Economic and social impacts of household debt traps on quality of life and solutions for agriculturists in Buriram province

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Abstract: This research aims to study the level of economic and social impacts of household debt traps on agriculturists, as well as the factors influencing their economic and social impacts on their quality of life. Additionally, it aims to study solutions to address household debt traps of agriculturists in the Sakae Phrong sub-district, Mueang district, Buriram province, using a mixed-methods approach. Data collection was divided into two phases: 1) Quantitative data analysis using a questionnaire as a research instrument with a sample group of 400 agriculturists in Sakae Phrong sub-district, Mueang district, Buriram province, employing proportional stratified random sampling and simple random sampling techniques. Statistical methods used for data analysis include frequency distribution, percentages, mean, standard deviation, and Structural Equation Modeling (SEM) analysis using the PLS-SEM method with Bootstrapping procedure for hypothesis testing. Partial Least Square (PLS) analysis was conducted using SmartPLS software, and 2) Qualitative data analysis using focus group discussion with a sample group selected by purposive sampling of 6 individuals. The research findings revealed that 1) the economic impact ($\overline{X} = 3.72$) and social impact ($\overline{X} = 3.78$) of household debt traps are at a high level, while agriculturists' quality of life ($\overline{X} = 2.69$) is at a moderate level., 2) The economic and social impacts of household debt traps significantly influenced on the quality of life of agriculturists (Adjusted $R2 = 0.42$), with direct effects on agriculturists' quality of life from the economic impacts (ß = -0.49, p < 0.001) and social impacts (ß = 0.42, p < 0.05)., and 3) It is recommended to adjust the debt structure appropriately to the potential and fairness, enhance economic capacity, and strengthen financial literacy and immunity among agricultural households.

Keywords: Agriculturists, Economic and social impacts, Household debt traps, Quality of life.

1. Introduction

Agriculture is considered crucial to Thailand's economy and society. The country has a large agricultural population, reaching 25 million people, or about 40.00% of the total population. Therefore, the agricultural sector serves as the largest labor force and a significant source of income for households. However, when considering the income returns of the agricultural sector, it is found that despite employing the majority of the country's workforce, about 40.00% of the total, it should generate more income. Agriculturists tend to have lower average incomes than other professions and lack income stability, experiencing fluctuations according to seasons.

Consequently, this leads to a low quality of life among agriculturists, income inequality, and subsequent livelihood issues (Digital Economy Promotion Agency, 2023). Additionally, Additionally, Thai agriculturists have considerable debt burdens, averaging over 450,000 baht per household, with

likely continuous increases. When comparing debt levels with incomes and assets, it is found that over 57.00% of households have debt exceeding their repayment capabilities (Chantarat et al., 2023).

Based on current data, household debt in Thailand has increased significantly, reaching 90.60% of household income. If this issue is not addressed seriously and continuously, purchasing power among the Thai population will be reduced. The Bank of Thailand has implemented measures to address household debt and assist households, collaborating with the public and private sectors. Since this issue requires cooperation from all sectors, delaying action may escalate into more significant and more challenging issues in the future (Kasikorn Research Center, 2023). However, the trend in household debt over the past eight years indicates that Thai agricultural households are inclined to fall into a high debt-to-asset ratio, reaching up to 70.00% of asset value. This level of debt persists in the long term for households that already have debt or are trending towards such levels, constituting a "debt trap" that needs to be promptly understood and addressed. Challenges in managing the finances of Thai agricultural households include low income, uncertain and high seasonal income, and liquidity problems. About 27% of households need total annual income to cover necessary expenses, while another 42.00% have insufficient income after necessary expenses to repay debts or invest in future agricultural activities. Both agricultural and non-agricultural income sources are highly uncertain and subject to systemic risks, such as natural disasters and market price fluctuations, which occur on average every three years and may increase in frequency and severity due to global warming and future uncertainties. These financial challenges make managing household finances for agricultural households highly challenging. Every month, households must strive to minimize and stabilize income to ensure sufficient spending throughout the year and save for uncertain income in subsequent years (Smooth Consumption Within and Across Years). Additionally, they must find ways to cover necessary expenses to maintain their quality of life and livelihoods. These financial issues are common across households in various demographic groups (Chantarat et al., 2022).

From the field survey conducted for this research, it was found that agriculturists in Sakae Phrong Sub-district, Mueang Buriram District, Buriram Province, registered the highest number of agriculturists in Mueang Buriram District, totaling 3,980 people (Office of Agricultural Economics, 2023). Additionally, the survey of household debt conditions revealed that most agriculturists face household debt from borrowing from various financial sources. This debt includes loans for consumption, investment, and housing. Agriculturists also need help with issues such as insufficient income to cover expenses, unstable income, and liquidity problems. These challenges are causing a decrease in agriculturists' ability to repay their debts due to several factors, such as income not meeting expenses and increasing installment payments.

Furthermore, agriculturists need more understanding of the rules and conditions for debt repayment, which hinders their ability to escape the debt trap within a shorter period than specified in loan agreements. However, Chantarat et al. (2022)noted that from one perspective, the various loan sources available to agriculturists today are working together to help households manage their finances comprehensively. From another perspective, however, access to multiple loan sources may lead to excessive and unsustainable credit use. Related research on household debt solutions indicates that agricultural household debt has increased over the past decade, exceeding repayment capacity and affecting the ability to obtain new loans. This creates a cycle of debt from which households cannot escape (Santiprabhob, 2021; Chantarat et al., 2022; Chai-Anant, 2023; Bank of Thailand, 2024; Puey Ungphakorn Institute for Economic Research, 2024).Santiprabhob (2021)emphasized that the debt trap is a critical issue. If not seriously addressed, it will lead to other traps in the Thai economy and society, making it difficult for Thais to achieve a sustainable quality of life. Chai-Anant (2023) stated that promptly failing to address the debt trap would hinder economic activities and future security. Thawa and Tunyarak (2023) further noted that health factors, living standards, social relationships, and work

conditions significantly correlate with quality of life. Bisonyabut et al. (2018) mentioned that agriculturists often borrow money for agricultural investment, and when they cannot repay, they continue borrowing, creating a cycle of debt. The socio-economic structure is a crucial factor contributing to inequality. Limpaisarn (2017)added that the household debt situation in Thailand causes agriculturists to spend more than their income, leading to excessive debt burdens, difficulty accessing new credit sources, and potential financial problems after retirement if debts remain unpaid.Therefore, it is urgently necessary to address household debt problems for agriculturists by applying innovative household debt management practices. This will enhance their ability to repay debts and develop their access to low-interest financial resources.

