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# Financial skill and self-control affecting the saving behaviour of income earners in Thai municipalities

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# **Abstract**

The researcher aimed to examine the saving behaviour of income earners in Thai municipalities using a survey research method. The questionnaires were validated by experts, and data from 400 questionnaires were analysed using multiple regression analysis (including the mean and standard deviation). The results showed that most people had savings, which, if the savers had no main income, would be sufficient to sustain life for less than three months. Also, their incomes were mostly allocated for expenses, with the remainder deposited as savings. The proportion of savings per month was about 5–15%, and the overall purpose of saving money was to provide for old age or retirement. The main factor used to choose a form of savings was the rate of return. The savings trend is likely to continue in the future. The internet was a source of knowledge about saving plans, and most savings were in the form of money deposited with financial institutions. The researcher found that personal factors, such as income and occupation; financial skill factors, such as financial literacy, financial behaviour, and financial attitude; and self-control influenced the saving behaviour of income earners in Thai municipalities with a statistical significance of p-value at 0.01.

Keywords: Financial attitude, Financial skill, Financial behaviour, Financial literacy, Saving behaviour, Self-control.

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# 1. Introduction

Since saving is a national agenda, the Thai government should encourage people to cultivate good saving behaviour and recognise the importance of managing their finances and spending accordingly, enabling them to reduce personal debt and have sufficient savings for retirement [1]. Saving also strengthens community-based financial institutions, which form the financial foundation for citizens [2]. Savings and investment levels can determine economic growth [3] and ensure that Thailand's retirement savings system truly covers both formal and non-formal means for Thai people to benefit from the security and good quality of life in retirement.

The role of savings is vital in a developing country's economy. The rate of economic growth is based on the ability to save above the minimum savings level, thus promoting investment and stimulating economic growth [4]. Public saving only occurs when people are aware of the necessity and there is a surplus of income after consumption. The fundamental problem that humans face from birth onwards is the need to survive. By nature, people are often dissatisfied with their achievements, forcing them to try to do everything better, such as setting aside a portion of their income or reducing their consumption and planning for the future. Saving habits must be cultivated in childhood to ensure comfortable old age [5]. Besides enabling people to prepare for the future, saving is a determinant of economic prosperity for many countries in the world.

Children should learn to save and build stability and prosperity in the future. Those who start saving early will achieve stability and wealth [6]. Saving habits cultivated at a young age have many benefits, such as thrifty attitudes, discipline in spending money, and preparation for the future [5]. Besides being beneficial for individuals, saving is also beneficial for nations, but it can only occur when incomes exceed expenses. Usually, the income of working people is in the form of salary or wages, which are generally used for consumer spending according to each person's lifestyle, but working life is finite and unexpected events, such as sudden unemployment, may result in loss of income. Many people intend to save when they start working and may have different savings objectives, such as saving for education, housing and other assets, or old age. Also, there are various forms of saving, such as depositing cash with a bank or financial institution or taking out life insurance. Some people can save as they wish, but many cannot. Others may save for a certain period, but then abandon or have to discontinue saving for some reason [7]. Saving education has benefits in encouraging people to save continually until it becomes a sustainable behaviour.

Savings are extremely important for people at all levels of society [8]. Money alone is not sufficient; people also need self-discipline to become financially savvy and to demonstrate good financial behavior [9, 10]. Saving behaviour is a behaviour performed by people who allocate some of their income to savings [11], such as by improving their income, reducing their expenses, and slowing down their consumption [12].

Nowadays, many government agencies and private sectors in Thailand are focusing on saving and financial literacy to directly help people solve their financial problems. For example, the Bank of Thailand has established a Financial Consumer Protection Center (FCPC) to disseminate financial knowledge and help people develop accurate financial knowledge, understand different types of risks, and plan their investments appropriately. The FCPC emphasises financial literacy and promotes investment knowledge to provide people with the skills necessary for self-analysis and investment decisions [13].

Saving behaviour is influenced by internal and external factors. Internal factors include learning, motivation, attitude, mood, personality, memory, and perception. External factors include family, reference group, class, society, culture, marketing, and demographic status Manstead [14]. Kamarudin and Hashim [15] found that several factors influenced saving behaviour: financial literacy, parental refinement, and self-control.

