Thai Elder Policy Reception Across Generations

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Abstract

This study investigates how varying age groups perceive information regarding elder policies. Data was gathered from 1,000 residents of Bangkok, Thailand, segmented into age brackets: 21-30, 31-40, 41-50, and 51-60 years old. The research aims to discern if age disparities contribute to distinct attitudes towards elder policies. Findings reveal a trend where younger individuals exhibit lower interest in elder policies compared to older cohorts. Notably, a crucial observation highlights a lack of awareness among soon-to-retire individuals regarding elder policies, signaling a significant concern. Analysis indicates that the primary information source for elder policies across all age groups is television, superseding other mediums like the internet. However, when evaluating comprehension channels, the ratio between television and internet use changes. Additionally, employing an econometric model, the study examines variables impacting post-retirement worries, with factors such as income, education, interest in elder policies, time allocation for policy understanding, marital status, having children, and gender demonstrating statistical significance across all age groups. These findings underscore the significance of these variables in influencing concerns about life after retirement among the Thai population.

Keywords: Elder policies, OLS, Retirement concerns

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Introduction

At the present, the numbers of Thai elder people have continuously been increasing which the ratio is highest among ASEAN member countries. This gives a sign that Thailand is going to be an aging society faster than many countries. For the citizens, they should be able to understand the current situation and know how to make proper plans for their retirement plans. It does not only for themselves, but it also affects to their relatives. This can be seen through the statistics of elder people's income. The main income comes from either their children give or the elder people still have to work after retirement. Therefore, from the statement, the problem of elder people would face is insufficient income to survive after they are retired.

In addition, nowadays, Thai society is approaching to be the aging society due to higher rate of elder people, lower rate of fertility, and increase in life expectancy. In 2035, predictably, 2 out of 10 Thai population will be elder people which is doubled from 2015 (Statista Research Department, 2019). Aging society in Thailand is seen to be worrying. Thailand is a middle-income country. However, to compare Thailand to other countries, especially developed countries, Thailand remains in the low rank of low income and low fertility rate while developed countries have high income and low fertility rate. In 2020, Thailand has fertility rate 1.501 and GDP per capita 7186 US$ (see in the Figure 1).

Figure 1: GDP per capita (current US$) and Fertility rate from 1960 to 2020 (Thailand)

(Source: World Bank, n.d.)

