

Determinants for successful loan credits for older people in Thailand




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ABSTRACT

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Aging populations are gradually creating financial distress for governments, and Thailand is no exception. Effective policies for improving elderly welfare must be formulated since the population shift to older age is moving at a faster pace than economic growth. Older people prefer to live actively and independently in order to be less burdensome to their family members and are actively engaged in activities, either voluntarily or because of necessity, even after retirement age. The Thai government initiated a microcredit scheme for eligible older people in order to overcome the difficulty of gaining access to credit. The objective of this research is to explore and evaluate the effectiveness of the Older Persons Fund (OPF) organized by the Thai government to provide seed money for loans to promote active aging in Thailand. Data were collected nationwide using stratified sampling in urban and rural districts from members affiliated with the Older Persons Fund. Structured interviews were conducted with 578 loan recipients. The methodology includes inferential statistics and the multinomial logit choice probabilities model to determine the factors for successful active aging of the loan recipients. The results indicate that the purpose of the loan is a significant factor for a successful outcome. The results also imply that older people provide input into the economy and are not a burden on government expenditure in the long run by promoting active aging projects through microcredit schemes in Thailand.

Contribution/Originality: This article is based on an original study investigating credit policy for older people. The study is unique and different from previous research due to the loan program for retired people. The findings provide policy recommendations that are crucial for ensuring an active aging society in Thailand.

1. INTRODUCTION

Demographic change is happening at an unprecedented pace due to falling fertility rates and increasing life expectancy. The total fertility rate in Thailand in 2010 was 1.58 and declined to 1.34 births per Thai woman in 2020 (United Nations, 2022). In addition, life expectancy at birth had increased from 76.13 years in 2010 to 79.27 years in 2020. The old age dependency ratio (65+/20–64 years of age) increased from 19.3% in 2019 and is expected to rise to 55.4% by 2050. Hence, Thailand has become an aged society with 20% of the population aged 60 years and older.

Given the trend of demographic changes, the burden of caring for the elderly by family members will increase significantly in the near future. The traditional family support system where children provide finances, healthcare, and emotional well-being for the elderly will be seen less commonly in Thai society (Suwanrada, 2008). Simultaneously, family support systems are weakening due to increased migration to urban areas for employment, expanding female labor market participation, and decreasing family size (Knodel & Saengtienchai, 2007). Moreover, even if family care support is available, the caring for older people will become more complex where other forms of formal support are essential.

The demographic, economic, and social trends are resulting in a growing need for the Thai government to establish and finance holistic support for older people to age well. The Covid-19 pandemic and recent sluggishness in economic growth, as well as low productivity in the labor market, has put the government in a finite role in providing sustainable welfare for the elderly (Wyse & Walker, 2021). Thailand's aging population is putting fiscal stress on the government. The central government has appropriated 3,185,000 million Thai Baht for the 2023 fiscal budget (17.79% of GDP), with 11.8% of that budget set aside for social protection. Within the social protection scheme, 323,775.0 million Thai Baht has been set aside for elderly welfare (Budget Bureau, 2022). This number has more than doubled for the same expenditure in the last decade (Ministry of Social Development and Human Security, 2022). Despite the increase of public expenditure for the well-being of the elderly, social provision in Thailand is minimal compared to developed countries. The well-being of the elderly relies heavily on family members in terms of providing welfare and living every day with dignity. Policy guidelines for population aging in developing countries must be formulated as soon as possible since the rate of aging is faster than in developed countries and the governments are less prepared in terms of financial and human resources. At the same time, the pace of aging is faster than economic growth, so the need to address public expenditure for elderly welfare is prevalent (Powell & Cook, 2009).

