreement contract (X1.2)
	3. Public Relations (X1.3)
Policy terms (KX2)	4. Rules and conditions (X2.1)
	5. Loan interest rate (X2.2)
	6. Period of policy implementation (X2.3)
Collaboration of the private sector (KX3)	7. Number of housing units (X3.1)
	8. Housing selling prices (X3.2)
Resources for implementing policy (KX4)	9. Officer (X4.1)
	10. Equipment/System (X4.2)
	11. Budget (X4.3)
Dependent Factor (latent variable)	Components of the dependent variable (observable variable)
Policy success (SY)	1. Receiving loan approval (Y1).
	2. Satisfaction of low-income earners who use housing mortgage loan services (Y2).

Discussion

From the results of structural equation modeling research, factors affecting the success of implementing a housing loan policy for low-income earners. It was found that it has a good agreement with the empirical data, with an R-value of 4.6%, Chi-Square equal to 78.818, df.=60, χ^2/df =1.314, CMIN/df=1.31, CFI=0.987, GFI=0.972, TLI=0.983, NFI=0.948, AGFI=0.957, IFI=0.987, RMSEA=0.028 and RMR=0.047. The indexes were consistent, and statistical values passed the specified criteria. In addition, a study of factors affecting the success of the implementation of the housing mortgage loan policy for low-income earners and the level of success in implementing the housing mortgage loan policy for low-income earners. It was found that the most influential factors affecting the success of implementing the housing mortgage loan policy for low-income earners were the specifications of rules and conditions, loan interest rates, and the policy implementation period.

Factors influencing the success of the policy include the approval of loans to low-income earners. who apply for credit from financial institutions, as well as the satisfactory service provided to this group of people. The success of the housing loan policy for low-income earners comprises policy processes, policy terms, collaboration of the private sector, and resources for policy Implementing related to the implementation of the housing loan policy for low-income individuals, which leads to the successful implementation of the policy, resulting in loans being approved for low-income earners and their satisfaction with the service for applying for housing loans as per the policy. The study found that the current implementation of the policy has been relatively successful, with the four contributing factors summarized as follows:

1. The policy process of the Housing Loan Policy for low-income earners demonstrated that the process factor has a significant positive influence on the success factor at the 0.01 statistical level, with an impact coefficient of 0.37. This finding is consistent with the research framework hypothesis, confirming that the process factor positively affects policy success. Specifically, the process—which encompasses loan consideration, financial data analysis, and the evaluation of applicants' credit history—plays a critical role in loan approval and overall policy implementation. The assessment will focus on the ability to repay loans. For low-income earners, this consideration may involve examining repayment capability based on additional income sources, such as part-time work or income from irregular jobs. The contractual agreement in the policy is a document that defines the rights and responsibilities of both parties involved, such as loan borrowing conditions, interest rates, and repayment conditions. Creating suitable contracts for low-income individuals may include offering flexibility in repayments and reasonable interest rates. Furthermore, public relations play a critical role in communicating housing loan policies to low-income individuals, enabling them to become aware of available opportunities to apply for loans and to understand the policy's contribution to improving quality of life and reducing inequality. The use of appropriate communication channels—such as online media or community-based social activities—is essential for disseminating information and fostering interest in policy updates among the target population. This finding is consistent with the study of Pannimitjitsaman et al. (2020) on the success model for implementing the housing construction policy for low-income individuals in Prachuap Khiri Khan province. That study found that the success of policy implementation comprised effective communication and coordination, participation in residential development, loan facilitation, and the reduction of regulations and procedures by relevant government agencies. The overall success level of the policy was rated high, with an average score of 3.53.

2. In terms of policy requirements for the housing loan policy targeting low-income individuals, the requirement factors were found to have a statistically significant positive influence on the success factors at the 0.01 level, with an influence coefficient of 0.44. This result is consistent with the research framework hypothesis, confirming that requirements positively affect the success of policy implementation. Specifically, regulations, conditions, loan interest rates, and the duration of policy implementation exerted a significant statistical influence on policy success, with an influence coefficient of 0.41, which is considered a high value. This finding reflects a positive relationship between the requirement factors and the success of the related policies and activities. Collecting and evaluating relevant information related to appropriate regulations, establishing reasonable conditions, setting suitable interest rates, and determining appropriate timeframes are crucial factors that will increase the likelihood of success for the housing loan policy for low-income individuals. This clearly affirms the importance of these factors in predicting the success of the housing loan policy and instills confidence in the correctness of this analysis, which plays a vital role in the success of the housing loan policy for low-income individuals. This aligns with Phowathong, (2019), who summarized that the development approach emphasizes housing finance, with the number of development activities in each development plan corresponding to the country's economic conditions. The study's results will enhance understanding of the concept of housing development in Thailand in the past and provide relevant information for formulating long-term housing strategies in Thailand. Additionally, owning a residence involves high housing costs. Those who wish to own a home require loans as they do not have savings to cover these expenses. The government should provide long-term fixed-rate, low-interest housing loans for individuals unable to attain homeownership. In addition, the government should support long-term rental housing as an alternative for low-income groups. This aligns with Sreevipasthit (2014), who emphasized that government assistance should encompass not only the provision of housing loans but also other forms of housing support, such as long-term rentals and rent-to-own schemes.