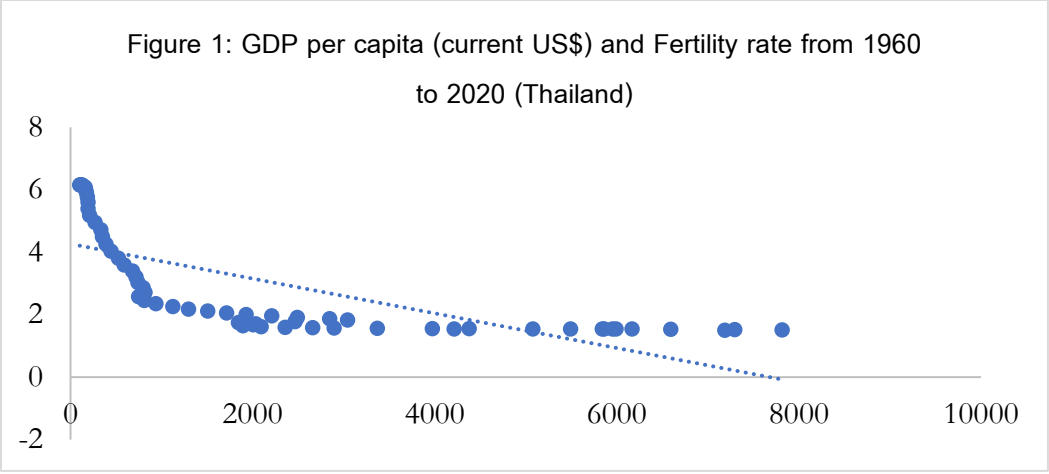
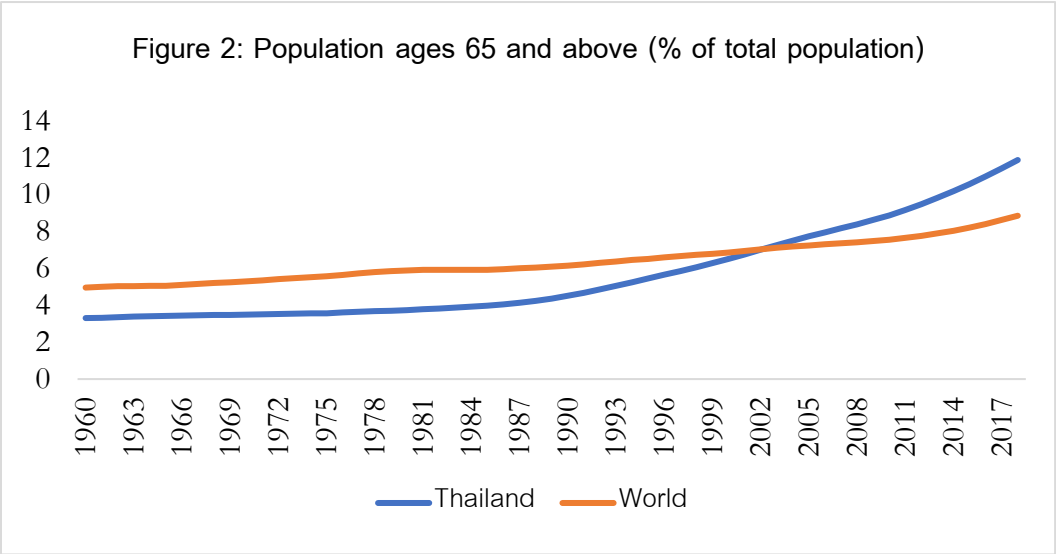


Figure 2: Population ages 65 and above (% of total population)



(Source: World Bank, n.d.)

In addition, Thailand will be aging society because the ratio of elder people has continuously been increasing. According to World Bank (n.d.) in Figure 2, Thailand, after 2002, has the percentage of population ages 65 and above more than the world's average. Therefore, Thailand seems to step faster on having higher elder people ratio than many countries. From this point, aging society may not be an issue that is farm from Thai people to be concerned.

In ASEAN member countries, all countries seem to step in the aging society. In 2018, for percentage of population ages 65 and above, according to World Bank (n.d.), there are Thailand 11.90, Singapore 11.46, Vietnam 7.27, Malaysia 6.67, Indonesia 5.8, Myanmar 5.78, Philippines 5.12, Brunei 4.87 and Cambodia 4.56. It can be seen that Thailand and Singapore have the highest ratio of elder population more than other ASEAN countries. This can be illustrated by the table in Table 1.

Table 1. The increase in numbers of elder people.

Ratio of elder population 65 years old and above to total population				
	5%	7%	9%	11%
Thailand	1993	2002	2011	2018
Singapore	1983	2004	2015	2018
Vietnam	1966	2017	-	-
Malaysia	2011	-	-	-
Indonesia	-	-	-	2011
Myanmar	2014	-	-	-
Philippines	2018	-	-	-
Brunei	-	-	-	-
Cambodia	-	-	-	-

(Source: World Bank, n.d.)

Table 1 also demonstrates that Thailand has stepped to have more than 11 percent of elder people in the first country out of ASEAN member countries. In addition, to compare Thailand and the world's average, Thailand still has a high ratio of elder people. This information, therefore, can be conveyed that Thailand may approach to aging society faster than others. Nonetheless, it comes up with the question that "does Thai citizens know aging society and what they will have to deal with?"

In addition, it seems to be worrying as Vorasiha (2018) demonstrates that retirees may have problems of insufficient savings, no income, debts, and health. In addition, according to National Statistical Office Ministry of Information and Communication Technology (2014), elder people receive their main income from their children 36.7%, elder work 33.9%, government allowance for elder people 14.8%, pension 4.9%, spouse 4.3%, and savings & selling properties 3.9%. More than majority, therefore, relies income on their children and work. This also shows that retirees mostly are unable to survive by themselves, and they will still have to work for obtaining income after retirement.

