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Saving and Dissaving Behaviour in an Aged Society

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Abstract

This study examines saving and dissaving behaviors across different age groups and generational cohorts in Thailand, using nearly three decades of repeated cross-sectional data from the Thai Household Socio-Economic Survey (HSES). The findings reveal a clear hump-shaped life-cycle pattern in saving behavior, with savings peaking between the ages of 56 and 65, slightly beyond traditional working life. Importantly, wealth accumulation remains positive even into later life stages, suggesting the influence of precautionary motives, cultural bequest norms, and limited annuitization options. Generational comparisons show that Baby Boomers and Generation X consistently save more than Generation Y, reflecting differences in economic experiences and structural opportunities across cohorts. The study underscores the impact of economic experiences and life stages on saving behavior. These findings highlight the critical interplay of temporal, demographic, and cohort effects, offering valuable insights for policymakers seeking to promote financial resilience and security in an aging society.

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Keywords: Household behavior, Household saving, Lifecycle, Age, Cohorts

JEL Classfication: D10, D14, E21, J11

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Introduction

The dynamics of saving behavior have long been central to understanding economic stability and growth, particularly in societies undergoing rapid demographic transitions. Saving, traditionally defined as the difference between income and consumption, serves as a crucial indicator of how households accumulate, preserve, and utilize wealth over their life cycles. The life-cycle hypothesis (LCH), introduced by Modigliani and Brumberg (1954), posits that individuals seek to smooth consumption throughout their lives, saving during their working years to finance consumption during retirement. While this hypothesis provides a robust theoretical framework, empirical studies have revealed substantial deviations from its predictions, especially in the context of aging societies (Banks & Crawford, 2022; Beblo & Schreiber, 2022; Chen & Zhang, 2024; Karagöz, 2024). Gibson and Scobie (2001) also emphasize the importance of distinguishing saving patterns across age cohorts to uncover behavioral nuances that are often masked in aggregate data. These findings underscore the need for localized and context-specific investigations to better understand how saving and dissaving behaviors evolve over time, particularly in countries experiencing rapid demographic shifts.

Thailand, a rapidly aging society, offers a compelling case study for exploring saving behaviors across different age cohorts. With a life expectancy of 75 years reported in 2019 and projections suggesting that individuals born in 2016 may live up to 98 years, Thailand is transitioning into an aged society faster than many developed nations. According to the World Bank (2016), by 2035, over 20% of Thailand's population will be aged 65 or older, officially making it a hyper-aged society. What sets Thailand apart is that it will be the first developing country to reach this demographic milestone, unlike high-income countries such as Japan, Germany, or the United States. This accelerated aging process presents unique challenges, including a declining labor force, slower economic growth, and increased fiscal pressures on government programs. Furthermore, Thailand's relatively weak social safety nets and limited pension coverage exacerbate these challenges, leaving many elderly individuals financially vulnerable and reliant on their own savings or familial support.

The weakening of traditional family support systems compounds the financial insecurity faced by Thailand's aging population. Historically, extended families served as the primary safety net for elderly individuals. However, data from the Thailand Development Research Institute (TDRI) reveal a sharp decline in such arrangements—from 80% of individuals aged 60 or older living in extended families 30 years ago to only 49% in 2019. Additionally, only 35% of elderly individuals now receive financial support from their children, a figure expected to drop further as fertility rates

continue to decline. Fertility rates in Thailand have fallen from 1.4 children per family to just 0.5 in recent years, underscoring the diminishing role of intergenerational support. Compounding this issue, the universal social welfare scheme for elderly citizens provides only 500 THB per month, a sum grossly insufficient to meet even basic living expenses. In this context, understanding saving and dissaving behaviors has become critical to addressing the financial challenges of Thailand's aging population and to promoting greater financial independence among retirees.

This study seeks to explore saving and dissaving behaviors in Thailand to address critical gaps in the literature and provide actionable insights for policymakers. Specifically, the study investigates how wealth evolves during old age, identifies the areas where wealth deteriorates most significantly, and evaluates whether these patterns align with predictions of economic theories such as the LCH. The key research question guiding this study is: How do saving and dissaving behaviors differ across age cohorts in Thailand, and what factors contribute to these variations? Additionally, this research examines whether cultural and contextual factors unique to Thailand, such as traditional views on bequests and family interdependence, influence saving patterns differently from those observed in Western contexts. Horioka (2014) highlights that Eastern cultures often prioritize intergenerational financial support, contrasting with the more individualistic saving behaviors observed in Western societies. Understanding these dynamics in Thailand, a country undergoing rapid socio-economic transformation, is essential for designing effective policies to support its aging population.

This study analyzes saving and dissaving behavior across household heads of different age groups and generational cohorts using repeated cross-sectional data from the Thai Household Socio-Economic Surveys (HSES). While true cohort analysis is not employed, the stratification by age and generation allows robust examination of life-cycle saving patterns and generational differences over time. This approach enables insights into how demographic and socio-economic shifts influence household financial behaviors, even without longitudinal tracking of the same households.