Given the abovementioned issues the education sector, as a knowledge service provider, can play a crucial role in assisting agricultural households. By imparting knowledge on how to address household debt problems and escape debt traps and by researching the application of financial tools to solve these issues, the education sector can provide significant support to agriculturists. Therefore, scholars are interested in studying the economic and social impacts of household debt traps and the economic and social factors influencing the quality of life of agriculturists. The aim is to propose solutions for overcoming household debt traps, ultimately enhancing the quality of life for agriculturists.

2. Literature Review

2.1. Maslow's Hierarchy of Needs

Maslow, a psychologist, and anthropologist used his experience as a psychologist and counselor as the foundation for proposing a theory that explains human behavior as driven by a hierarchy of needs consisting of five levels. Maslow's theory is based on three main concepts or assumptions: 1) Humans are social animals with endless needs. Humans continuously have needs that increase over time. 2) Needs that have been met no longer motivate behavior; however, unmet needs continue to motivate behavior. 3) Human needs can be organized in a hierarchical order, and humans will continuously seek to fulfill these needs. According to Maslow's theory, human needs are arranged in five levels, which can be explained as follows (Maslow, 1980):

1. Physiological Needs: These are humans' basic needs and the most essential for survival. They include food, air, drinking water, shelter, clothing, and medicine. Additionally, Maslow includes reproduction in this category, as it is crucial for the species' survival.

2. Security Needs: Once physiological needs are met, the need for protection from physical harm becomes paramount. This includes protection from accidents and crime and the desire to live in a predictable, orderly society. Security needs also encompass knowing the limits or boundaries of behavior accepted in society, job security, financial stability, and general stability in living conditions.

3. Social or Belonging Needs: Social needs become dominant after the first two levels of needs are satisfied. These involve the desire to belong and be accepted, to form friendships, and to be loved by others, including colleagues, religious groups, and other social groups.

4. Esteem or Egoistic Needs: These include the desire to stand out in society, self-confidence, achievement, knowledge, skills, self-esteem, independence, and freedom. This level also encompasses the need to hold a prominent status and be recognized and respected by others. It includes gaining respect from others, holding high positions in organizations, or being close to essential individuals. The desire to be someone significant or to take pride in one's skills and expertise also falls under this category. This need includes feelings of self-worth or self-esteem. Those who fulfill their esteem needs feel confident in their abilities, while those who lack self-esteem and respect from others may feel inferior. Maslow noted that the need for esteem is significant in children and adolescents.

5. Self-Actualization Needs: This is the highest level of Maslow's hierarchy of needs, representing the desire to achieve everything possible and become the most possible. This involves reaching one's full

potential and being the best version of oneself. Examples include the desire to be an ideal parent, excel in sports, or fully utilize one's creative abilities through invention, painting, or other artistic expression.

However, in the research on the economic and social impacts of debt traps on the quality of life of agriculturists in Buriram Province, the scholars applied Maslow's theory of human needs to explain the factors influencing the quality of life from the perspective of human needs.

2.2. Concepts of Household Debt and Debt Traps

Household debt refers to the financial obligations of households resulting from borrowing money from various financial institutions, as recorded by the Bank of Thailand. These financial institutions include commercial banks, specialized financial institutions that accept deposits, savings cooperatives, finance companies, credit foncier companies, credit card companies, leasing companies, personal loan companies, and others such as insurance companies, life insurance companies, securities companies, and pawnshops. Households borrow money for consumption or business purposes. If households believe that the returns from investing the borrowed money exceed the cost of borrowing, they might also incur debt for investment purposes.

However, there are two leading causes of debt: 1) It arises from increasing consumption needs, the cultural system of society, and the values regarding the consumption behavior of Thai people. The desire for a more comfortable and entertaining lifestyle has increased. 2) Failure in the occupation due to the sale of products at undesired prices, price uncertainty, or production quantity. Increasing agricultural investment due to the desire to increase income often leads to borrowing. Another significant reason is dependency on capital groups of agriculturists (Sukanta, 2009). Another important reason is the lack of financial knowledge, leading to reckless spending and quickly falling into a debt cycle, resulting in stress and long-term debt problem-solving (Bank of Ayudhya Public Company Limited, 2022). Additionally, Chuenchoksan et al. (2022) have stated that eight truths about being in debt and financial problems from the borrower's perspective, finding that household behavior is a significant cause of Thailand's household debt problems today. High debt burdens are a crucial factor causing Thai households to have insufficient income for expenses. Some reckless spending is influenced by changing technology, such as online shopping and accessing social media, which stimulate desires and consumption compared to others. This influence trend is expected to intensify, especially among younger generations. The critical question is how to make Thai households, especially vulnerable groups, aware of the dangers of inadequate savings and financial indiscipline. However, from the current data on Thai household debt, which has increased to 90.60% of the national income, if this problem is not seriously and continuously addressed, it will reduce purchasing power among the Thai population. Therefore, the Bank of Thailand has implemented measures to address household debt as part of efforts to assist households, collaborating with both the government and private sectors. This is a significant issue that requires cooperation from all sectors. If the problem is not addressed promptly, it may escalate into a more significant and increasingly complex problem to solve in the future (Kasikorn Research Center, 2023).