Table 2: Elder people's annual income in 2014

Income	Male	Female	Total
< 20,000 Baht	17.7%	24.7%	21.6%
20,000 – 39,000 Baht	21.7%	28.2%	25.2%
40,000- 59,999 Baht	18%	19.1%	18.6%
60,000 – 99,999 Baht	18.4%	15.4%	16.7%
100,000-299,999 Baht	18.3%	9.8%	13.7%
> 300,000 Baht	5.9%	2.8%	4.2%
Total	**100%**	**100%**	**100%**

(Source: National Statistical Office Ministry of Information and Communication Technology, 2014)

Table 2 shows that most elder people have annual income less than 40,000 Baht. In other words, their monthly income is less than 3,333 Baht. Chaiyawong and Lueprapai (2011) conclude that elder people face the problems of insufficient income to survive. Their study found that the average monthly income of elder people is 2,000 Baht. However, the average monthly expenditure is 2,250 Baht. The expenditure does not include in health care expenditure. In addition, on the average, male elder people seem to have higher annual income than women elder people.

When it goes back to before being elder people, they were workers working for income. Bank of Ayudhya (n.d.) announces that 38% of people ages from 40 to 60 can accomplish their retirement plan. The main problems they face are insufficient savings and overconfidence.

National Statistic Office Thailand (2018) demonstrates that 72 percent of Thailand saved their income in 2018 which was higher than before. It was only 66 percent in 2016. However, the habits of saving may not be certain (see Table 3).

Although the habits of saving raised, the ability to save money with the certain amount fell. Moreover, the uncertain habits of saving raised. NSO (2018) worryingly announced that 87.2 percent out of total households are unable to live longer than 1 year if they lose their jobs or no longer receive income (see Table 4).

Table 3: Percentage of household saving

Percentage of household saving n = 13,000 households	2018	2016
Percentage		
• People who save money	72.9%	63.7%
• People who do not save money	27.1%	33.3%
Proportion of people who save money		
• Save before spending	16.5%	22.4%
• Spend before save	28.4%	30.3%
• uncertain	28.0%	14.0%

(Source National Statistical Office Thailand, 2016 & 2018)

Table 4: Proportion of households' abilities to spend from their savings

Proportion of households' abilities to spend by their savings n = 13,000 Households		
Time	Numbers of Households	Percentage
Less than 1 year	11,336	87.2%
1 to 5 years	1,196	9.2%
6 to 10 years	325	2.5%
11 to 20 years	78	0.6%
21 to 50 years	39	0.3%
The rest of the life	26	0.2%
Total	**13,000**	**100**

(Source: National Statistical Office Thailand, 2018)

Thus, this paper is intentionally to study and provide how amount of savings, retirement plan, and especially to study that the awareness of Thai people in terms of retirement plan and government policies.

Literature Reviews

Tonam, et al.(2018) have summarized their research that processing government's policy in the same direction altogether would result in effective outcomes. When we consider the Thai economic situation, society, and politics, elder funding by the government is one of the policies that the Thai government should support and consider more. Adjusting this policy can be beneficial to the quality of citizens' lives.

Kumsuchat (2017) says that the health situation of Thai elderly is at a moderate level. Thai elderly has these major health problems: hypertension, diabetes, cardiovascular, mobility disability, hearing problems, and vision disability. The author claims that it is needed from the Thai government to take care of its citizens because the government health care provision has not covered the targeted population. It is important that health policy to help the elderly people should be in many dimensions such as careers for retired people, trained elderly people for being a post hospitalized elderly caretaker, training for village health volunteers, elderly day care center promotion located in local government offices, and promoting the elderly care center. From this research, it can be seen that elder policy is one of many important policies for Thai people. If Thai citizens are well informed and fully understand their rights and coverages, it will be much more beneficial to the citizens. Also, the burden of taking care of elderly people will not be only inherited to their family only because government support will ease all households.