In this study, the researcher examined the effects of personal factors, financial skill factors (financial literacy, financial behaviour, and financial attitude), self-control and their effects on the saving behaviour of Thailand's high-income population. Self-control has rarely been used as a factor to study saving behaviour in Thailand and only in the context of crime and unethical behaviour [16].

Various learning materials are now available to help people develop adequate financial skills, enabling them to build security for themselves and their families by managing money effectively and taking responsibility for personal finances. If all families have good financial knowledge and understanding, it can have a positive effect on the overall economy and society of a nation. Therefore, the researcher was interested in studying the saving behaviour of income earners in Thailand to support saving incentives and to provide a model for building sustainable saving habits. The results may also be helpful in formulating ways to promote people's further saving behaviour.

#### 2. Literature Review

# 2.1. Personal Factors

Personal factors, including sex, age, education, occupation, income, and lifestyle, have a great influence on human behaviour [17, 18]. These factors vary from person to person, resulting in different perceptions, attitudes, and behaviours towards spending money [1].

# 2.2. Financial Skill Factors

Financial skill factors comprise financial literacy, financial behaviour, and financial attitudes. Financial literacy can be defined as knowledge and understanding of financial concepts and financial risks, as well as the skills, motivation, and confidence to apply that knowledge to managing money effectively [19], including a variety of financial behaviours to ensure social well-being [20] and contribute to economic security [21]. The development of financial systems began when individuals with the necessary funds demanded stable financial institutions [22], particularly in countries with high levels of financial literacy and relatively high savings. A one-unit increase in the standard deviation for financial literacy increases national savings by 3.6%. Therefore, many countries, especially the United States and the European Union member states, are trying to promote financial literacy at the primary level and organise programmes for adults [23]. Financial literacy is positively correlated with saving behaviour and has the greatest impact on saving behaviour [24], consistent with research by Uddin [25]. Strongly influenced by the concept of financial literacy [26], this study relied on the work of Baidoo, et al. [27]. The findings suggest that financial literacy affects saving behaviour and that people with good financial attitudes have better financial management.

## 2.3. Self-Control

Self-control relates to people's saving behaviour, and those with strong self-control have better saving behaviour. This means that people with good self-control are able to avoid wasteful behaviours and consider choices carefully because they tend to think about the consequences [5]. Also, people with good self-control prioritise needs over momentary desires. When money is received, it is not spent immediately, and a portion is always saved [28]. According to the theory of self-control, parenting during the first 10 years of life has a profound effect on determining levels of self-control [29]. Self-control is a behaviour resulting from self-control learning [30]. Crime is a consequence of an individual's lack of self-control behaviour, and self-control theory has often been applied to studying saving behaviour abroad except in Thailand. Self-control has a significant effect on determining people's saving behaviour [25], which is consistent with research by García and Vila [28].

## 3. Methodology

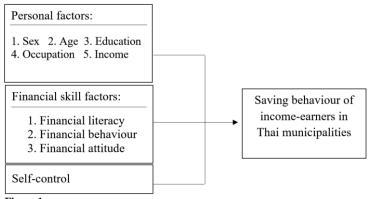
The aim of this research was to study the saving behaviour of income earners in Thailand to provide savings data consistent with the research objectives, conceptual framework, data collection and analysis methods, and statistics, as explained in the following sections.

### 3.1. Research Objectives

The research objectives were to study the characteristics, saving behaviour, and financial skills of income earners in Thai municipalities, and to study the influence of various factors on the savings of those income earners.

## 3.2. Research Conceptual Framework

The researcher applied a conceptual framework to study the saving behaviour of income earners in Thai municipalities, as illustrated in Figure 1.