Unlike the synthetic cohort methodology used by Gibson and Scobie (2001), which tracks average outcomes across cohorts constructed from repeated cross-sections to approximate longitudinal behavior, this study focuses on cross-sectional stratification at each survey wave. While synthetic cohort analysis provides valuable estimates of cohort-specific trajectories, it relies on strong assumptions about cohort stability and minimal migration or attrition effects. In contrast, the repeated cross-sectional approach adopted here offers a clearer and less assumption-dependent snapshot of saving behaviors across age and generational groups at different points in time.

Although this method cannot directly observe intra-cohort evolution, it mitigates concerns over potential cohort contamination and allows a more transparent analysis of demographic and structural shifts influencing saving behavior in Thailand's rapidly aging society.

From a theoretical perspective, this study contributes to the ongoing debate regarding the LCH and its applicability in non-Western contexts. While the LCH predicts that wealth peaks just before retirement and gradually declines thereafter, empirical evidence often contradicts this pattern (Banks & Crawford, 2022; Beblo & Schreiber, 2022; Chen & Zhang, 2024; Karagöz, 2024). Studies in developed countries have shown that retirees decumulate wealth more slowly than predicted due to factors such as lifetime uncertainty, risk aversion, and bequest motives (Yaari, 1965; Hurd, 1989). These deviations highlight the importance of incorporating behavioral economics into the analysis of saving behaviors. For instance, hyperbolic discounting, which leads individuals to prioritize immediate consumption over long-term savings, has been identified as a key factor influencing saving behaviors in various contexts (Thaler, 1994). Understanding whether such behaviors are culturally specific or universally applicable is crucial for extending the theoretical framework of the LCH.

This research also has significant policy implications. Thailand's current pension system, characterized by minimal coverage and inadequate benefits, places a growing fiscal burden on the government. With over 5 million elderly citizens receiving monthly cash transfers, the program costs more than 30 billion THB annually—a figure that is unsustainable given the country's aging population and economic constraints (TDRI, 2019). Without reforms to encourage greater financial independence among the elderly, Thailand's economic growth could decline by as much as 0.8% annually. Insights from this study could inform the design of targeted interventions to promote retirement savings, improve the effectiveness of social welfare programs, and mitigate the financial vulnerability of aging populations. For example, understanding cohort-specific saving behaviors could guide the development of financial education programs, tax incentives, and other measures aimed at increasing savings rates among younger and middle-aged cohorts.

In summary, this research offers a comprehensive examination of saving and dissaving behaviors in Thailand's aging society. By combining theoretical insights with empirical analysis, it aims to provide actionable recommendations for policymakers and expand the academic understanding of economic behaviors in aging societies. As Thailand navigates its demographic transformation, this study seeks to illuminate strategies for ensuring financial security and economic resilience in the face of unprecedented challenges.

Literature Review

The dynamics of saving and dissaving behaviors have been extensively studied through the lens of the Life-Cycle Hypothesis (LCH), introduced by Modigliani and Brumberg (1954). The LCH posits that individuals aim to smooth consumption over their lifetime by saving during their working years and dissaving in retirement. While the hypothesis provides a robust theoretical framework, empirical evidence has often highlighted deviations from its predictions, particularly in aging societies. Studies such as Hausman and Paquette (1987), Bernheim (1992), and Banks et al. (1998) have shown that under-saving is a common issue, as many individuals fail to maintain consistent consumption levels throughout their retirement. These findings suggest that saving behaviors are influenced by factors beyond the rational decision-making assumed in the LCH.

Emerging markets in Southeast Asia have interesting characteristics and differences that are worth investigating. Firstly, its demographical difference, majority of the population still earn their income from the agricultural sector which make the life time income more difficult to predict. Furthermore, Thailand, as a rapidly aging society, presents a compelling case for examining saving and dissaving behaviors across age cohorts. The weakening of traditional family support systems—evidenced by a decline in extended family arrangements and intergenerational financial transfers—has profound implications for the financial security of the elderly. Data from the Thailand Development Research Institute (TDRI) highlights these trends, with only 49% of individuals aged 60 or older living in extended families as of 2019, compared to 80% three decades ago. Furthermore, fertility rates have dropped from 1.4 children per household to just 0.5, reducing the capacity for familial financial support. These changes underscore the importance of understanding how saving behaviors differ across age cohorts and the factors driving these variations. Secondly, some empirical evidence suggests that emerging markets have relatively higher saving rates than in developed countries (Wen, 2010; Ferrucci and Miralles, 2007). Hence, these differences of characteristics between emerging markets and developed markets enable us to test the inconclusive evidence on savings.