According to Jitapunkul et al.(1993), the demographic change of elderly people ratio results in dependency problems and higher rate of burden of diseases which are related to insufficient social policy. Health care system is required to concentrate more on training of professional staff and carers. Although developing strategies to assist elderly people should be established, developing separate services for elderly people is recommended to avoid, due to high likelihood of producing services of low quality of hospital emphasis.

Sukpaiboonwat (2021) points out that the negative impact of the aging society can result in a high public spending on government pension funds, elderly living allowance, and medical expenditure; these can be a burden to fiscal policy. On the other hand, the positive impacts are the extension of retirement age and lifelong learning.

Narknisorn and Kusakabe (2013) have stated that the fast growth rate of aging society and lower fertility rate, change in roles of employment of woman, migration, and family and social change can be challenging factors to woman because woman's and family's old Thai traditional role is an elder care provider. Although

many scholars and policy makers have tried to make awareness, the Thai National Policy on Aging insists that the main responsibilities belong to the family.

From these literature reviews, author would like to indicate that although there are many scholars who study about elderly people, the main focuses are including government policies, author hence would like to know that one of the many significant factors is understanding policy. This research will ask the interviewees how they receive the information and which channels can make them understand the most.

Methodology

Before indicating the research outcomes, according to the referenced research, previous scholars tried to indicate that elder policies are one of many important policies which is to significantly help elderly people, especially the health care and costs of living support. Author, therefore, believes that knowing elder policy is one of the significant factors to let all people know their rights and know what to do when it turns to everyone's time.

Consequently, the analysis in this research is based on surveyed interviews conducted in 2022 among people whose ages begin from 21 to 60 years old: this is the primary data. The data has been directly collected from people in Bangkok, Thailand. There are 250 people who are 21 – 30 years old, 250 people who are 31 - 40, 250 people who are 41 - 50 and 250 people who are 51 – 60 years old. Therefore, 1,000 people are interviewed for this research in 2022.

According to National Statistical Office Thailand (2021), the latest data of total people who live in Bangkok is 5,527,994. By focusing on the people who are in the age rage of this study, it is approximately 3,216,970. In order to find the proper numbers of sample which are suitable to collect the data, author sues Yamane's formula in the equation below.

$$n = N/1 + N(e)^2 \quad (1)$$

This equation is where n is the sample size that author should have collected. N is the population size, and e is the level of significance (precision). To put it in a simple way, if author set the significance: at 10%, n is 99.99 samples, at 5%, n is 399.95 samples, at: 1%, n is 9,969.01 samples. From the result, author chooses to collect the samples at 5% (University of Florida, 1992).

Author has asked interviewees about their personal information, and especially how do they perceive the elder policies, the question will be explained in the result and discussion section. The method of analysis will be based on the statistical results from survey that author has collected before analyzing. In addition, author also adds the econometric analysis to show how people's personal options and information related to elder policy. The econometric model (be model 1) can be explained as follows:

$$LBWLAR_i = \beta_0 + \beta_1 AGE_i + \beta_2 INC_i + \beta_3 EDU_i + \beta_4 POL_i + \beta_5 TIME_i + \beta_6 MAR_i + \beta_7 CHILD_i + \beta_8 GEN_i + \varepsilon_i \quad (2)$$

These variables are fully named as:

$LBWLAR_i$ is the level of being worried with life after retirement.

AGE_i is the age of interviewees.

INC_i is interviewees' personal income.

EDU_i is the education background of interviewees.

POL_i is as if the interviewees pay attention to elder policies.

$TIME_i$ is the time spending on elder policies per month.

MAR_i is the marriage status of interviewees.

$CHILD_i$ if the reviewees already have a child under their care.

GEN_i is the gender of interviewees.