**Figure 1.** Research conceptual framework.

# 3.3. Research Methods

The populations used in this research were comprised of 50,000 or more people at the municipal level (the local administrative level for large cities), covering 30 places, together with Bangkok and Pattaya, totaling 8,576,444 people. Based on this total population, a representative sample of the entire population was determined using the Yamane's formula [31] at a 95% confidence level and a 5% error value. Based on the calculations, the sample size to be studied was 400 people who submitted questionnaires by mail and online and responded to all questions. The average questionnaire response rate should not be less than 20% [32]. Therefore, to obtain the necessary number of responses, questionnaires were distributed in 2,000 sets using a stratified random sampling process as follows: 1) classifying the population by municipality (30 + 2 locations), determining the sample groups according to the proportion of each municipality, and 3) performing sampling using a simple sampling method. The period of data collection was about 2 months, from June 2022 to July 2022.

## 3.4. Tool Used in the Research

The tool used to collect data for this research was a questionnaire about the factors influencing the savings and saving behaviour of the Thai population. The researcher created the questionnaire based on a review of the relevant literature, divided into four parts as follows: Part 1 requested demographic information about the respondents and consisted of five items, and Part 2 asked general questions about the savings behaviour of the respondents and included nine items. Part 3 used questions to measure the financial skill levels of the respondents based on the Bank of Thailand [33] guidelines for surveying the financial skills of Thai people in conjunction with the National Statistical Office. This part was further divided into three separate sections for financial knowledge, financial behaviour, and financial attitude, and the total 14 questions had both a checklist and a rating scale. Part 4 measured the respondents' levels of self-control using questions drawn from the Self-Control Cognition Questionnaire [34]. The SCCQ is divided into two parts—self-discipline and emotional balance—and the 16 questions all have a checklist and a rating scale. Self-discipline means practising good habits (without anyone having to tell you what to do) and maintaining emotional balance (under self-control) means that the actions of others or adverse situations will not cause you to lose control of your emotions.

#### 3.5. Validation Methods

The final draft of the questionnaire was submitted to five experts in business administration and finance for review and validation. The researcher performed a content validity test to find the index of item objective congruence [35] and then selected appropriate items based on an IOC value of 0.5 or higher. The analysis results showed that the IOC value was 0.732. The researcher tested the resulting questionnaire with 30 trials before collecting the actual data, and the results of the test were used to verify the quality and improve the accuracy using Cronbach's alpha coefficients. The resulting alpha values represented the levels of question stability (reliability  $\alpha \ge 0.7$ ).

#### 3.6. Data Collection

Questionnaires were distributed to income earners in 30 municipalities, together with Bangkok and Pattaya, via direct mailing, an online social media questionnaire, and a questionnaire link on Google Drive. The researcher collected data until the sample contained 400 completed questionnaires.

# 3.7. Statistics Used in the Data Analysis

The researcher used various statistical methods, as follows: 1) analysis of the basic descriptive statistics of the samples to determine the distribution characteristics, such as frequency, percentage, mean, and standard deviation; 2) statistical analysis of the relationships between variables using a Chi-squared test to determine the level of statistical significance at p = 0.05, and Pearson's correlation coefficient analysis to observe the relationships between the variables and consider problems that may be caused by multicollinearity (the correlation value should not be greater than 0.8; Stevens [36]; and 3) hypothesis testing using multiple regression analysis. Before the testing, the tolerance and variance inflation factor (VIF) values were checked according to a tolerance threshold of 0–1 and a VIF  $\leq$  10 to verify that there were no multicollinearity problems. The researcher examined linear relationships between the error values (autocorrelation) using Durbin–Watson statistics, which should be 1.5–2.5 [37].

#### 4. Results and Discussion

This research studied the factors affecting saving behaviour using a questionnaire to collect the research data. Most of the respondents were female (66.00%, 264 people). The ages of the respondents were 31–40 years old (33.75%, 135 people), followed by 20–30 years old (30.25%, 121 people). Most of the respondents had a bachelor's degree (53.75%, 215 people), followed by people with a high school certificate (31.75%, 127 people). Most were traders or had a personal business (31.50%, 126 people), followed by employees of companies, department stores, or private stores (24.25%, 97 people), and civil servants/state enterprise employees (16.25%, 65 people). The average monthly income of most respondents was 10,001–20,000 baht (58.50%, 234 people), followed by 20,001–30,000 baht (25.75%, 103 people).