A debt trap is when individuals cannot fully repay their debts. For example, when the repayment deadline of Loan Agreement 1 arrives, the borrower cannot repay the debt. This leads to borrowing money for Loan Agreement 2 to repay Loan Agreement 1, creating a cycle of perpetual debt. Currently, the Bank of Thailand has been making continuous efforts to monitor and analyze household debt problems. They have implemented various measures suitable for the economy and the issues in each period, aiming to address debt problems and push people out of the debt trap cycle. However, the increasing debt among agricultural households over the past decade has surpassed their repayment capacity, affecting their ability to borrow anew. From the cumulative debt problems of agricultural households, it is found that the increasing debt stems from the existing debt that remains unpaid, and the new debts accumulated each year, leading to a vicious cycle of debt traps. Over 20.00 percent of

households have debts exceeding 100.00 percent of collateral value, significantly reducing their debt repayment ability and new borrowing opportunities. This may hinder the use of credit for financial management and development. In addressing these household debt issues, the inappropriate financial management tools and inefficiency of community-based financial services play significant roles.

Consequently, households resort to excessive borrowing, leading to debt problems. Additionally, government debt moratorium policies distort household debt repayment motivations, resulting in further debt accumulation. This, in turn, exacerbates financial and household economic issues, eventually leading to a vicious cycle of debt traps (Chantarat et al., 2022). The Bank of Thailand has been continuously monitoring and analyzing household debt problems, implementing various measures suitable for different economic situations. Recently, as the economy begins to recover, measures have been introduced to help "tackle debt before it accumulates, close existing chronic debts, enhance the quality of new debts, and bring debts into the system." (Chai-Anant, 2023). According to the National Credit Bureau (2023), the following steps are suggested to escape debt traps: 1) suspend unnecessary expenses and avoid frivolous spending, 2) increase savings, 3) plan daily expenses, and restrain impulse spending to prevent overspending beyond the set budget, 4) seek additional income sources beyond primary earnings, and 5) set clear goals, cultivate consistent savings habits, and adhere to savings targets.

2.3. Concepts of the Economic Impacts of Debt Traps

Economic impact refers to the consequences that lead to changes in the economic system and affect changes in various aspects such as occupations, income, production, savings, sales, and consumption of various goods. These consequences can occur both in the present and future, both positively and negatively. They can affect target groups or non-target groups, leading to direct or indirect impacts and leading to attempts to address issues or changes that arise.

Household debt problems are a significant risk factor for the Thai economy. If addressed, they can improve economic recovery and may impact the financial system's stability. Household debt issues have been prevalent, exacerbated by the COVID-19 crisis. Analysis of economic and social survey data by the National Statistical Office revealed that the Debt Service Ratio (DSR) for Thai households averages 30.00 percent, making debt a hindrance to consumption and economic recovery. While household incomes are expected to recover with economic activities gradually, the high debt burden will likely continue to hinder the economy. Addressing household debt issues is crucial for Thailand's financial system and requires cooperation from all sectors. Designating 2022 as the "Year of Household Debt Solutions" by the government marks a significant step in earnestly tackling these issues (Tang-nararatchakit, 2022). However, inappropriate financial management tools and inefficiencies in community-based financial services contribute to excessive household borrowing and further debt accumulation. Government debt moratorium policies distort households' motivations for debt repayment, leading to increased debt accumulation. This exacerbates financial and household economic issues, eventually forming a vicious cycle.

Moreover, falling into a debt trap reduces households' immunity, limiting their access to opportunities for enhancement and quality of life and becoming obstacles to development. Comprehensive solutions are needed to help agricultural households in Thailand escape these traps and sustainably utilize financial tools for development. These solutions should address community-based financial service problems, debt issues, household financial and economic challenges, and government policy issues (Chantarat et al., 2022). With household debt statistics reaching 90.00 percent of national income, urgent collaborative efforts are required to find solutions and prevent household debt from becoming an obstacle to economic activities (Chai-Anant, 2023).

2.4. Concept of the Social Impacts of Debt Traps

According to the concept proposed by Vanclay and Daniel (1996), it is suggested that these impacts can bring about changes in one or more aspects. These aspects include 1) Way of life: Basic living habits, work, leisure activities, and interpersonal communication in everyday routines; 2) Culture: Traditions, customs, group values, the language used for communication within the group, and local languages; 3) Community: Cooperation and unity within a community, provision of services and facilities within the community; 4) Environment: Air and water quality, food, particulate matter, and noise pollution, as well as the adequacy of community health. These factors should be accessible and controllable by communities; 5) Health and Well-being: It refers to physical and mental health, living in an excellent social environment without threats of illness or discomfort. In summary, it pertains to the individuals residing within a community; and 6) Anxiety and Aspirations: Concerns about safety and worries about the community's future, as well as aspirations for what the community desires for its future generations.

Furthermore, Karin and Uttarin (2023) have also stated that social impacts are associated with people's way of life in terms of social behaviors and changes expected to bring about either positive or negative effects in the long term. The social impacts on individuals may vary depending on the context. Therefore, when certain events occur within a society, the impacts on individuals may differ in severity.

However, household debt problems are considered a significant issue within the Thai socio-economic system, severely impacting the micro and macro levels. At the micro level, high household debt implies low savings for the future, especially as Thailand transitions into an aging society and is projected to become a super-aged society by 2030. This indicates that Thai individuals and households must have sufficient savings to cover expenses for self-care and care for the elderly within the family. Consequently, Thai households are likely to face increased uncertainties due to the effects of climate change, which could lead to more severe natural disasters. The agricultural sector, where many Thais rely, may face increased variance due to extreme weather conditions. Thai households are also likely to face increasing economic fluctuation, needing to adapt quickly to technological changes, resulting in mismatches between the workforce's skills and those required for the future and a lack of job security.

Moreover, high levels of debt and being consistently pursued by creditors also impact the stress levels, health, and work efficiency of Thais. At the macro level, when a majority of households are heavily indebted and unable to take care of themselves and their families in old age or during various crises, it places a burden on the government to provide increased support and assistance, mainly through expanding state welfare, which may pose long-term fiscal stability issues for the country. High household debt levels also hinder long-term consumption expansion and economic growth, affecting the government's ability to stimulate the economy effectively, as a significant portion of Thai household income goes towards debt repayment rather than circulating for economic activities. Furthermore, if household debt cannot be controlled appropriately, it could exacerbate inequality issues within the Thai socio-economic system, which is already fragile and vulnerable (Bisonyabut et al., 2018; Santiprabhob, 2021). Additionally, Thailand's household debt remains consistently high, representing a critical vulnerability of the Thai financial and social systems (Chunsom, 2023).