Recent studies have shown that older people, even in Asian collective cultures, prefer to live actively and independently in order to be less burdensome to their families (Chan & Liang, 2013; Soong, 2020). This is apparently due to a change in living arrangements where family size has decreased from an extended family to a nuclear family (only parents and their dependent children). Not only that, older people prefer to be actively engaged in generating income, even after retirement age, either voluntary or by necessity (Yuan, Hanrahan, Rosson, & Carroll, 2018). Older people are more willing to be active, even after retirement, especially when they are living by themselves or need to generate income to cover daily living expenses. The evidence is more dominant in rural areas where adult children have migrated to work in urban areas and leave their aging parents behind (Bassett, Bourbonnais, & McDowell, 2007). In addition, especially in rural areas, grandparents still need to be active as breadwinners in the household if their adult children send back their own children as dependents (Knodel & Saengtienchai, 2007).

The active aging concept has emerged due to this phenomenon as a new direction for Thai policy for supporting elderly welfare. It is apparent that older people are not inactive or a burden for the institutions but can often be a social and economic resource contributing to society (Foster & Walker, 2015). Previously, Thai policy perceived older people as vulnerable and in need of welfare provision. Currently, policy is shifting toward the active aging concept, which provides social programs that support older people to live independently, especially if they are active and have an interest in generating income. The Older Persons Fund (OPF) is one of the Thai programs that supports the active aging concept through entrepreneurship or earning income. The OPF is a seeding fund provided by the Thai government that offers both individual and group loans to eligible older people for occupational purposes or for projects that promote active aging activities. The objective of this paper is to explore and evaluate the effectiveness of the OPF to gain insight into the effectiveness of active aging policies.

The remainder of this paper is outlined as follows: Section 2 provides a literature review and background on the development of Thai policies for elderly welfare; Section 3 describes the framework and objective of the study; Section 4 explains the methodology; Section 5 contains the results; and the final section presents the discussion and policy recommendations.

2. LITERATURE REVIEW

2.1. Active Aging

Active aging has emerged as a leading scientific and policy conceptualization for viewing older members of society as productive resources (Foster & Walker, 2015). Active aging is derived from the concept of successful aging where older people are perceived as positive, healthy, and can achieve the notion of aging well (Bülow & Söderqvist, 2014). Successful aging is defined as the ability of the elderly to continue daily activities (World Health Organization, 2002). Rowe and Kahn (1997) stated that the model of successful aging includes three components, which are: 1) low probability of disease; 2) high cognitive and physical function; and 3) active engagement with life.

In practice, aging is a social process that interplays with the social structure (Mollenkopf & Walker, 2007). Active aging includes society as part of successful aging, not just at an individual level. Older people's lives are contingent upon policies, opportunities from families, communities, government, and cultural settings (Peterson & Martin, 2015). The concept of active aging views older people as a socioeconomic resource. Policy related to active aging aims to perceive the elderly as more productive for the economy and at the same time improves their quality of life from a holistic view throughout the course of their life (Foster & Walker, 2015).

Active aging was introduced as a policy framework by World Health Organization (WHO). Domains for measuring active aging outcome are employment, social participation, independence, health, secure living, and suitable environments for active aging (World Health Organization, 2002). These indexes measure the process for empowering people with the skills and knowledge to maintain healthy living through social participation. The framework for active aging will assure income security, which will lead to quality of life achievement.

2.2. Microfinance

Employment after retirement has become necessary, especially in rural areas, due to the need of households to earn an income to pay for daily expenses or to repay debts in old age (Singh, Dutt, & Adbi, 2022). In order to generate income, financial loans are necessary as an initial investment for self-employment. Hence, it is necessary to review microfinance and adverse selection with regard to understanding the mechanism of loan schemes as a policy instrument for active aging. Microfinance is a financial instrument that reduces the problem of asymmetric information for borrowers that cannot access financial services from formal sectors (Varian, 2014). The adverse selection problem arises almost naturally in financial markets where lenders have less information about the investment projects and their future returns than borrowers. Qualified projects may have been denied due to information asymmetry. Hence, interest rate is utilized as a screening device for distinguishing between good and bad risks (Rai, 2007). It also acts as an incentive mechanism to reveal the borrower's information regarding productivity parameters in conducting the financed project.