Regarding saving behaviour data, most respondents (54.25%, 217 people) had savings. Without a main income, how long would those savings be enough to live on? Most respondents could live for less than 3 months (48.75%, 195 people), followed by 3–6 months (30.75%, 123 people). The highest number of respondents allocated their income as savings after deducting expenses (77.25%, 309 people). The proportion of savings per month was 5–15% (71.25%, 287 people), followed by less than 5% (20.75%, 83 people). The majority of respondents saved for retirement (62.25%, 249 people), followed by 29.25% (117 people) who saved for life security. The rate of return was the factor most often used to decide on the form of savings (42.00%, 168 people), followed by the risk level (35.75%, 143 people). The future trend of savings was estimated to be the same for 261 people (65.25%) or a decrease in savings for 87 people (21.75%). Most savings information was found by searching the internet (48.25%, 193 people). Depositing money with financial institutions was the form of saving preferred by most respondents (61.75%, 247 people), followed by buying life insurance policies (34.75%, 139 people).

Three sections of questions measured financial skill levels using a financial literacy score, a financial behaviour score, and a financial attitude score, respectively. To determine their financial skill levels, the respondents were classified by their financial literacy scores. The question that the respondents answered most wrongly was question 1 (i.e. 'Suppose that all brothers and sisters have to wait one year to receive their share of 1,800 baht, and the inflation rate is 3% in the next year. How much money can be used to buy things today?') Most respondents answered incorrectly (64.25%), followed by a second wrong answer (56.72%) to question 3 (i.e. 'Suppose you borrow 500 baht from a friend today, and your friend gives you back 540 baht. In the next year, how much interest will you pay your friend for this loan?). The third wrong answer was to the question, 'Assuming you deposit 1,000 baht into your savings account with 2% interest per year compounded once per year. Do you think that after one year the money in your account will include the interest amount (if you don't deposit or withdraw any money)?' There were 49.27% incorrect answers.

Regarding financial behaviour, 61.25% of respondents compared product descriptions from different companies and service providers before choosing a financial service. Most (47.54% of the respondents) agreed that before you buy something, you should carefully consider whether it is affordable. Most of them (32.75%) agreed that they paid their expenses on time. The majority (39.45%) agreed that they closely supervised their own finances. Also, 71.50% of the respondents faced problems with insufficient funds during the past year, and when they did not have enough money, 60.75% mortgaged their valuables or borrowed from family or friends (39.25%).

Regarding financial attitudes, the majority of the respondents (45.37%) disagreed that they thought about their finances daily, and 47.63% were opposed to spending more than saving for the future. Also, 64.0% of the respondents agreed with setting long-term financial goals and trying to achieve them.

The measure of self-control consisted of two questions regarding self-discipline and emotional balance. The majority of respondents had moderate self-discipline (67.39%). Most respondents agreed with the statement, 'You're good at planning

things carefully' (54.71%). For the statement, 'You can trust that your actions always reflect your promises', most were in the middle (63.15%). For the statements, 'You don't interrupt people while they are speaking and 'You usually spend at least 15–20 minutes a day resting/reviewing/meditating', the majority were again in the middle (43.94% and 41.75%, respectively).

Most respondents had a high level of emotional balance (46.35%). For the statement, 'You don't worry about things you can't control,' the majority (49.35%) agreed. For the statements, 'When faced with a bad situation, you tend to look for the pros and cons' and 'You don't hold onto bad feelings or disappointments for a long time,' the majority (54.75% and 41.72%, respectively) had moderate emotional balance. For the last statement ('You tend to maintain your emotional balance without losing self-control when angry'), most of them were again in the middle (52.15%).

To find the relationship between personal factors and saving behaviour, the researcher did a Chi-squared statistical analysis with a p-value of statistical significance at p = 0.05 and found that personal factors, including monthly income and occupation, had effects on saving behaviour as shown in Table 1 and Table 2, respectively. Other personal factors such as sex, age, and education had no effect on saving behaviour for this study.

**Table 1.**The relationships between personal data and monthly income level affecting the saving behaviour of income earners in Thai municipalities.