Gibson and Scobie (2001) provide a significant contribution to understanding saving behavior by emphasizing the need to analyze saving patterns across age cohorts rather than relying solely on aggregate data. Their study on New Zealand highlights how different birth cohorts exhibit distinct saving and dissaving behaviors due to the economic and policy environments they experienced during their peak earning years. For example, cohorts exposed to more favorable economic conditions and generous social welfare systems may display lower lifetime savings rates compared

to those who faced economic uncertainty or limited state support. The cohort approach allows researchers to disentangle the effects of age, period, and cohort on saving behaviors, revealing nuanced patterns often obscured in aggregate data. While Gibson and Scobie (2001) employ synthetic cohort analysis—tracking hypothetical cohorts across repeated cross-sections—this study instead uses repeated cross-sectional stratification by age and generation without constructing synthetic panels. Although less precise in capturing life-cycle effects for the same individuals, this approach remains valuable in revealing generational heterogeneity in saving behavior, especially in the absence of true longitudinal data.

The inclusion of lifetime uncertainty and bequest motives further extends the scope of the LCH. Yaari (1965) and Davies (1981) argue that individuals often save more than predicted by the LCH due to the risk of outliving their assets. Mortality risks, which increase with age, lead to higher discount rates and accelerated consumption among the elderly (Frederick et al., 2002). However, socio-economic disparities complicate this dynamic, as wealthier individuals tend to live longer and exhibit different saving trajectories compared to their less affluent counterparts (Attanasio and Hoynes, 2002; Hurd, 2002). Recent evidence also reveals considerable heterogeneity in elderly saving behavior across countries and cohorts. For instance, Banks and Crawford (2022) show that in the UK, while median wealth of retirees is stable, the distribution is highly unequal, and many households fail to decumulate wealth as predicted, partly due to precautionary motives and housing-related constraints. Similarly, Beblo and Schreiber (2022) find that in Germany, elderly households adjust leisure and housing consumption more than financial assets in response to retirement, suggesting that saving patterns may be influenced by broader lifestyle transitions. In China, Chen and Zhang (2024) document strong cohort differences in savings among older couples, with newer cohorts exhibiting higher savings due to pension reforms and changing expectations about familial support. From a macroeconomic perspective, Karagöz (2024) demonstrates a significant negative long-run effect of population aging on aggregate savings in Türkiye, highlighting how demographic shifts can reshape the national saving trajectory. Together, these studies reinforce the importance of contextual and cohort-specific factors, such as institutional settings, public pensions, and family dynamics, in shaping elderly saving behaviors, often in ways that diverge from the standard LCH predictions.

Cultural norms and intergenerational dynamics, as discussed by Horioka (2014), add another layer of complexity to saving behaviors in Thailand. Horioka's work emphasizes the role of cultural factors in shaping saving patterns, particularly in Eastern societies where familial and altruistic motives play a significant role. In Thailand, these cultural norms have traditionally encouraged intergenerational financial transfers and bequests, with parents often saving to provide for their

children and future generations. However, as family structures evolve and fertility rates decline, these traditional motives may weaken, leading to shifts in saving behaviors. Horioka's findings suggest that while altruistic saving motives remain strong in Eastern societies, they are increasingly influenced by economic pressures and changing social norms. An intentional bequest reduces consumption throughout retirement years lead to more wealth than standard life-cycle model predicted at every age. In the model, Hurd (1989) further assumes that the marginal utility of leaving a bequest is constant. This is inconsistent with most of the actual bequest motive that arises from the altruism to the next generation. Laitner and Juster (1996) provide empirical evidence that planned bequests are indeed larger for parents who have children with relative low lifetime earnings. Empirical evidence supporting these models are still limited as Hurd (1989) tried to fit the models with actual data and found that individuals with and without children behaviour are no different. This highlights the need to explore how cultural and economic factors interact to shape cohort-specific saving behaviors in Thailand.

The study of saving and dissaving behaviors in Thailand also has significant policy implications. The country's pension system, characterized by minimal coverage and inadequate benefits, places a growing fiscal burden on the government. With over 5 million elderly citizens receiving monthly cash transfers of 500 THB, the program costs over 30 billion THB annually and remains unsustainable in the face of demographic challenges (TDRI, 2019). Understanding cohort-specific saving behaviors can inform the design of targeted interventions, such as financial education programs, tax incentives, and pension reforms, to promote financial independence among the elderly.

In summary, this literature review highlights the need for a localized examination of saving and dissaving behaviors in Thailand. By integrating theoretical insights from the LCH with the cohort analysis approach of Gibson and Scobie (2001) and the cultural perspectives of Horioka (2014), this study aims to uncover how these behaviors differ across age cohorts and the factors contributing to these variations. Such an analysis is critical for addressing the financial vulnerabilities of Thailand's aging population and for developing policies that ensure economic resilience and security.