To explain the data inside of each variable. In this model, author sets the level of being worried with life after retirement $LBWLAR_i$ as a dependent variable. The value of this variable can be from 0 to 3 where 0 means no worry, 1 means worried a little, 2 means feeling neutral on the life after retirement, and 3 means the interviewees are concerned on the life after retirement. Next, the personal information of interviewees is: AGE_i is interviewees' age when answering the survey, INC_i is interviewees' personal income, EDU_i is the education background of interviewees. There are various levels of education, author simplifies the level of education with 0 and 1 value where 0 means the education background is lower than bachelor's degree, and 1 means the interviewees at least hold a bachelor's degree. POL_i is if the interviewees are interested in elder policies, or they pay attention, keep up to date to the elder policies where 0 means not interested, and 1 means interested. $TIME_i$ is the time spending on elder policies per month of interviewees. MAR_i is the marriage status of interviewees where 0 means the interviewees ae single, and 1 means they are already married. $CHILD_i$ is to ask the reviewees that they already have had a child under their care or not where 0

means without a child and 1 means having at least 1 child. The last variable is GEN_i which is the gender of interviewees where 0 is a woman and 1 is a man.

Moreover, author also builds another model (model 2) in order to see how well interviewees, know about elder policies, if they know, will they be worried with their life situation after retirement or not. The model 2 adds 3 more variables into the model.

$$LBWLAR_i = \beta_0 + \beta_1 AGE_i + \beta_2 INC_i + \beta_3 EDU_i + \beta_4 POL_i + \beta_5 TIME_i + \beta_6 MAR_i + \beta_7 CHILD_i + \beta_8 GEN_i + \beta_9 POL1_i + \beta_{10} POL2_i + \beta_{11} POL3_i + \varepsilon_i \quad ...(3)$$

The previous variables are the same, but the added 3 variables are $POL1_i$ to $POL3_i$ are the elder policies. If interviewees do not know, the value is 0, and if they know, the value is 1.

3 main questions that author asked interviewees about elder policies (from $POL1_i$ to $POL3_i$) 1. Creating collateral in the elder people. The term collateral means “something provided to a lender as a guarantee of repayment”. This can be such as pension funds, social security, and subsidies for employment loss. 2. Supporting the elderly to participate in society means elder people can participate in the community by getting another job after retirement or knowing some projects of Thai government to support elderly people who have retired. 3 Creating ideas for the community to recognize the elder people means that do interviewees see some concrete things that Thai government has done in their community. For example, health care check-up for elder in their community, or it is also related to any activities that Thai government tries to reach elderly people in their community.

Based on model 1 and 2, the surveyed data will be used with Ordinary Least Square (OLS) to find the regression result.

Research Result and Discussion

Regression Result

Before explaining the result, in this part, there will be descriptive statistics explaining the data that author collected, and then there will be an analysis of regression result and the questions about elder policies.

Table 5: Descriptive Statistics

Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
LBWLAR	1000	1.916	.79	0	3
AGE	1000	40.5	11.549	21	60
INC	1000	15222.2	4840.584	5000	20000
EDU	1000	.705	.456	0	1
POL	1000	.747	.435	0	1
TIME	1000	25.118	13.696	15	60
MAR	1000	.579	.494	0	1
CHILD	1000	.511	.5	0	1
GEN	1000	.391	.488	0	1
POL1	1000	.944	.230037	0	1
POL2	1000	.914	.280504	0	1
POL3	1000	.89	.313046	0	1

After personal information of interviewees were collected (1,000 people in total), we can show the income by ages in Figure 3.