Relationship of monthly income level with	$\mathbf{X}^2$	Asymp. sig.
Allocating savings	0.882	0.830
How long will savings last?	58.622	0.000
Income allocation	8.035	0.045
The ratio of savings to monthly income	9.373	0.154
Factors to be considered in deciding a form of savings	6.869	0.333
Savings trends	9.328	0.156

Table 1 reveals how monthly income level significantly affects the saving behaviour of income earners in Thai municipalities, based on the chi-squared statistically significant at the p = 0.05 level, in case of no main income-How long will savings last? and an income allocation because the asymptotic significance (Asymp. Sig.) of the relationship between the monthly income level and saving behaviour was 0.000-0.045, which was less than the 0.05 significance level.

**Table 2.**The relationship between personal data and occupation affecting the saving behaviour of income earners in Thai municipalities.

Relationship of occupation with	$\mathbf{X}^2$	Asymp. sig.
Allocating savings	2.606	0.760
How long will savings last?	90.825	0.000
Income allocation	7.348	0.196
The ratio of savings to monthly income	4.477	0.923
Factors to be considered in deciding a form of savings	9.978	0.442
Savings trends	15.219	0.124

Table 2 shows how occupation significantly affects the saving behaviour of income earners in Thai municipalities by using the chi-squared statistically significant at the p = 0.05 level, in case of no main income-How long will savings last? because the Asymp. Sig. of the relationship between occupation and saving behaviour was 0.000, which was less than the 0.05 significance level.

The results of the analysis and the correlations of financial literacy, financial behaviour, financial attitudes, and self-control with saving behaviour of income earners are presented in Table 3. Table 3 shows that financial literacy, financial behaviour, and self-control were highly correlated with saving behaviour. For financial attitudes, there was a moderate correlation with saving behaviour at a significance level of 0.01. From the results, it can be seen that each independent variable had a relationship value of 0.179–0.789, which did not exceed 0.8, so there was no multicollinearity problem. This indicated that variables could be tested to analyse the influence of independent variables on dependent variables.

**Table 3.**Correlations between financial literacy, financial behaviour, financial attitude, self-control and the saving behaviour of Thai income earners.

Factors	Financial	Financial Self-control		Saving behaviour	
	behaviour	attitude			
Financial literacy	0.693**	0.645**	0.232	0.789**	
Financial behaviour		0.716**	0.179	0.620**	
Financial attitude			0.281	0.499**	
Self-control				0.732**	

**Notes:** \*\*significant at the p = 0.01.

Table 4 shows the results of testing for the influence of the primary variable on the dependent variable. R2 = 59.4% (0.594) indicated that financial skill factors (financial literacy, financial behaviour, and financial attitude) and self-control influenced saving behaviour, and 40.6% of the remaining were influenced by other factors. Also, the independence of the error value from the Durbin–Watson value was 1.782, indicating that the variables were independent of each other according

to the hypothesis test. Self-control, financial literacy, financial attitude, and financial behaviour had a statistically significant influence on saving behaviour at the p = 0.01 significance level.

**Table 4.**Testing results for the influence of the primary variable on the dependent variable.

Factors	В	Std. E	Beta	t	Sig.
Constant	0.617	0.157		5.394	$0.000^{**}$
Financial literacy	0.412	0.043	0.437	7.189	$0.000^{**}$
Financial behaviour	0.211	0.056	0.246	4.036	$0.000^{**}$
Financial attitude	0.354	0.037	0.372	4.751	$0.000^{**}$
Self-control	0.439	0.045	0.450	7.503	$0.000^{**}$
$R^2 = 0.594$ , $F = 205.143$ , $Sig = 0.000$ , $D-w = 1.782$					