Data Description

In this section, we discuss the data source and how we have modified the data to obtain the interested variables, e.g., saving and income, as well as the scope of the study. We apply data from the Thai HSES organized by National Statistical Office (NSO). To address our main objectives,

the study covers almost 30 years (from 1994 to 2021) so that we can observe the saving patterns of three different generations, namely, Baby boomers, Gen X, and Gen Y.

Each HSES consists of several records, which contains a similar set of information, such as, socioeconomics, financial incomes, and consumptions. Questions are listed in each record to obtain intended information. The complication process of data manipulation in this study is in dealing with the different HSES forms across, and hence, data recorded, over a long-time horizon. Variables appear in the HSES with different names, records, and types, e.g., from categorical to continuous.

Besides, some procedures of data manipulation are required to obtain empirical variables. All related variables are provided in Table 1 as follows:

Table 1: The list of related variables applying in the study.

Variable	Description
saving	Financial income – (Financial expenses – Vehicle purchases)
fin. income	Total financial income
fin. exp.	Total financial expense
year	Year covering the study period
region	Domestic regions in Thailand
area	Dummy variable indicating municipal areas.
nactive	Number of household members being labour force active.
hhsize	Household size by number of household members
couple	Dummy variable indicating households with couple
nchildren	Number of children in a household
agri	Dummy variable indicating farming households
gender	Gender of household head
mstatus	Marital status of household head
age	Age of household head
gencohort	Identifier of generations by birth years
uni	Dummy variable indicating education level of household head
wgov	Dummy variable indicating if a household's head is working in a government-related sector.
debt	Dummy variable indicating household with debts

We begin with the dependent variables - saving behavior variables. Similar to Gibson et al., (2001), saving behavior (i.e., "saving") is defined by the difference between household incomes and expenses; we exclude asset purchases (i.e., vehicles). Saving values are also adjusted to real terms using the Consumer Price Index (CPI) to account for inflation over time. This is also in line with the analyses of other seminal works i.e. Attanasio (1998) and Attanasio and Banks (1998). Although binary or ordinal versions of saving behavior could be constructed (e.g., saving vs. dissaving), this study focuses on saving amounts measured continuously.

For independent variables, a variable indicating "year" from which the data is collected. We also include general information about households, namely, region and area. The "region" variable provides information in which domestic region (i.e., Bangkok metropolitan area, northern, northeastern, southern, and central). The variable "area" is a dummy variable indicating whether each household is located in a municipal area or not.

The next group of independent variables describing household characteristics. The "nactive" variable captures the number of household members who are active in the labor market. The "hhsize" variable indicates household size by the number of people in a household. "Couple" is a dummy variable identifying whether household is a couple living together. "Nchildren" provides the number of children in each household to capture the effect of bequest motives. The "agri" variable is a dummy variable indicating if a household is a agricultural culture.

The study also covers some individual characteristics of the household's head. The variable "gender" indicates whether a household's head is male or female. The variable "age" is to capture the age of the household's head. The variable "gencohort" is a categorical variable that indicate whether a household's head is baby boomer, Gen X, or Gen Y. The dummy variables "uni" and "wgov" indicating if a head of household is holding at least a university degree and working in a government-related sector which provides relatively better welfare, respectively.

Financial elements are important when saving behavior is considered. This study incorporates a dummy variable indicating whether a household has any debts as well as the outstanding debt indicating the debt burden that a household has faced.

Methodology

This study investigates the saving and dissaving behaviors of Thai households using repeated cross-sectional data, with a focus on generational differences across time. It employs a pooled cross-sectional regression strategy with generation indicators to estimate differences in saving behavior across Baby Boomers, Generation X, and Generation Y. The primary objective is to identify the socioeconomic and demographic factors that influence the level of saving or dissaving in Thai households, while accounting for Thailand's unique socio-economic and cultural context. By focusing on generational differences, the study aims to uncover how saving behaviors evolve over time and identify the factors contributing to these variations.

The data for this study are sourced from the Thai Household Socio-Economic Survey (HSES), conducted by the National Statistical Office (NSO), spanning almost 30 years from 1994 to 2021. This extensive dataset enables the observation of saving patterns across three generational cohorts: Baby Boomers, Generation X, and Generation Y. Each HSES provides detailed records on household income, expenditure, assets, and liabilities, enabling the calculation of savings as the residual between income and expenses, excluding significant asset purchases such as vehicles. The data are prepared for analysis by harmonizing variables across survey years, as the structure and naming conventions of the HSES have evolved over time. Standardizing the variables ensures comparability across years and cohorts.

To ensure comparability across years and account for changes in price levels, all savings and dissavings values are converted from nominal to real terms, using the Consumer Price Index (CPI)[1] to adjust for inflation. This definition aligns with the conventional understanding of savings as a flow variable, representing the portion of income not consumed during a specific time period (Deaton, 1997). By focusing on the difference between income and expenses, this approach captures the active decision-making process of households to allocate resources between immediate consumption and future financial security. Unlike stock variables, such as wealth or accumulated savings, which provide a snapshot of financial status at a single point in time, flow variables highlight ongoing behaviors and changes over time. This distinction is particularly

[1] Data sourced from Ministry of Commerce, Thailand

important in the context of Thailand, where income sources and consumption patterns vary significantly across regions and socio-economic groups.