The mechanism of implementing microfinance is more rigorous but well used in developing countries since it is an opportunity for those with minimal credit to access financial investment. It is an economic way of reducing the lack of information of the principal by means of screening the utilization of social assets, especially for the poor (Marinescu & Manafi, 2015). If borrowers are not committed to paying back loans from microfinance, then they are faced with the consequences, such as being prohibited from borrowing again in the future. Typically, microfinance involves small amounts, short credit periods, high transaction costs and high interest rates.

Microfinance can protect the poor from vulnerability by acting as a buffer against shocks. These shocks, such as natural disasters, illness, expenditure perks (cost of weddings and funerals), can cause income fluctuations. The ability to borrow enables the poor to invest in income-generating activities or fund small-scale businesses. Providing people with adequate access to financial services through microfinance is one means by which impoverished elderly people in rural areas can be enabled to protect themselves from short-term shocks and long-term vulnerability. Microfinance has had a significant impact on improving economic development due to its contribution to solving societal challenges

regarding access to credits for the rural poor (Bika, Subalova, & Locke, 2022). One main focus is to examine how institutional factors serve as enablers or as constraints in accessing microfinance.

2.3. Thai Policies on Population Ageing

The population aging phenomenon did not escape the attention of the Thai government. Evidence that the government is taking the issue of population aging seriously can be seen from policy development and program implementations for the elderly. Older people are one of the target groups in Thailand's long-term strategic planning and national economic and social development plans. The National Plan for Older people, adopted in 2002, coincided with the United Nations (UN) World Assembly on Ageing and established its main function of setting policy and guidelines to oversee matters related to older people. The Older Persons Act is the formal law that guarantees the value of older people as productive contributors to families and society (Knodel, Kespichayawattana, Wivatvanit, & Saengtienchai, 2013).

The act provides rights, benefits and support and includes a range of programs as a part of a social safety net for guaranteeing a certain income level for old age. The Act entitles older people with rights and facilities which will ensure security and welfare. Older Thai people are entitled to receive various services and benefits from the government, including financial allowances, universal health care, appropriate self-development programs, and livelihood security.

One of the government strategies to accommodate the aging population is to encourage older people to stay employed for as long as possible. The government assumes that older people who remain active in the labor force will be more able to support themselves and be valued in society. This will also help to compensate for the reduction in Thailand's working age population. One of the programs supporting active aging in Thailand is the Older Persons Fund (OPF), which was administered by the Ministry of Social Development and Human Security in 2004 as mandated by Older Persons Act.

The purpose of the OPF is to provide funding for projects that promote older people's active aging lifestyles. The funds are divided into three categories depending on the size of the proposed project. The funding can support a minimum 50,000 Thai Baht up to a maximum of 300,000 Thai Baht per project. The OPF also provides financial loans for individuals or groups of older people who have innovative business ideas. The loan is granted with no interest up to 30,000 Thai Baht for an individual proposal and 100,000 Thai Baht for a group proposal (at least five people per group).

The loan can be repaid on a regular basis for up to three years and can be renewed. Among the criteria for the loan application is to produce a sound entrepreneurial proposal with a detailed description of the activities.

3. CONCEPTUAL FRAMEWORK AND OBJECTIVE

The question this paper aims to answer is whether the OPF, a mechanism that represents the function of microfinance, can effectively generate funding for older people in Thailand. Theoretically, a financial loan is given to those who are of working age or with a fundamentally feasible project to invest in. Providing financial loans to older people comes with the risk of the loans not being repaid. Furthermore, a financial loan can become the route that causes the deterioration of the livelihood of older people due to unforeseen debt. Based on the literature review, the conceptual framework for addressing the research objective is illustrated in Figure 1.

This paper assesses the performance of the financial loans of elderly people who were members of the OPF in Thailand between 2015–2018. The data will provide greater insights as to what determines successful financial loans and whether the OPF is effective in promoting active aging in Thailand.