2.5. Concept of Quality of Life

Quality of life refers to the perception of satisfaction in living, encompassing well-being in various aspects that can meet basic needs from birth to death, provided by both the government and private sectors. This includes food, clothing, shelter, medical treatment, and disease prevention and cure, all aimed at preventing and eliminating social problems. These provisions must be ensured under human dignity, rights, and equality. These factors are interconnected with daily living and positively impact the quality of life regarding physical health, mental well-being, social relationships, and the environment. A good quality of life should not create problems for oneself or society.

Quality of life is crucial because its care is primarily family's responsibility. However, if the family cannot fulfill this role, support systems from relatives, neighbors, or the community provide temporary assistance. When social support systems fail, the government assumes responsibility. The effectiveness of welfare in enhancing quality of life depends on each country's political, economic, and socio-cultural contexts. Thailand faces similar challenges, with the government needing help to provide comprehensive social services (Khaenamkhaew et al., 2019).

Additionally, the importance of quality of life extends to social coexistence, as it involves protecting society's members and ensuring human and social security. This entails providing essential social services or welfare to those in need, as the government is responsible for the well-being of its citizens. People believe the government can deliver welfare services effectively, though some critique and call for a reevaluation of the government's role, arguing that current services do not adequately address the issues and needs of target groups (Chatterjee, 1999). This has led to dynamic changes in the economy, society, politics, and technology at national, regional, and global levels. Consequently, previous methods of enhancing quality of life and happiness have yet to prove enough.Innovations and partnerships at all levels—domestic, regional, and global—are required to address these changes and achieve the targeted quality-of-life enhancements (Kittisuksathit et al., 2014).

Additionally, quality of life is crucial because the government must ensure the well-being of its citizens, allowing them to live sustainably. This necessitates innovations and multi-level partnerships to develop targeted quality-of-life enhancements. While it is believed that the government can provide welfare services effectively, sometimes, these services do not fully align with the actual problems and needs of the target groups. Therefore, it is essential to ensure continuous and accurate approaches to enhancing quality of life (Khaenamkhaew, 2022).

2.6. Context of Agriculturists in Buriram Province

Based on a survey of household debt among 1,073 agriculturist households, it was found that 99.00% have household debt. Most of these agriculturists have debts for personal consumption, occupational purposes, real estate purchases, automobile and motorcycle purchases or leases, education, and credit card and personal loans. Additionally, there is an increasing problem of income not meeting expenses compared to the period before the COVID-19 pandemic. Furthermore, agriculturists in the area tend to accumulate even more household debt. This group of agriculturists is experiencing decreasing debt repayment capabilities due to several factors, such as increased payment rates per installment, reduced and unstable income, etc. They also need to gain more knowledge and understanding of the rules and conditions for debt repayment, which could help them escape the debt trap more quickly than the terms specified in their loan agreements.

However, the survey also found that agriculturists have a recurring need to incur household debt during every production cycle (agriculture) or debt repayment period. They often use money from new loan agreements to pay off existing debts (borrowing from the same financial institution) and borrow from other financial sources or institutions to make timely repayments. This includes borrowing from cooperatives, village funds, or informal lenders. When it comes time to repay these informal loans, they often need help to make the payments. Additionally, the survey revealed various repayment conditions in loan agreements, reflecting different interest calculation methods, such as 1) Fixed-rate interest (Flat Rate): This method calculates interest on the entire principal amount, which remains constant throughout the loan term, even though the borrower has been making partial principal repayments., and 2) Reducing-rate interest (Effective Rate): This is commonly used for almost all types of loans, calculating interest on the remaining principal balance for each installment. These two interest calculation methods result in different payment amounts, potentially leading to varying principal repayment amounts for agriculturists.

Based on the above literature review, household debt traps' economic and social impacts are influential factors affecting the quality of life of agriculturists. The scholars, therefore, hypothesize as follows:

Research Hypothesis 1: The economic impact of household debt traps influences the quality of life of agriculturists.

Research Hypothesis 2: The social impact of household debt traps influences the quality of life of agriculturists.

3. Methodology

3.1. Process and Sample Selection Method

The population used in this research consists of agriculturists in Sakae Phrong Sub-district, Mueang District, Buriram Province, with six villages registering the highest number of agriculturists. The top six villages include Ban Nong Yai, Village No. 1; Ban Nong Phai, Village No. 3; Ban Som Sanuk, Village No. 5; Ban Sawai So, Village No. 7; Ban Nong Kieb, Village No. 11; and Ban Mai Phatthana, Village No. 16, totaling 1,073 households (Office of Agricultural Economics, 2023). For this study, the number of sample groups used for analysis was determined by calculating the ratio between the sample units and the number of parameters or variables following the formula by Hair et al. (2010), which suggests that the number of suitable sample groups for multivariate analysis should be at least 5-10 times the number of indices measured. With 14 questionnaire items in the research study, a minimum of approximately 140 sample groups should be used. Past research has recommended appropriate sample groups for evaluating structural models using the PLS-SEM method to be between 100-200 groups (Ringle et al., 2009; Hair et al., 2011; Sarstedt et al., 2014).Therefore, the scholars used at least 140 sample groups.In order to avoid sample size limitations in calculating various statistics (Henseler et al., 2016), 400 samples were used, which exceeds the minimum required number. However, the researchers divided the sample groups into two categories: 1) a questionnaire-based sample group comprising a total of 400 individuals, calculated proportionally (Proportional Stratified Random Sampling) using the Simple Random Sampling method (drawing lots, sampling unit selection method, no replacement/refund) at a significance level of 0.05, and 2) a sample group of focus group discussion selected through Purposive Sampling, consisting of six individuals, including 1) the credit manager of Bank for Agriculture and Agricultural Cooperatives in Buriram Province, 2) the manager of the community bank in Ban Sawai So, Mueang District, Buriram Province, 3) the head of the SME Financial Network in Buriram Province, 4) the director of the finance and property division at Buriram Rajabhat University, 5) a senior Teachers' Saving Cooperative expert from Buriram Rajabhat University, and 6) the president of the village fund.