The decision to exclude asset purchases from expenses is rooted in the distinction between consumption and investment. Large expenditures on assets, such as vehicles or property, do not represent immediate consumption but rather a reallocation of resources into long-term investments. Including such expenditures as part of expenses would distort the measurement of savings by underestimating the resources available for future consumption. This approach is consistent with the methodologies employed in similar studies, such as Gibson and Scobie (2001), which emphasize the need to separate consumption-related spending from investment-related spending to accurately capture saving behaviors.

Defining saving as the difference between income and expenses also aligns with the life-cycle hypothesis (LCH), which posits that individuals aim to smooth consumption over their lifetime by saving during their working years and dissaving during retirement (Modigliani & Brumberg, 1954). By focusing on the flow of resources, this definition facilitates the examination of how households allocate income across different life stages and how this allocation varies across cohorts and periods. It allows for the analysis of dynamic behaviors, such as the accumulation of savings during peak earning years and the gradual decumulation of savings in retirement, which are central to understanding the financial strategies of aging populations.

Moreover, this definition is practical for analyzing the Thai Household Socio-Economic Survey (HSES) data, which provides detailed records of household income and expenditure but less comprehensive information on stock variables such as wealth or accumulated savings. Using a flow-based measure ensures consistency across survey years and facilitates comparisons within and between cohorts. It also aligns with policy-focused objectives, as flow variables like saving rates are more directly influenced by interventions such as tax incentives or retirement savings schemes compared to stock variables, which evolve more slowly over time.

To construct generational cohorts, households are grouped based on the birth years of household heads. Baby Boomers include those born before 1965, Generation X covers those born between 1965 and 1980, and Generation Y comprises those born after 1980. By tracking these cohorts over time, the study observes how their saving behaviors change as they age and as they encounter

different macroeconomic and policy environments. This approach compensates for the lack of longitudinal panel data, providing a means to infer life-cycle patterns through repeated cross-sectional data. It is particularly suited to the HSES data, given its consistent structure and wide temporal coverage.

The statistical methods used in this study include descriptive analysis and linear regression. Each method is chosen to address specific analytical needs and is particularly suitable for the structure of the HSES data.

Descriptive statistics are employed to provide an initial overview of saving patterns across cohorts, regions, and years. These statistics highlight key differences in savings behavior and establish the foundation for more detailed analyses. For instance, summary statistics reveal variations in saving levels between urban and rural households, across different age groups, and among regions in Thailand. Descriptive analysis is essential for understanding the distribution of key variables and identifying potential outliers or anomalies in the data.

The initial step in the analysis involves estimating a base regression model to establish the fundamental relationships between saving behaviors and key explanatory variables. This model provides a straightforward and interpretable framework for analyzing the determinants of saving levels without introducing complex statistical adjustments. The general form of the base regression model is specified as follows:

$$S_i = \alpha + \beta_1 Year_i + \beta_2 Age_i + \beta_3 AgeGroup_i + \beta_4 GenCohort_t + \beta_4 X_{SocEcons,i} + \varepsilon_i \quad (1)$$

where

S_i is the saving/dissaving level for household i.

$Year_i$ represents the dummy variables for the survey year t (e.g., 1996, 1998, etc., with 1994 as the reference).

Age_i is the age of household head.

$AgeGroup_i$ is the variable categorizes household heads into six age groups to capture life-cycle differences in saving behavior, with the 15–25 age group, 26-35 age group, 36-45 age group, 46-55 age group, 56-65 age group, 66-75 age group.

$X_{SocEcons,i}$ is the vector of socioeconomic variables (e.g., region, household size, number of children, number of active earners, gender, marital status, employment type, debt level, etc.).

This base model assumes that age, cohort, and year effects, along with household characteristics, independently influence saving behaviors.

After estimating the base regression model, the analysis proceeds by exploring heterogeneity in saving behavior through a series of subsample regressions. The study estimates ordinary least squares (OLS) regressions separately across different groups to identify how the determinants of saving differ across household types. Specifically, regressions are conducted for the full sample, as well as for subsamples based on generational cohorts (Baby Boomers, Generation X, and Generation Y), education level (households with and without a university-educated head), and primary income source (households with and without agricultural income). This approach enables a more nuanced understanding of how saving behavior varies across key demographic and economic characteristics, revealing important patterns of inequality and vulnerability in household financial outcomes. These heterogeneity analyses are presented in Tables 2 through 4, and offer insights into how life stage, education, and employment sector interact with saving capacity in the Thai context.