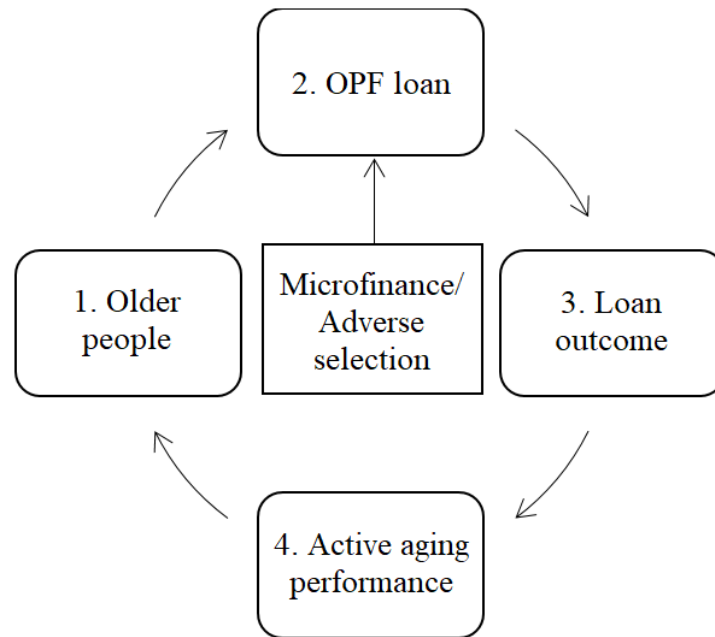


Figure 1. Conceptual framework.

4. METHODOLOGY

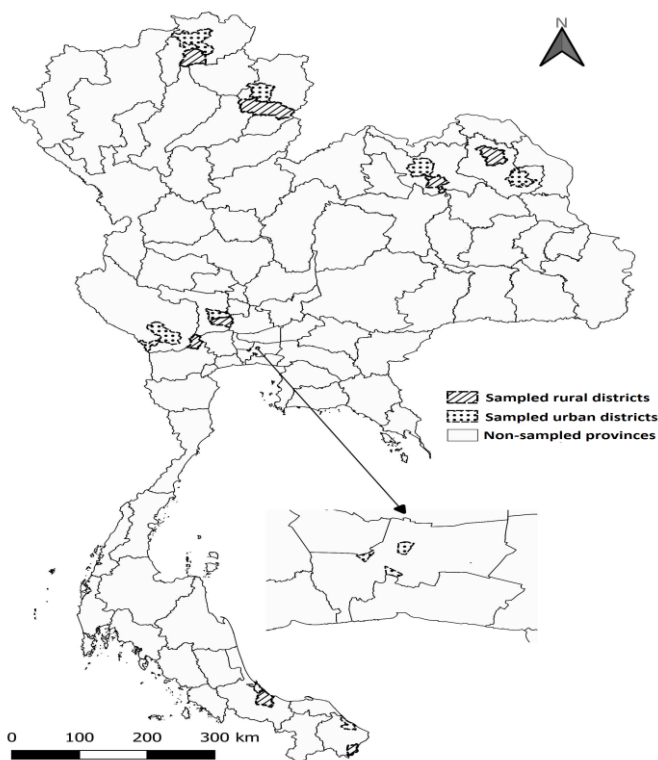
This research is explanatory and aims to assess the effectiveness of the OPF regarding active aging for older people in Thailand. The purpose of the quantitative analysis is to determine socioeconomic and individualistic factors that influence the success of credit loans obtained by older people.

4.1. Study Area and Sampling Design for Data Collection

Data were collected at the individual level at selected districts in provinces in all regions of Thailand. Proportional sampling was employed for provincial selection in the north, northeast, central, and south regions of Thailand. Provinces in each region were ranked by the percentage of people aged 60 years or over. Two of the highest percentages were selected including Bangkok as the special administration jurisdiction. In each province, two districts were selected that represent an urban and a rural area. The districts were classified by the type of local administration in which a district with municipalities is considered urban, while a district with local administration is considered rural. Among each type of district selection, districts with the highest number of OPF borrowers were selected as a research study area.