**Notes:** \*\*significant at the p = 0.01.

#### 4.1. Discussion

Based on the study of the saving behaviour of income earners in Thai municipalities, some important issues should be discussed as follows. Most of the respondents had savings. Without a main income, the savings would be enough to live on for less than three months. Most respondents allocated their incomes to savings after expenses. The proportion of monthly savings was 5-15%, consistent with Prachumpan [38] study, which found that people of different statuses had different mean scores for saving behaviour for future spending, at a significance level of p=0.05. Factors that influenced savings were income and expenses, and these factors influenced the saving behaviour and future spending of the people in Bangkok at a significance level of p=0.05. The reasons for saving money were primarily retirement and future security, and the rate of return was the most important factor to consider when deciding a form of saving. The future trend of saving was predicted to be the same, and the main source of education and saving information was the internet. The preferred saving form was to deposit money with financial institutions. The results were consistent with a study by Kowhakul [1] in terms of monthly income and occupation affecting saving behaviour, showing that most of the sample had some type of savings account with a commercial bank (either savings or fixed deposits). The savings amount after spending was more than 5,000 baht. The hypothesis testing revealed that personal factors, such as occupation, education level, and income, were related to saving behaviour across all dimensions, except for age, marital status, and expenses which were not related to saving behaviour.

A study of factors affecting saving behaviour showed that financial literacy, financial skills, and financial behaviour influenced the saving behaviour of income earners in Thai municipalities. Therefore, the more financially literate the population, the better their saving behaviour will be. With good financial knowledge, an individual can prioritise the efficient use of financing and plan and manage money effectively. Also, with good financial knowledge, a person will always understand how to invest money wisely and consider profit and loss before proceeding, consistent with a study by Chalimah, et al. [5]. People with good financial knowledge become smart and efficient consumers of their financial resources, can manage their finances well for the present, and can plan their finances appropriately for the future. Financial literacy manifests in savings, investments, loans, and budgeting. It arises when individuals have the skills and abilities to use available resources to achieve their goals [39].

Financial literacy has a great influence on the saving behaviour of Thai people. According to research by Tharanika and Andrew [24], financial literacy has a positive and strong influence on savings. Likewise, a study by Uddin [25] indicated that saving behaviour is heavily influenced by financial literacy. These findings are consistent with this research in the context of income earners in Thailand.

The results also showed that self-control influenced the saving behaviour of income earners in Thai municipalities. The greater the self-control, the better the saving behaviour. Moreover, people with good self-control are able to prioritise needs over momentary desires. Self-control has a strong influence on determining saving behaviour, according to research by Trzcińska, et al. [40], and other research has shown that self-control has a significant positive effect on saving behaviour Mexhuani and Ribaj [4]; Mpaata, et al. [41]. Biljanovska and Palligkinis [42] also claimed that people with strict self-control can save money better.

Based on the research results, it can be concluded that personal factors (monthly income and occupation), financial skill factors (financial literacy, financial behaviour, and financial attitudes), and self-control directly affect the saving behaviour of income earners in Thai municipalities. Therefore, to improve the saving behaviour of Thai people, it is imperative to promote financial skills, instil self-control during the first 10 years of childhood to improve long-term security, and lay the foundations for people to develop saving behaviour in Thailand in the future.

# 5. Conclusion

This research studied the saving behaviour of income earners in Thai municipalities according to various factors. The results showed that personal factors, such as monthly income and occupation; financial skill factors, such as financial literacy, financial behaviour, and financial attitude; and self-control affect the saving behaviour of Thai income earners. This was based on an analysis of the relationships between financial literacy, financial behaviour, financial attitudes, self-control and the saving behaviour of income earners. The research revealed that financial literacy, financial behaviour, and self-control correlate highly with saving behaviour. For financial attitudes, there was a moderate correlation with saving behaviour at a significance level of p = 0.01. The results of the testing for the influence of primary variables on dependent variables showed that self-control, financial literacy, financial attitudes, and financial behaviour had a statistically significant influence on

saving behaviour, respectively, at the p = 0.01 level. Other personal factors, such as gender, age, and education, had no effect on saving behaviour in this study.

# 5.1. Suggestions for Future Research

Other factors affecting saving behaviour should be further investigated so that saving behaviour can be clearly explained, and in-depth qualitative research should be conducted.

## 5.2. New Knowledge and Impact on Society and Community at the Local Level

This research examined the saving behaviour of income earners in Thai municipalities. From the previous research, there was no self-control factor studied affecting saving behaviour in Thailand. Thus, this research studied this self-control factor which is a vital factor for determining saving behaviour and other types of behaviours. It is imperative that all sectors of society, from the family to the national level, become aware of the need to cultivate self-control during the first 10 years of childhood and to develop financial skills to ensure that they lead the country to progress to a high level of financial security.

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