3.2. Research Instruments

The scholars developed research instruments divided into two parts: 1) Quantitative Research: The instrument used is a questionnaire, which is divided into three parts: Part 1: General Information of Respondents (9 items) including gender, age, education background, average monthly income, monthly expenses, types of household debt expenses, credit sources, duration of household debt, and household debt repayment methods (Checklist); Part 2: Factors Influencing the Economic and Social Impacts of Household Debt Traps on the Quality of Life of Agriculturists, including the economic impact factors, social impact factors, and the quality of life of agriculturists (Rating Scale); and Part 3: Additional recommendations concerning the economic and social impacts of household debt traps on the quality of life of agriculturists, featuring open-ended questions. 2) Qualitative Research: This involves focus group discussions. The scholars formulated questions and discussion topics to align with the research framework and objectives, which include: (1) How is the level of impact from household debt traps on agriculturists in Sakae Phrong Sub-district, Mueang District, Buriram Province?; (2) Whether and how the economic impact factors of household debt traps influence the quality of life of agriculturists; (3)

Whether and how the social impact factors of household debt traps influence the quality of life of agriculturists; (4) How is the quality of life of agriculturists in the community?; and (5) What are the solutions to address the impact of household debt traps on agriculturists in Buriram Province?

3.3. Quality of Instruments

The scholars presented questionnaires and focus group questions to three experts to assess their consistency, appropriateness, language accuracy, and content coverage (Index of Item-Objective Congruence: IOC). The consistency of the questions ranged from 0.67 to 1.00, indicating that the instruments had sufficient quality for data collection (Kulsawat, 2015). Subsequently, the questionnaires were tried out on a non-sample population, and the reliability was analyzed using Cronbach's Alpha Coefficient, which needed to be equal to or greater than 0.70 for the instruments to be used for data collection (Hair et al., 2010). In this study, the Cronbach's Alpha Coefficient reliability ranged from 0.70 to 0.78.

3.4. Data Collection

For this research, the scholars implemented data collection as follows:

1. Questionnaires: The scholars collected data from a sample group of 400 individuals by distributing the questionnaires and collecting them back from the respondents on the same day. A total of 400 completed questionnaires were obtained for further data analysis.

2. Focus Groups: The scholars conducted one focus group discussion, which lasted approximately 2 hours and 30 minutes. The scholars invited experts to join the focus group discussion to ensure a diverse range of information. After the focus group, the scholars transcribed the recorded audio verbatim into written text, organized the information into categories, and verified the accuracy of the data.

3.5. Data Collection Period: Data Collection Was Conducted from April 2024 to August 2024.

3.5.1. Data Analysis

For this research, the scholars divided the analysis into two types:

1. Quantitative Data: Basic statistics, including frequency, percentage, mean, and standard deviation, were used. Structural Equation Modeling (SEM) using PLS-SEM with the bootstrapping process was employed for statistical hypothesis testing. Bootstrapping was used to find the confidence intervals of parameter estimates, and the mean and standard errors of each parameter to analyze the statistical results (Henseler & Sarstedt, 2013; Hair et al., 2014). The technique involves resampling the collected data to create new data sets, typically generating 5,000 sets (Hair et al., 2011; Wong, 2013). This method, based on common variance, aims to estimate the parameters in the model to explain the variance of latent variables within the model as much as possible using the Ordinary Least Squares (OLS) method. PLS-SEM does not focus on theory testing but rather on testing the significance of individual paths. This approach has fewer assumptions than other methods, such as not requiring the data to be normally distributed, as it is robust to deviations from normal distribution (Hair et al., 2013). Additionally, it does not require the assessment of model fit, as this analysis method is always consistent.

2. Analysis of the data collected from the focus group discussions involved verifying the accuracy of the information obtained from transcriptions and recordings. The data were analyzed using content analysis, where categories were created based on grouping similar or related data independently and not according to the scholars' preconceptions, ensuring methodological validity and preventing bias. Subsequently, sub-themes were consolidated into main themes to summarize the discussion topics coherently and comprehensively. The themes were presented sequentially and cohesively based on the

group discussions. The results of the data analysis were then presented to the participants for validation, involving three individuals, and presented through analytical description.

4. Results and Discussion

4.1. General Information of the Respondents

General Information of Questionnaire Respondents: It was found that the majority of respondents were female, totaling 302 individuals (75.50%). The age range of 20-29 years accounted for 192 individuals (48.00%), with most having completed high school or vocational education, totaling 97 individuals (24.25%). Those with an average monthly income of less than 10,000 baht numbered 256 individuals (64.00%), while those with monthly household debt expenses ranging from 10,001 to 15,000 baht were 197 individuals (49.25%). Regarding the types of household debt expenses related to consumer loans (personal loans, credit card debts, and other loans typically used for consumption), there were 400 individuals (30.72%). Additionally, all respondents had access to credit systems, totaling 400 individuals (67.34%), with a debt burden period of less than one year for 112 individuals (28.00%). The repayment method for household debt was typically to settle the debt in full according to the agreed-upon installment schedule (with occasional missed payments) for 361 individuals (47.44%). This aligns with Chunsom (2023), Puey Ungphakorn Institute for Economic Research (2024), and Bank of Thailand (2024), which stated that Thais currently have an increasing proportion of debt, mainly consisting of non-productive loans. These include consumer loans and loans for excessive spending beyond means.

This comprises personal loans at 39 percent and credit card debt at 29 percent. Agriculturists and low-income groups are borrower groups with the highest Debt Service Ratio (DSR), posing a high risk of default or partial repayment, trapping them in a cycle of unescaped debt. Additionally, Suwanik (2023) also mentioned that household debts from these groups often have short repayment periods but high interest rates, resulting in high monthly repayment burdens.

4.2. The Level of Economic and Social Impacts from Household Debt Traps and the Quality of Life of Agriculturists

The research findings can be presented as shown in Table 1.

Table 1.
The level of economic and social impacts from household debt traps and the quality of life of agriculturists.