Older people who applied for and received an OPF loan within the last three years make up the sample population. Proportional sampling was used to select the number of samples for the survey and the interview according to the number of older people in each district. Older people under the OPF registration were randomly selected for data collection. Figure 2 illustrates the map of the study area and the locations for data collection.

A total 578 samples were used for this research during the six month period of fieldwork (May–October 2018). The primary data collection methods included questionnaire surveys and semi-structured interviews. In addition to the survey of the elderly, in-depth interviews were conducted with the OPF provincial officers and government officers responsible for the funded development projects. All subjects provided informed consent before participating in the study. The study was conducted in accordance with research ethics and passed the IRB protocol issued by Mahidol University. The table in Figure 2 shows the sample sizes collected in each of the provinces in the various regions across Thailand.



Region	Province	Sample size
Capital	Bangkok	59
Central	Kanchanaburi	59
	Supanburi	56
Northeast	Udonthani	52
	Sakonnakhon	64
North	Chiangrai	81
	Nan	62
South	Songkla	62
	Narathiwat	83

Figure 2. Map and distribution of sampling population.

4.2. Model Specification and Econometric Analysis

According to the literature review and conceptual framework, three sets of independent variables influence the success of the OPF loans. The formal model underlying the present research can be written as:

$$E(Y|X) = P(Y = 1|X_1, X_2, X_3) = \Phi(\beta_0 + \beta_1X + \beta_2X_2 + \beta_3X_3 + \mu) \quad (1)$$

Table 1 presents the dependent and independent variables for the quantitative analysis in this study. Loan status is the dependent variable, which indicates whether the loan recipients can provide regular monthly repayments to the OPF. The independent variables are related to individual and household characteristics of the loan recipients.

Table 1. Variable descriptions for empirical analysis.

Variable	Name	Description and measurement
Y	Loan status	This is given a value of 0 if the loan is incomplete in terms of irregular payment or default and a value of 1 if the loan is complete in terms of regular payment and has been repaid in full
X1	Vector of borrowers' demographic characteristics	Age, gender, education, marital status, and health status
X2	Vector related to household	Living arrangements, number of households
X3	Vector related to loan	Loan purposes, frequency of loan repayment, sources of payment

Probit regression was used to model the conditional probability function of the successful outcome of OPF loans. The probit model constrains the estimated probabilities between 0 and 1 and relaxes the constraint that the effect of independent variables is constant across different values of the dependent variables. The probit model assumes that while the observed values for the variable Y are 0 and 1, there are unobserved variables that determine the value of Y (Vatter & Nagler, 2018). Since the dependent variable is a nonlinear function of the regressors, the coefficient of X has no simple interpretation. The expected change in the probability that Y = 1 is due to the change in the probability distribution function on the right-hand side of Equation 1. The probit coefficient β_i is the change in probability distribution associated with a one-unit change in X. Although the effect of a change in X is linear, the link between

the distribution function and the dependent variable Y is nonlinear since Φ is a nonlinear function of X . Thus, a multinomial probit was selected among several models available to determine the linkages between the set of explanatory variables described in the table.

5. RESULTS

Data from the field survey were examined, cleaned, and verified for quantitative analysis. A descriptive statistical analysis was used to understand the cross-sectional and demographic profiles of the respondents. This section explains the statistical description and empirical analysis of the data collected.

5.1. Socioeconomic Characteristics of Respondents

Table 2 shows the demographic profiles and loan characteristics of the respondents. After cleaning, data for a total of 547 borrowers were used for the probit regression and descriptive analysis. Among the samples, 39.24% of the borrowers had fully repaid the borrowed money to the OPF fund. The borrowers were predominantly female (64.62%), married (55.37%), and living with at least one family member (87.23%). The average age of the respondents is 70.118, with a manageable health status (64.06%).