Results and Discussion

Descriptive Statistics

The descriptive statistics of selected variables for this study, from the Thai Household Socio-Economic Survey (HSES), is provided in appendix A. They provide critical insights into household characteristics, saving behaviors, and demographic trends in Thailand over nearly three decades. This section synthesizes the key findings from the data and highlights notable patterns and trends.

Total expenditure increased steadily, with the mean rising from 7,249 THB in 1994 to 12,223 THB in 2021. This growth reflects improving living standards, higher incomes, and inflationary pressures.

The largest increase occurred between 1994 and 2004, during which expenditure grew substantially as households recovered from the 1997 Asian Financial Crisis. Variability in expenditure also increased, as evidenced by the rise in the standard deviation from 8,411 THB to 10,338 THB over the same period, highlighting growing disparities in spending patterns. Minimum expenditure values remained consistently low across all years, reflecting subsistence living or underreporting in some households, while maximum values rose sharply, peaking at 552,048 THB in 2009 before declining to 188,795 THB in 2021. The decline in maximum expenditure in recent years suggests reduced discretionary spending among wealthier households, potentially influenced by economic challenges such as the COVID-19 pandemic.

Current income also exhibited significant growth, with the mean rising from 8,978 THB in 1994 to 23,491 THB in 2021. This represents an increase of approximately 162%, driven by Thailand's economic development, improved employment opportunities, and rising wages. However, income growth was not uniform, with the most significant gains occurring between 1994 and 2013, after which income growth plateaued. Variability in income widened substantially, with the standard deviation increasing from 15,151 THB to 32,968 THB, reflecting growing income inequality. Minimum income values remained low, with extreme cases such as 13 THB recorded in 2017, indicating households engaged in informal or subsistence economies. Maximum income values showed dramatic increases, peaking at 8,820,684 THB in 2013 before stabilizing at 2,862,588 THB in 2021, further underscoring disparities in earnings among households.

The comparison between expenditure and income highlights consistent gaps indicating that on average household savings are positive. Hence, the saving statistics presented in Appendix A, the mean monthly saving rose from approximately 146 THB in 1994 to 11,330 THB in 2021, reflecting a substantial strengthening of household financial buffers. The standard deviation of saving also expanded significantly, from 6,861 THB in 1994 to 32,976 THB in 2021, indicating that while many households have improved their saving behavior, disparities in saving capacity have also widened. The saving distribution continued to show negative minimum values in all survey years, suggesting that dissaving—spending more than income—remains a persistent reality for a subset of households. Overall, these trends demonstrate not only improved aggregate financial health over the long term but also underline the increasing heterogeneity in household economic outcomes.

The dataset also includes a comprehensive regional distribution of households, reflecting diverse socio-economic contexts across Thailand. The Central region consistently represents the largest share of households, accounting for approximately 29-30% of the total sample in most years. The Northeast, with about 25-27%, follows closely, while the North and South account for approximately 23-24% and 15-17%, respectively. Bangkok, despite being the economic hub, comprises a smaller proportion, mostly less than 10% over the years. This uneven distribution highlights the concentration of households outside the metropolitan region, particularly in agricultural and rural areas.

The average household size shows a declining trend over time, reflecting broader demographic changes in Thailand. In 1994, the average household size was approximately 3.2 members. By 2021, it had decreased to 2.3 members. This decline is consistent across regions and aligns with Thailand's demographic transition toward smaller family units. The data indicate that households with fewer members (1-2) have become the majority in recent years, replacing the previously dominant 3-4 member households.

The number of active members in households—defined as individuals engaged in income-generating activities—has also decreased over time. This is coincided with declining average household size. In 1994, the average number of active members per household was 2.4. By 2021, this had declined to 1.3, with an increasing proportion of households reporting no active members, particularly among elderly-headed households. The rise in non-active-member households reflects the aging population and the decline in labor force participation rates among certain age groups.

In terms of the number of children, the data shows a clear and consistent decline in the number of children per household over the period from 1994 to 2021. This trend reflects Thailand's broader demographic shift, characterized by decreasing fertility rates and a transition to smaller family sizes. In 1994, the mean number of children per household was 1.307, but by 2021, this figure had dropped to 0.458. This substantial reduction underscores significant societal changes, including increased access to family planning, improved educational opportunities, particularly for women, and evolving economic conditions that have made raising larger families less common

and less practical.

The standard deviation of the number of children per household has also declined over this period, from 1.105 in 1994 to 0.763 in 2021. This reduction in variability indicates a growing uniformity in household sizes, with fewer households reporting large numbers of children. The shrinking standard deviation corresponds with the decline in the proportion of households with three or more children, which were more prevalent in earlier years. The data suggest that households have increasingly converged toward having no children or only one, reflecting both economic and cultural shifts that discourage larger families.