Factors	$\overline{X}$	S.D.	Level of Impact/Quality of life
1. Economic Impact			
1.1 You need more liquidity when spending money.	3.53	0.54	High
1.2 You need more opportunities to invest money or use it for other benefits.	3.94	0.62	High
1.3 You have high expenses related to loan interest rates.	4.00	0.63	High
1.4 Your ability to incur new debt is reduced.	3.48	0.46	High
1.5 You need more financial stability.	3.91	0.71	High
Total	3.72	0.59	High
2. Social impact			
2.1 You feel discouraged in life.	3.53	0.67	High
2.2 People around you become suspicious of you.	4.00	0.71	High
2.3 You worry about household debt burdens.	4.00	0.67	High
2.4 You meet and socialize with friends or relatives, etc.	3.48	0.72	High
	3.91	0.74	High

2.5 There is an increase in crime in the community. Total	3.78	0.70	High
3. Quality of life of agriculturists			
3.1 You have savings for emergencies.	2.87	0.74	Moderate
3.2 You own durable and sturdy housing.	2.72	0.62	Moderate
3.3 You can purchase desired goods and have time for travel and leisure.	2.68	0.69	Moderate
3.4 You have money saved for retirement.	2.52	0.69	Moderate
Total	2.69	0.68	Moderate

From Table 1, it was found that the majority of respondents experienced a high level of economic impact ($\overline{X} = 3.72$) and social impact ($\overline{X} = 3.78$) from household debt traps, while their overall quality of life was at a moderate level ($\overline{X} = 2.69$). This is due to high-interest rate expenses, lack of financial stability, liquidity issues in spending, reduced ability to incur new debt, social suspicion, community crime, discouragement in life, lack of emergency/retirement savings, and reduced purchasing power. This is consistent with Chantarat et al. (2022), who stated that the household debt of agriculturists has been increasing and is affecting their ability to secure new loans. The dynamics of accumulating debt among agriculturist households show that the increase stems from unpaid previous debts and new debts incurred annually, creating a debt trap that further increases household debt. This cycle exacerbates household financial problems, reducing their financial immunity, hindering access to opportunities for capacity building and quality of life enhancement, and becoming a development trap.

Similarly, Tang-nararatchakit (2022) noted that household debt is a significant risk factor for the Thai economy. Unaddressed debt could hinder economic recovery and affect financial stability, which stifles consumption and economic recovery. Chai-Anant (2023) also stated that if household debt in Thailand remains above 80% of national income for an extended period, it could impact economic growth and financial stability. Various agencies have expressed concerns about the rising household debt in Thailand, currently at 90% of national income, emphasizing the need for urgent solutions to prevent household debt from obstructing economic activities. Additionally, Santiprabhob (2021) and Suwanik (2023) mentioned that high levels of debt and frequent debt collection can lead to stress and health issues, potentially increasing crime rates, compromising the safety of individuals and property, and reducing work efficiency.

4.3. Testing the Factors of Economic and Social Impact from Household Debt Traps Influencing the Quality of Life of Agriculturists

Using the PLS-SEM method, as illustrated in Tables 2-8.

Table 2.
Variance inflation factors.

Predictive Components	VIF
1. Economic impact from household debt traps (EE)	6.04
2. Social impact from household debt traps (ES)	6.08
3. Quality of life of agriculturists (QL)	6.10

Table 2 shows that the predictive components have Variance Inflation Factors (VIF) values ranging from 6.04 to 6.10. This aligns with the criteria that testing for multicollinearity of predictive components should not show significant statistical correlations among themselves. The VIF values

should not exceed 10, indicating that the predictor variables can be analyzed without multicollinearity issues(Hair & Black, 2014). This means that the structural equation model for this research does not have multicollinearity problems among the external components.

Table 3.
Indicator reliability.

Latent variables	Indicator variables	Outer loadings	Composite Reliability	Cronbach's Alpha	AVE
Economic impact from household debt traps (EE)	Eco1	0.86	0.89	0.70	0.55
	Eco2	0.76			
	Eco3	0.96			
	Eco4	0.70			
	Eco5	0.71			
Social impact from household debt traps (ES)	So1	0.89	0.93	0.78	0.60
	So2	0.98			
	So3	0.98			
	So4	0.70			
	So5	0.70			
Quality of life of agriculturists (QL)	Qua1	0.71	0.80	0.70	0.51
	Qua2	0.82			
	Qua3	0.71			
	Qua4	0.70			

From Table 3, it was found that the indicator reliability test for this research used composite reliability to assess the quality and reliability of the research instruments. The composite reliability value must be greater than 0.7, which is considered acceptable for data reliability testing. Additionally, Cronbach's Alpha coefficient was used to test the reliability of the measurement instruments, with a criterion greater than 0.7, which is acceptable for data reliability testing (Hair et al., 2014). All three latent variables had composite reliability and Cronbach's Alpha coefficients greater than 0.7, indicating that all latent variables used in the study are reliable. Furthermore, the outer loadings test and the standardized outer loadings of the indicator variables should not be lower than 0.70; if lower, the variable should be considered for removal (Hair et al., 2014). From Table 3, the outer loadings of all indicator variables were more significant than 0.7, confirming the reliability of all indicator variables used in the study.

Table 4
Discriminant validity through the square root of AVE using the Fornell-Larcker criterion.

Latent variables	EE	QL	ES
1. Economic impact from household debt traps (EE)	0.74		
2. Quality of life of agriculturists (QL)	0.64	0.71	
3. Social impact from household debt traps (ES)	0.72	0.65	0.77

From Table 4, it was found that according to the Fornell-Larcker Criterion, the discriminant validity analysis involves comparing the square root of the Average Variance Extracted (AVE) values between the latent variables and other latent variables. The √AVE should be at least 0.7, and each latent variable should have a higher value than the AVE between the latent variables and other latent variables squared (Hair et al., 2013). The economic impact of household debt traps (EE) has the highest

√AVE value in the same block, 0.74. When comparing the correlation between the social impact of household debt traps (ES) and the quality of life of agriculturists (QL), the √AVE values are 0.64 and 0.72, respectively, lower than 0.74. The social impact of household debt traps (ES) has the highest √AVE value in the same block, 0.71. When comparing the correlation between the quality of life of agriculturists (QL), the √AVE value is 0.65, lower than 0.71. Moreover, the quality of life of agriculturists (QL) has the highest √AVE value in the same block, 0.77. Therefore, it can be concluded that the latent variables of the economic impact of household debt traps (EE), the social impact of household debt traps (ES), and the quality of life of agriculturists (QL) have discriminant validity according to the Fornell-Larcker Criterion.