Table 2. Descriptive statistics of the variables used.

Variable	Frequency	Percentage
Gender		
Male	202	35.37
Female	369	64.62
Marital status		
Married	309	55.37
Single	15	02.68
Widowed	234	51.93
Living condition		
Living alone	71	12.58
Living with family members	492	87.23
Living with non-family members	1	0.17
Health status		
Good health status	170	29.51
Manageable health status	369	64.06
Poor health status	37	06.42
Loan status		
Regular repayments	245	44.62
Repayment completed	217	39.52
Irregular repayments	87	15.84
Purpose of loan		
Non-business	60	11.56
Continue previous business	374	72.06
New investment	85	16.38

The survey documented three types of loan status, namely completed repayment, normal repayment and no repayment, as the dependent variable. Complete repayment refers to the applicants who had successfully applied for an OPF loan and have repaid the principal amount to the fund within the three years of loan duration. Normal repayment defines applicants who were repaying the loan during the past three years of research (2016–2018) and are making regular repayment to the fund. No repayment refers to applicants who had taken out an OPF loan and were not able to repay the principal amount within the expected time frame or have not repaid regularly within the past three months. The majority of borrowers (44.66%) were making regular repayments, followed by borrowers who had successfully returned the loan (39.24%) and those who did not make regular repayments (16.09%).

5.2 Empirical Results

5.2.1 T-Test Analysis

The differences between the independent variables in Table 3 were calculated using Student's t-test for independent samples. An independent two-sample t-test was used to determine whether the two populations' means of recipients with a good loan status were different from those with a bad loan status. There was a significant difference in these two groups in terms of the purpose for borrowing from the OPF at a 95% significance level (p value < 0.05).

Table 3. T-test analysis for OPF outcome.

Variable	Mean difference	Standard error	CI	T-test	P-value mean diff $\neq 0$
Purpose*	0.108	0.390	(0.030–0.186)	2.729	0.006
Gender	0.038	0.035	(-0.0331–0.107)	1.078	0.281
Living condition	0.019	0.047	(0.072–0.112)	0.418	0.676
Location	0.013	0.033	(-0.052–0.079)	0.412	0.680

Note: * Significant variable.

The group with a normal loan status had a mean of 0.4847 and a standard deviation of 0.0242 for the purpose of borrowing for business investment. On the other hand, the borrowers with a bad loan status had a mean of 0.1428 and a standard deviation of 0.0169 for the purpose of borrowing for business use. There were no significant differences in terms of loan status by gender, borrowers' living arrangements, or whether they are residing in urban or rural areas.

5.2.2 Probit Regression

This research hypothesizes that both individuals and household conditions have an impact on the loan repayment status. The model was estimated with probit regression using the STATA statistical software package. The results are shown in the following table.

Table 4. Probit regression result.

Dependent variable	Coefficient	Standard error	Z	P > z	[95 % Confidence interval]	
Purpose	0.366	0.141	2.591	0.010	0.089	0.643
Gender	-0.052	0.053	-0.987	0.326	-0.156	0.052
Location	-0.054	0.121	-0.456	0.655	-0.292	0.184
Age	0.009	0.012	0.799	0.428	-0.014	0.032
Constant	-0.038	0.859	-0.055	0.964	-1.722	1.642
Log-likelihood	-282.059	Prob > Chi2	0.101			

Overall, the model predicted 1.35% of the sample correctly. The model proximately fit the data, which implies that the independent variables have theoretically meaningful effects on the loan status. The coefficient of purpose is statistically significant at a 5% level.

Table 4 shows the results of the binary probit regression coefficients of factors affecting the success of the OPF loan repayment. From the table, a positive sign on the variable's coefficient indicates that higher values of the variable increase the odds of successful use of credit and vice versa. The model indicates that recipients who borrowed the loan for business purposes increase the probability of repaying the loan regularly. Moreover, an increase in the age of the borrower increases the chance of regular loan repayment. On the other hand, the results show that male recipients living in rural areas have a negative effect on the loan status.