Figure 3: Income by ages

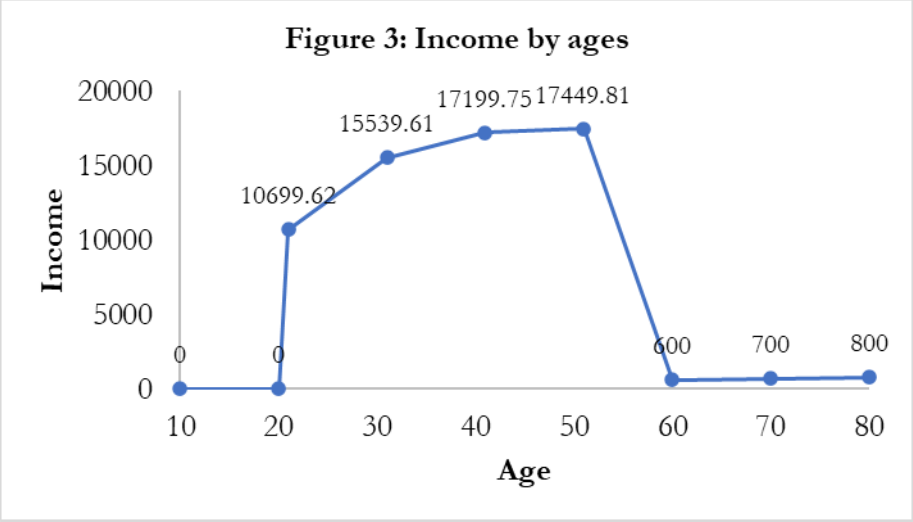


Figure 3 demonstrates the income on average by age rage. After retirement, people can at least get some income support from the government at least 600 bath, and the growth of income will increase by age as government policy states (Ekachai, 2023).

Table 6: Income and Growth Rate

Age	Income on average	%Growth
21-30	10,699.62	-
31-40	15,539.61	45.23%
41-50	17,199.75	10.68%
51-60	17,449.81	1.45%
> 60	600	-96.56%

Notices:

1.The survey asked interviewees to select their income A) less than 5,000 Baht B) 5000-9,999 Baht C) 10,000-14,999 Baht D) 15,000-19,999 E) More than 20,000 Baht.

2.Numbers of interviewees are not equally interviewed by ages where there are 250 interviewees age 21-30, 250 interviewees age 31-40, 250 interviewees age 41-50, and 250 interviewees age 51-60.

Figure 3 and Table 6 show that the income cycle people aged 21-30 and 31-40 income can be increased rapidly in this rage about 45 percent growth. Next in the rage 31-40 and 41-50, their income increases about 10 percent. After that, when they almost get retired. Their income seems to be stable similarly to previous rage (1 percent increases). When thy get retired, without provident fund, and other financial sources, they receive elderly fund stated at 600 Baht (the amount of 600 is fund by Thai government) This change shows the rapid change -96 percent.

Table 7: Linear Regression (Model 1)

	(1) LBWLAR (overall)	(2) LBWLAR (21-30)	(3) LBWLAR (31-40)	(4) LBWLAR (41-50)	(5) LBWLAR (51-60)
AGE	.006***	-.004	-.001	-.011*	.017***
	(.001)	(.005)	(.005)	(.006)	(.005)
INC	0***	0***	0***	0***	0**
	(0)	(0)	(0)	(0)	(0)
EDU	.183***	.589***	.126**	-.355***	.213***
	(.029)	(.055)	(.054)	(.062)	(.058)
POL	.987***	.973***	.431***	.845***	1.038***
	(.031)	(.051)	(.064)	(.074)	(.077)
TIME	.023***	.025***	.025***	.027***	.012***
	(.001)	(.002)	(.002)	(.002)	(.002)
MAR	-.069*	-.109*	-.43***	-.236**	.401***
	(.04)	(.063)	(.08)	(.112)	(.124)
CHILD	.064	.092	.168**	.254**	-.272**
	(.042)	(.091)	(.068)	(.117)	(.117)
GEN	-.021	-.042	-.072**	-.072*	.35***
	(.019)	(.031)	(.03)	(.037)	(.057)
Constant	.106**	.139	-.619***	.024	-.606**
	(.046)	(.14)	(.202)	(.325)	(.296)
Observations	1000	250	250	250	250
R-squared	.873	.902	.912	.886	.902

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

Table 8: Linear Regression (Model 2)