Table 5.
Results of discriminant validity testing of measurement instruments using cross loadings.

Latent variables	EE	QL	ES
Qua1	0.68	0.71	0.60
Qua2	0.23	0.82	0.28
Qua3	0.18	0.71	0.25
Qua4	0.31	0.70	0.43
So1	0.56	0.53	0.89
So2	0.66	0.65	0.98
So3	0.66	0.65	0.98
So4	0.25	0.37	0.70
So5	0.21	0.10	0.70
Eco1	0.86	0.53	0.69
Eco2	0.76	0.41	0.50
Eco3	0.96	0.65	0.68
Eco4	0.70	0.05	0.05
Eco5	0.71	0.40	0.60

From Table 5, it was found that the factor loadings of the observed variables in the latent variables are higher than the specified criterion, which is greater than or equal to 0.7 (Henseler & Sarstedt, 2013). However, they can be lower but not less than 0.50 (Lee et al., 2011). When considering the correlation values between the factor loadings of the observed variables of the latent variables and other latent variables in the model, it was found that the correlation values are lower than these variables. Therefore, it can be concluded that the three latent variables, namely the economic impact of household debt traps (EE), the social impact of household debt traps (ES), and the quality of life of agriculturists (QL), have discriminant validity according to the cross loadings' criterion.
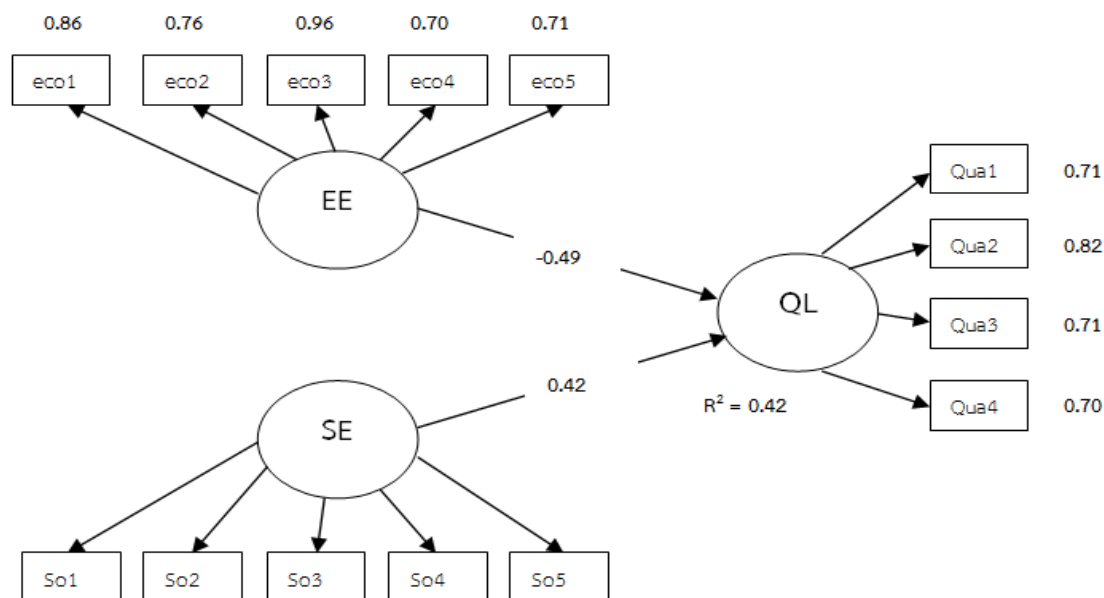
Table 6.
Coefficient of determination (Coefficient determinant–R Square).

Variables	R square	R square adjusted	Percentage in Prediction
QLF	0.44	0.42	42.00

From Table 6, it was found that the economic impact of household debt traps (EE) and the social impact of household debt traps (ES) are factors that influence the quality of life of agriculturists (QL). The coefficient of determination (R^2) for the internal latent variables is 0.44, and the adjusted coefficient of determination (R^2 Adjusted) is 0.42 at a significance level of P=0.05. This means that the economic

impact of household debt traps (EE) and the social impact of household debt traps (ES) can explain 42.00% of the variance in the quality of life of agriculturists (QL).

Calculating the coefficient of determination (R^2) involves analyzing the effect size between dependent and independent variables. This can be explained by the proportion of the variance in the dependent latent variable that is accounted for by the independent variables. The coefficient of determination for the internal latent variables, R^2 or R-Square, should not be less than 0.25, or this value may vary depending on the field of study, to consider that the independent variables can explain the variance in the dependent variables (Hair et al., 2014). The research findings indicate that the latent variables of the economic impact of household debt traps (EE) and the social impact of household debt traps (ES) have a coefficient of determination higher than 0.25, indicating that the independent variables can explain the variance in these latent variables, as shown in Figure 1.

Figure 1.
The PLS-SEM results.

Table 7.
Results of direct effect, indirect effect, and total effect testing

The correlation between independent and dependent variables	Direct effect	Indirect effect	Total effect
EE --->QL	-0.49	-	-0.49***
ES --->QL	0.42	-	0.42*

Note: *** $p<0.001$, * $p<0.05$.

From Table 7, it is found that the economic impact of household debt traps (EE) has a direct effect on the quality of life of agriculturists (QL) equal to -0.49 (ß=-0.49). This means that if the economic impact of household debt traps increases by 1 unit in the negative direction, it will decrease in the quality of life of agriculturists by 0.49 units. Similarly, the social impact of household debt traps (ES) has a direct effect on the quality of life of agriculturists (QL) equal to 0.42 (ß=0.42). This indicates that if the social impact of household debt traps increases by 1 unit in the positive direction, it will enhance in the quality of life of agriculturists by 0.42 units.

Table 8.
Research hypotheses summary.