6. DISCUSSION AND POLICY RECOMMENDATIONS

The empirical findings indicate that the purpose for the loan determines the consistency of the OPF loan repayment. This indicates that taking out an OPF loan for business purposes leads to a successful loan repayment rate among older people regardless of their location (urban or rural districts). The probit regression shows that taking a loan for business purposes increases the chance of the loan being successfully repaid (36.6%) compared to other types of loans. Moreover, the purpose of the loan is the only significant factor when the gender, living conditions and age of the borrowers are considered.

The t-test analysis also confirms the result of the probit regression. Hence, it is possible to provide loans to active citizens if they use the seed money to invest in activities that can generate positive income. The OPF committee should set up a screening process for applicants with the purpose of continuing a business or investing in income-earning activities that give returns at least equaling the amount of the principal loan given out to the borrowers. Since the OPF does not charge an interest rate, this will encourage those who are active to take out loans and further encourage truly active senior citizens in enhancing their quality of life.

The results of this study strongly indicate that providing loans as a business purpose for the elderly, rather than just providing welfare relief, can be a policy intervention that enhances active aging among older people in developing countries such as Thailand. According to financial research and policy, credit risk increases with age and income security. The disadvantage of providing credit to the elderly is their inability to repay the loans (Knoll, 2010). However, the older population that needs an income and are still living actively by providing productive labor or with an entrepreneurial mindset still have the intention to take out loans after retirement (Andrews, Clark, & Luszc, 2002). According to Cumming, Vanacker, and Zahra (2021), there are two main types of people who borrow after retirement. The first group is those who continued their self-employment. One reason why they continue to work is that they do not have enough savings for retirement and need to earn money for living. The other reason is that they enjoy working and have many ideas they wish to implement after retiring. The second type of borrowers are those who are newly self-employed after retirement. The reason for this is because retirees have a dream business plan and now have time to pursue their ambitions. Moreover, the labor market is more hostile to the aging population. These borrowers face barriers to entry into the labor market and need loans for capital investment where the exposure to financial risk is minimal (Cumming et al., 2021). However, this group of borrowers needs advice regarding careful planning and must build a sound infrastructure for their business before making further investment.

Many governments, especially in developed countries, provide funding opportunities for active aging (Poscia, Landi, & Collamati, 2015). This incentive is in the form of financial investment and stimulates the elderly who are aging actively to pursue their tentative self-employment idea. The findings from this study also align with the policy of loans for the retired European Union (EU) population (Peterson & Martin, 2015). Microloans are loans that are given to the EU population after retirement. An example from Europe shows that microloans are a potential tool in facilitating entrepreneurship among older people. This tool also reduces the number of illegal loans taken out, debt problems and broken social relationships and is essential for quality of life as elderly people age further. The potential of microloans allows credit to be more accessible and cheaper. If microloans are designed appropriately and are granted continuously, they can remove the disincentive to entrepreneurship. Hence, microloans can work as a signal to retirees that they can still contribute to economic growth. It will also allow older people to stay healthy both physically and mentally. However, microloans should be complemented by training. Other supporting schemes for older people include increasing civic participation, especially related to government incentives for financial investment, providing lifelong learning education, and promoting a healthy lifestyle.

In terms of policy recommendations, if the decision to provide a loan does not consider the purpose of taking loan, this will decrease the well-being of people at a later stage in life. In rural Thailand, the idea of dealing with government bureaucracy or taking out loans is already a fearful prospect for citizens. Hence, the public officers should consider each proposal with care. At the same time, they should not immediately reject applicants who do not get the

loan but instead provide other sources of welfare assistance. Since the loan is provided by the central government, the ease of collaboration and integration in monitoring the welfare for elders can be easily done. In addition, affiliated officers should monitor the performance of the borrowers regularly and provide any necessary assistance for enhancing their business. This assistance can take the form of knowledge sharing, finding new markets for businesses or innovating strategy for increasing returns.

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