	(1) LBWLAR (overall)	(2) LBWLAR (21-30)	(3) LBWLAR (31-40)	(4) LBWLAR (41-50)	(5) LBWLAR (51-60)
AGE	.004***	-.006*	-.001	-.008	.017***
	(.000)	(.084)	(.767)	(.166)	(.001)
INC	0**	0	0***	0***	0**
	(.017)	(.719)	(.000)	(.000)	(.010)
EDU	.101***	-.009	.077	-.326***	.208***
	(.000)	(.891)	(.186)	(.000)	(.000)
POL	.938***	.965***	.476***	.862***	1.023***
	(.000)	(.000)	(.000)	(.000)	(.000)
TIME	.024***	.024***	.025***	.027***	.011***
	(.000)	(.000)	(.000)	(.000)	(.000)
MAR	-.091**	-.100**	-.410***	-.299***	.409***
	(.015)	(.036)	(.000)	(.008)	(.000)
CHILD	.074*	.101	.169**	.316***	-.279**
	(.062)	(.142)	(.011)	(.007)	(.015)
GEN	-.007	.019	-.080***	-.058	.328***
	(.662)	(.417)	(.007)	(.115)	(.000)
POL1	.392***	.399***	.328*	.305**	.030
	(.000)	(.000)	(.050)	(.013)	(.806)
POL2	.053	.607***	-.044	.045	-.286***
	(.472)	(.000)	(.808)	(.741)	(.006)
POL3	.004	.012	-.085	-.166	.239***
	(.943)	(.931)	(.389)	(.135)	(.001)
Constant	-.188***	-.225**	-.606***	-.198	-.625**
	(.000)	(.042)	(.002)	(.551)	(.039)
Observations	1000	250	250	250	250
R-squared	.886	.944	.917	.890	.906

Standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

The regression analysis yields result across five distinct columns, delineating various age groups (21-30, 31-40, 41-50, and 51-60) and their perspectives on retirement concerns.

In Model 1 (Table 7), across 1,000 samples, several factors significantly influence post-retirement worries. Age (AGE), income (INC), education (EDU), understanding of elder policies (POL), and time spent contemplating policies (TIME) positively impact concerns, while marital status (MAR) lacks significance. However, the impact varies across age groups.

For AGE, a positive coefficient indicates increased worry with advancing age, notably prominent in the 51-60 age group, suggesting heightened concerns among older individuals.

INC exhibits a positive association universally, indicating higher incomes correspond to increased worries about elder policies post-retirement.

EDU reflects a trend where those with at least a bachelor's degree express greater concerns compared to those without higher education.

POL demonstrates a positive correlation across all age brackets, particularly pronounced in the 51-60 group, indicating heightened sensitivity to elder policies among older individuals. Surprisingly, the 21-30 age group also shows substantial concern, suggesting younger generations are attentive to elder policy matters.

TIME displays a consistent positive relationship across all groups, implying increased worry with more time spent contemplating elder policies.

MAR's negative coefficient implies married individuals worry less about post-retirement life, except for the 51-60 group, where worries persist regardless of marital status.

CHILD reveals a positive relationship overall, except for the 51-60 group, aligning with Thai cultural beliefs of caring for aging parents, indicating reduced worries if they have children.

GEN exhibits non-significance overall, except for the 51-60 age group, where men express heightened worries compared to women.

In Model 2 (Table 8), among three policies, the "creating collateral" policy attains statistical significance. Notably, when individuals cease earning as they did before retirement, understanding their rights to government funds becomes a primary concern.

These findings underscore age-specific variations in retirement concerns and emphasize income, education, policy understanding, and time spent contemplating policies as pivotal factors shaping post-retirement worries among Thai individuals.

Conclusion

This article presents findings from a survey involving 1,000 respondents, with the author focusing on two primary objectives. Firstly, the author aims to gauge individuals' concerns about life after retirement through regression analysis, alongside exploring their awareness of elder policies and the channels through which they acquire this knowledge. The regression analysis delineates two models, revealing several significant factors influencing post-retirement worries, including age, personal income, educational background, interest in elder policies, and time allocated for understanding them. Conversely, marital status emerges as a negative significant factor, while having at least one child and gender prove insignificant. Moreover, the study investigates age disparities by categorizing respondents into 10-year age brackets from 21 to 60 years old, uncovering that younger individuals may exhibit lower awareness or attention toward elder policies compared to older counterparts. Across all demographics, television serves as the primary source of information on elder policies.