Hypotheses	t- statistics	p-values	Test results
H₁ The economic impact of household debt traps influences the quality of life of agriculturists.	3.62	0.00	Accept
H₂ The social impact of household debt traps influences the quality of life of agriculturists.	1.98	0.04	Accept

From Table 8, it is found that the economic impact of household debt traps influences the quality of life of agriculturists (H_1), and the social impact of household debt traps influences the quality of life of agriculturists (H_2).

The research hypothesis testing shows that the economic and social impacts of household debt traps significantly influence the quality of life of agriculturists. The impacts from both these factors lead to agriculturists having emergency or retirement savings, durable and sturdy housing ownership, the ability to purchase goods, and reduced travel and leisure time. These findings are consistent with Chantarat et al. (2022), who stated that household debt problems pose significant challenges to managing finances for agricultural households. Every month, households must balance low and inconsistent income to sustain year-round spending, save for uncertain income in subsequent years, and cover necessary expenses for maintaining their quality of life and occupation, as Santiprabhob (2021) emphasized.Failure to address household debt trap issues seriously could ensnare Thailand's economy and society in other detrimental cycles, making it difficult for Thais to enhance their quality of life sustainably. This aligns with Chai-Anant (2023), who mentioned that unresolved household debt issues would hinder economic activities and future security. Additionally, it aligns with Thawa and Tunyarak (2023), who stated that health factors, living standards, social relationships, and employment are statistically significant correlates of quality of life.

4.3. Summary of Focus Group Discussions

From the focus group discussions, it was found that the solutions for addressing household debt trap issues among agriculturists can be categorized into three main points as follows:

1. Adjusting the debt structure to match the potential and ensure fairness involves designing a repayment plan that aligns with each household's repayment capacity and income structure. This entails considering fair interest rates, enabling households to repay and alleviate debt in the long term genuinely.

2. Enhancing the economic potential of agricultural households involves promoting productivity, improving market access, and increasing the value of agricultural products. This includes reducing risks, developing household personnel, and emphasizing the importance of supplementary income sources both within and outside the agricultural season. For instance, they can process agricultural products, basketwork, and handicrafts and hire for delivery of goods, with sales conducted both online and offline.

3. Strengthening immunity and financial literacy is crucial. Promoting financial skills and awareness of financial technology tools for money and debt management are emphasized. For example, utilizing financial technology to plan monthly expenses, diversifying financial risks through insurance, allocating monthly investment funds, and encouraging households to save and maintain financial discipline.

The solutions for addressing household debt trap issues among agriculturists mentioned above are in line with Santiprabhob (2021), who stated that household debt problems cannot be solved by any single measure and require time, promoting financial skills and understanding of financial management and encouraging the emergence of new financial service providers to reduce financial costs for the

public. Addressing household debt issues requires a multifaceted measure, starting from restructuring the economy to reduce income inequality and provide opportunities for workers, creating social security for Thais to withstand emergencies or climate fluctuations, and promoting values in living that align with income and financial status. This also aligns with Chantarat et al. (2022), who discussed debt relief solutions and appropriate financial tools for the sustainable development of Thai agricultural households, including 1) Solving the problems of microfinance to work more efficiently, 2) Resolving existing debt so that households can eventually get out of debt, 3) Thoroughly replenishing new debt to meet needs and be more sustainable, 4) enhancing the economic potential of agricultural households, 5) strengthening immunity and financial literacy, and 6) adjusting government assistance policies to create appropriate incentives. It also aligns with the Bank of Thailand (2024), which emphasized that sustainable solutions to address household debt trap issues among agriculturists must prioritize comprehensive debt management, enhancing financial literacy, promoting responsible lending, pushing for comprehensive debt relief, and collecting household debt data.

5. Recommendations for Future Research and the Benefits of Research

5.1. Recommendations for Future Research

This research has found insights from focus group discussions regarding adjusting debt structures to suit potential and fairness, enhancing the economic potential of agricultural households, and strengthening immunity and financial literacy. These findings can be applied to various forms of education, training seminars, and knowledge-sharing sessions for agriculturists or the general public. It is essential to prioritize enhancing the economic potential of agricultural households and strengthening immunity and financial literacy, utilizing applications to promote online sales and systematic financial management. For future research, it is recommended that the enhancement of the economic potential of agricultural households and the reinforcement of immunity and financial literacy through technology be incorporated as variables for the study.

5.2. Benefits of Research

The research findings found that the economic and social impacts of household debt traps influence the quality of life and the solutions to address household debt trap issues among agriculturists. Therefore, government and private agencies should urgently stimulate and promote the enhancement of economic potential for agricultural households and strengthen immunity and financial literacy. This should focus on practical implementation to drive change, such as using applications to promote online sales, utilizing systematic financial management applications, providing knowledge on modern financial technology, and using financial tools to cultivate savings habits and financial discipline. Examples include automatic salary deductions for savings accounts and savings insurance plans.

5.3. New Knowledge from the Research

The knowledge derived from the research shows that household debt traps' economic and social impacts significantly influence the quality of life of agriculturists. If the negative economic impacts of household debt traps increase, the quality of life of agriculturists will decrease. Conversely, if the positive social impacts of household debt traps increase, the quality of life of agriculturists will improve. Additionally, the solutions to address household debt trap issues among agriculturists should focus on enhancing the economic potential of agricultural households and strengthening immunity and financial literacy, as these approaches tackle the problem at the individual level first.

6. Conclusions

The economic and social impacts of household debt traps on agriculturists have an overall average at a high level. In contrast, the overall quality of life of agriculturists is an average at a moderate level. Additionally, the economic and social impacts of household debt traps are influential factors in the quality of life of agriculturists. From the focus group discussions, it was found that relevant agencies, both government and private, should urgently stimulate and promote the enhancement of the economic potential of agricultural households and strengthen immunity and financial literacy, emphasizing practical implementation to drive change and, for example, using applications to promote online sales, utilizing systematic financial management applications, providing knowledge on modern financial technology, and using financial tools to cultivate savings habits and financial discipline. Examples include automatic salary deductions for savings accounts and savings insurance plans.

Acknowledgement:

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