The minimum number of children reported in all survey years remained consistent at zero, representing childless households. This group has likely grown over time as couples delay childbearing or choose not to have children due to financial, social, or personal reasons. The maximum number of children per household varied slightly across years, with a high of 10 recorded in certain years such as 2000, 2009, and 2013. By 2021, the maximum number of children reported had decreased to 8, reflecting a general decline in the prevalence of larger families.

The trends in the number of children per household are closely tied to Thailand's demographic and economic transformations. Urbanization has played a significant role in shaping these patterns, as urban households tend to have fewer children due to higher living costs, space constraints, and increased participation of women in the workforce. Rural households, which traditionally had higher fertility rates, have also seen declines in the number of children per household, influenced by improved access to education, healthcare, and family planning services. These changes reflect a broader shift toward modern family structures, with nuclear families and smaller households becoming the norm.

From 1994 to 2000, the mean number of children declined from 1.307 to 1.146, with a moderate reduction in standard deviation. This period marked the early stages of Thailand's demographic transition, as fertility rates began to decline significantly due to national family planning initiatives and economic development. Between 2000 and 2010, the mean number of children continued to drop steadily, reaching 0.763 in 2009. This decade saw significant urbanization and economic

modernization, which further influenced family planning decisions and reduced household sizes. By the period between 2010 and 2021, the mean number of children per household approached 0.5, signaling a new societal norm where smaller families and childless households dominate. The reduction in the standard deviation during this period highlights the increasing homogeneity in family sizes, as large households have become exceedingly rare. These findings have important policy and socio-economic implications. The decline in the number of children per household contributes directly to Thailand's aging population, where a growing proportion of elderly individuals is supported by a shrinking base of working-age adults.

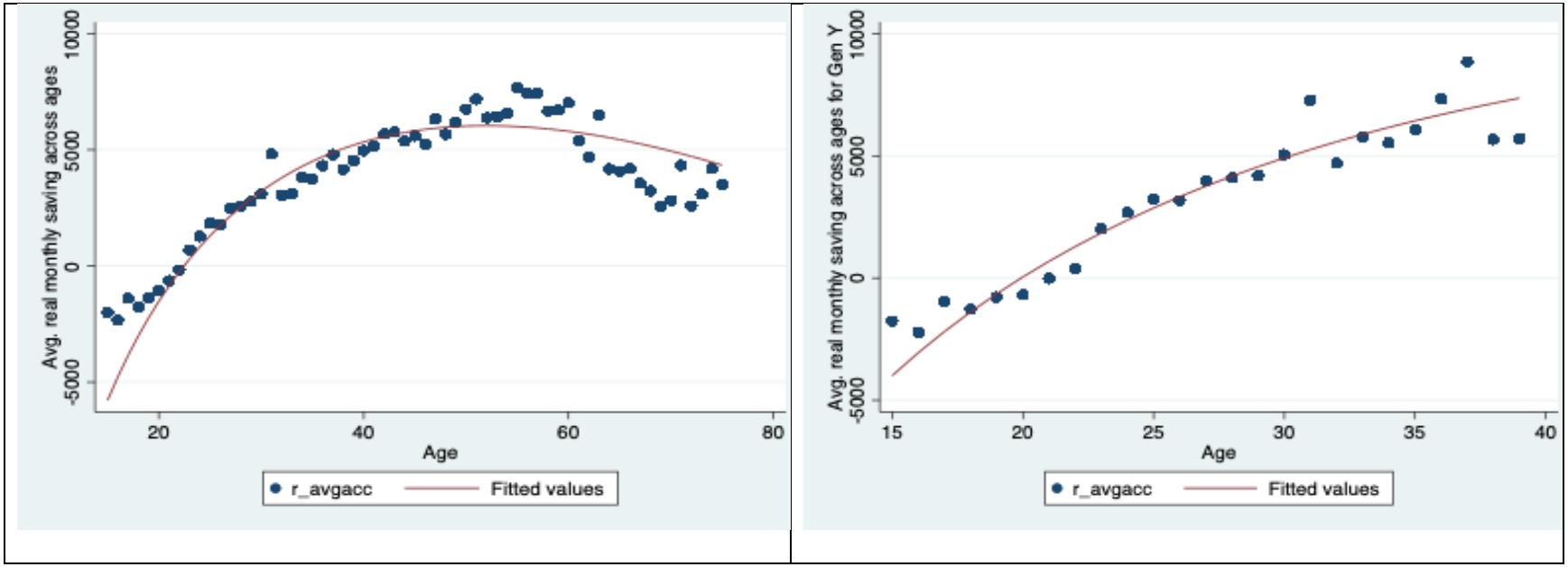
The data on household head age from 1994 to 2021 indicates a steady increase in the average age of household heads over the years, reflecting Thailand's demographic transition toward an aging society. In 1994, the mean age of household heads was 35.3 years, rising consistently to 52.8 years by 2021. This increase corresponds with broader trends such as declining fertility rates, longer life expectancy, and delayed household formation. The data on household head gender indicates a gradual increase in the proportion of female-headed households over time. In 1994, male household heads dominated, but by 2021, there was a notable rise in female household heads. This shift reflects changing societal norms, increased female workforce participation, and demographic factors such as widowhood among aging populations. The growing representation of female-headed households highlights the need for targeted policies to address gender-specific economic challenges and opportunities in Thailand.