3. Collaboration with the private sector in housing loan policies for low-income earners was found to have a statistically significant positive influence on the success factors at the 0.01 level, with an influence coefficient of 0.24. Accordingly, the hypothesis of the research framework is accepted, confirming that private sector cooperation positively impacts the success of housing loan policies for low-income individuals. Such collaboration is particularly important in determining the number of housing units available and setting appropriate housing prices, both of which are critical to the success of housing loan policies for low-income earners. The hypothesis suggests that factors of cooperation affect success. Private sector collaboration in policy participation, such as developing affordable housing projects, enables low-income individuals to purchase their own homes. Additionally, engaging in business with lower expected profits can enhance the purchasing power of this target group. This aligns with the research by Prawanta (2015), which concludes that relevant agencies should create incentives to help low-income individuals sustainably own their homes, driven by private sector cooperation. Furthermore, it resonates with the work of Techaphothivarakun, (2015), which states that allowing low-income individuals to participate in land procurement will help them choose housing locations that are not far from job sources, public utilities, and services, along with affordable transportation options. This approach can systematically address housing inequality.

4. In terms of resources for implementing housing mortgage loan policies for low-income earners, the analysis revealed that resources had a statistically significant positive influence on the success factors at the 0.01 level, with an influence coefficient of 0.27. Therefore, the hypothesis within the research framework—stating that resources positively impact the success of housing credit policies for low-income earners—is accepted. This indicates that resources, which include personnel, equipment/systems, and budget, play a role in the success of such policies. Examples include having knowledgeable and experienced personnel to execute activities effectively, modern and efficient equipment and systems, the integration of technology into policy services, and sufficient budgets to support various operations. Collectively, these factors significantly increase the likelihood of successfully implementing housing credit policies for low-income earners. The connection between resources and success is widely acknowledged in organizational management. This conclusion is consistent with the findings of Pannimitjitsaman et al. (2020), who reported that resource-related factors

significantly influence the successful implementation of housing construction policies for low-income earners. These factors include policy standards and objectives, policy resources, inter-organizational communication, legal enforcement, the characteristics of implementing agencies, and the commitment of leaders involved in policy implementation. Furthermore, it corresponds with theoretical models of policy implementation in management (Management Model), as noted by Chantrasorn (2022), based on organizational theory emphasizing organizational performance. The success of policy implementation depends on the responsible organization's ability to meet expectations. Policies are more likely to succeed with appropriate organizational structures and adequately knowledgeable administrative and technical personnel. Moreover, organizations need to plan and prepare adequately, including having sufficient materials, equipment, facilities, and budgets. This model represents an effort to explore solutions for addressing obstacles in policy implementation by focusing on improvements within the organization itself. Such obstacles include a lack of funding, insufficient skilled personnel, delays in personnel recruitment, and delays in establishing work systems. Emphasis is placed on the capacity of the organization responsible for implementing the policy. Organizational capacity involves five key factors: (1) organizational structure, (2) personnel, (3) budget, (4) facilities, and (5) equipment and tools.

The level of success of the factors influencing the implementation of the housing mortgage loan policy for low-income earners was found to be at a high level, with an average score of 3.55-3.61. Therefore, implementing a housing mortgage loan policy for low-income earners is important and has an impact on reducing social inequality, as a policy supporting access to housing mortgage loans for low-income earners can promote low-income earners to have the opportunity to access housing mortgage loans, which promotes equality and reduces inequality. Owning a home creates a sustainable quality of life for the people in the country. Maintaining and promoting the housing mortgage loan policy for low-income earners should be considered one of the important guidelines for carrying out government policies to create a sustainable and equitable economy in the country.

Additionally, measuring the success of the housing loan policy for low-income individuals should also consider the aspect of lending by financial institutions, which must establish a non-performing loan (NPL) threshold that does not exceed an acceptable level. NPL helps banks maintain a balance between business expansion and risk management to prevent the accumulation of bad debts. Setting the NPL value allows banks and regulatory agencies to manage and mitigate the impacts of bad debt problems that could affect the overall economy. Furthermore, establishing the NPL value is crucial for creating sustainability and stability within the financial system at both the organizational and national levels, allowing banks to improve their loan approval processes and avoid granting high-risk loans in the future.

To evaluate the success of the housing loan policy for low-income individuals, it is necessary to consider the NPL value. The implementation of the housing loan project for low-income individuals by the Government Housing Bank is within the limits set by the Ministry of Finance, which defines it not to exceed 5% of the total new loans issued. According to the performance results for non-performing loans (NPL) in the year 2023, the bank reported an amount of 66,343 million baht, or 3.87% of the total loan amount, which is below the target set. This indicates that the implementation of the housing loan policy has achieved a level of success, leading to sustainable policies consistent with this research. (Government Housing Bank, 2023, p. 15)

Suggestion

General suggestions

The study of housing mortgage loan policies for low-income earners is crucial in promoting access to adequate housing for disadvantaged groups within the country. Research in this area enhances the understanding of existing credit policies and provides a foundation for developing new policies that are appropriate to current socio-economic conditions. The findings indicate that the most influential factors affecting the success of implementing housing loan policies for low-income earners are the requirements-related factors, which include regulatory rules and conditions, loan interest rates, and the policy implementation period. Consequently, it is essential for government agencies to review these requirements, taking into account the limitations, opportunities, and potential impacts of various policies in addressing the housing needs of the target group. Furthermore, the study found that the overall level of success in implementing these factors was high. This outcome is highly beneficial for guiding future policy development on housing loans that are both appropriate and effective in ensuring housing accessibility for low-income earners. Given that this group remains the primary target for direct support by the government, the results underscore the importance of creating sustainable housing solutions that align with national policies and the 20-Year Housing Development Strategy (2017–2036).

Next research suggestion

Additional studies of sample groups in private financial institutions should be conducted to analyze data and develop guidelines for expanding universal credit access to earners, beyond government financial institutions. This would foster equality, reduce inequality, and encourage cooperation from financial institutions in providing sustainable housing loan support to the public. Furthermore, studies, surveys, and guidelines should also focus on developing financial innovations and technologies that can facilitate easier credit access for low-income earners.

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