References

Ekachai, S. (2023). Outrage over old-age allowance cut. Retrieved from https://www.bangkokpost.com/opinion/opinion/2634277/outrage-over-old-age-allowance-cut.

Bank of Ayudhya. (n.d.). 62% of Thais plan to retire wrongly Are you ready?. Retrieved from https://www.krungsri.com/bank/th/planyourmoney/must-stories/life-plan/retirement-failure-solution.html

Chaiyawong, A., & Lueprapai, S. (2011). Expenditure Analysis of Benefits Welfare for the Elderly. *Local Administration Journal, 4*(1), 24–31. Retrieved from https://www.tci-thaijo.org/index.php/colakkujournals/article/view/88332

Jitapunkul, S., Bunnag, S., & Ebrahim, S. (1993). Health Care for Elderly People in Developing Countries: A Case Study of Thailand. *Age and Ageing, 22*(5), 377-381. Retrieved from https://academic.oup.com/ageing/article-abstract/22/5/377/35465?redirectedFrom=fulltext

Kumsuchat, S. (2017). Health Problems and Health Care Needs among Thai Elderly: Policy Recommendations. *Journal of Health Science, 26*(6), 1156–1164. Retrieved from https://thaidj.org/index.php/JHS/article/view/1363

Narknisorn, B., & Kusakabe, K. (2013). Issues challenging future Thai elder care by women and family. *International Journal of Sociology and Social Policy, 33*(1), 21-32. Retrieved from https://www.emerald.com/insight/content/doi/10.1108/01443331311295154/full/html

National Statistical Office Ministry of Information and Communication Technology. (2014). The 2014 Survey of the Older Persons in Thailand. Retrieved from http://service.nso.go.th/nso/nsopublish/themes/files/elderlyworkFullReport57-1.pdf

National Statistical Office Thailand. (2016). Household Expenditure and Household Income. Retrieved from http://www.nso.go.th

National Statistical Office Thailand. (2018). Household Expenditure and Household Income. Retrieved from http://www.nso.go.th

National Statistical Office Thailand. (2018). Household Expenditure from 2009 to 2018. Retrieved from http://www.nso.go.th

National Statistical Office Thailand. (2021). Population from registration classified by age group Regions and Provinces 2012 – 2021. Retrieved from http://www.nso.go.th

Statista Research Department. (2019). Share of aging population Thailand 2015-2035. Retrieved from https://www.statista.com/statistics/713667/thailand-forecast-aging-population/

Sukpaiboonwat, S. (2021). International Conference on Economics, Management & Technology 2019. In Bridging Entrepreneurship and Social Innovations. Neu-Ulm. Retrieved from https://books.google.co.kr/books?hl=th&lr=&id=9rE6EAAAQBAJ&oi=fnd&pg=PA121&dq=Thai+elderly+policy&ots=1P6vUco8lm&sig=1DxJ-VW5vx_lXPiat0ceBrkh8Zg&redir_esc=y#v=onepage&q=Thai%20elderly%20policy&f=false

Tonam, B., Posing, P., & Krittiyachot, C. (2018). The policy implementation of cash allowance for the elderly. *Sisaket Rajabhat University Journal, 12*(3), 149–158. Retrieved from https://so05.tci-thaijo.org/index.php/sskrujournal/article/download/149108/109522/

University of Florida. (1992). Determining Sample Size. Retrieved from https://www.tarleton.edu/academicassessment/documents/samplesize.pdf

Vorasiha, P. (2018). Life After Retirement: Experiences of Elders in Thailand. *Research and Development Journal Suan Sunandha Rajabhat University, 10*(1), 201-215. Retrieved from https://www.tci-thaijo.org/index.php/irdssru/article/view/133224

World Bank. (n.d.). Population ages 65 and above (% of total population). Retrieved from https://data.worldbank.org/indicator/SP.POP.65UP.TO.ZS