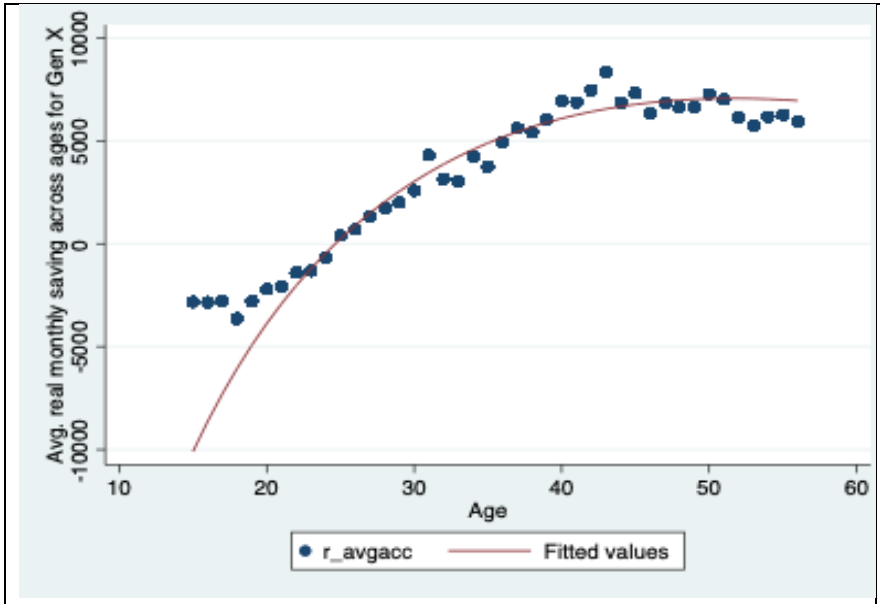
The data on household heads with a university degree shows a gradual increase over the years, reflecting improvements in educational access and attainment in Thailand. In earlier years, such as 1994, the majority of household heads did not hold university degrees. However, by 2021, there was a noticeable rise in the proportion of household heads with university education. This trend aligns with national efforts to expand higher education and the increasing value placed on formal qualifications in the labor market. The rise in educational attainment among household heads suggests potential improvements in household income, decision-making, and overall economic resilience.

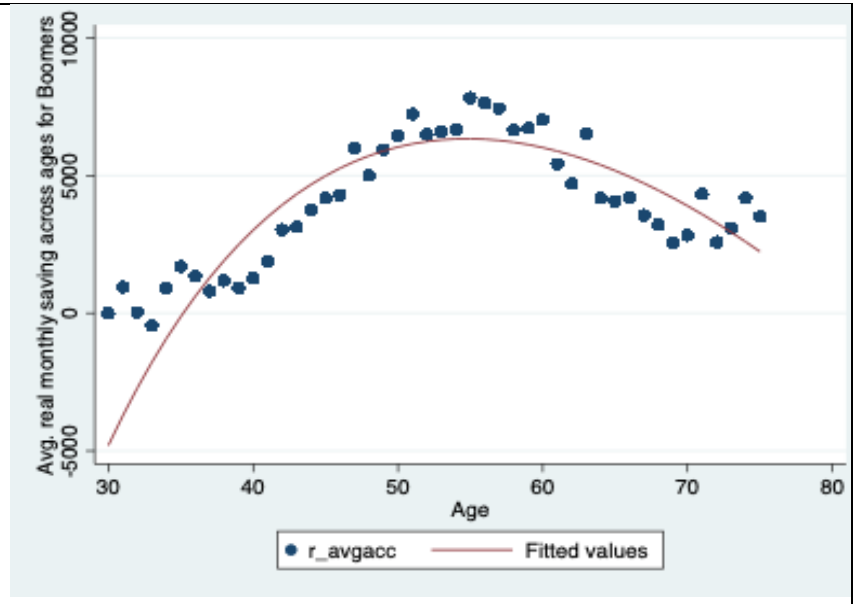
Next, to examine graphical trends in household saving behavior, average real monthly savings are

plotted against the age of the household head. These visualizations are structured to highlight demographic heterogeneity, focusing on differences by generation, education, and occupation. figure 1 displays the average real monthly saving of all households by age of the household head, and separately for Baby Boomers, Generation X, and Generation Y.

Figure 1: Average real monthly saving across age for whole sample and different generations.




Avg. real monthly saving across ages for Gen X
10000
5000
0
-5000
-10000
10
20
30
40
50
60
Age
r_avgacc
Fitted values

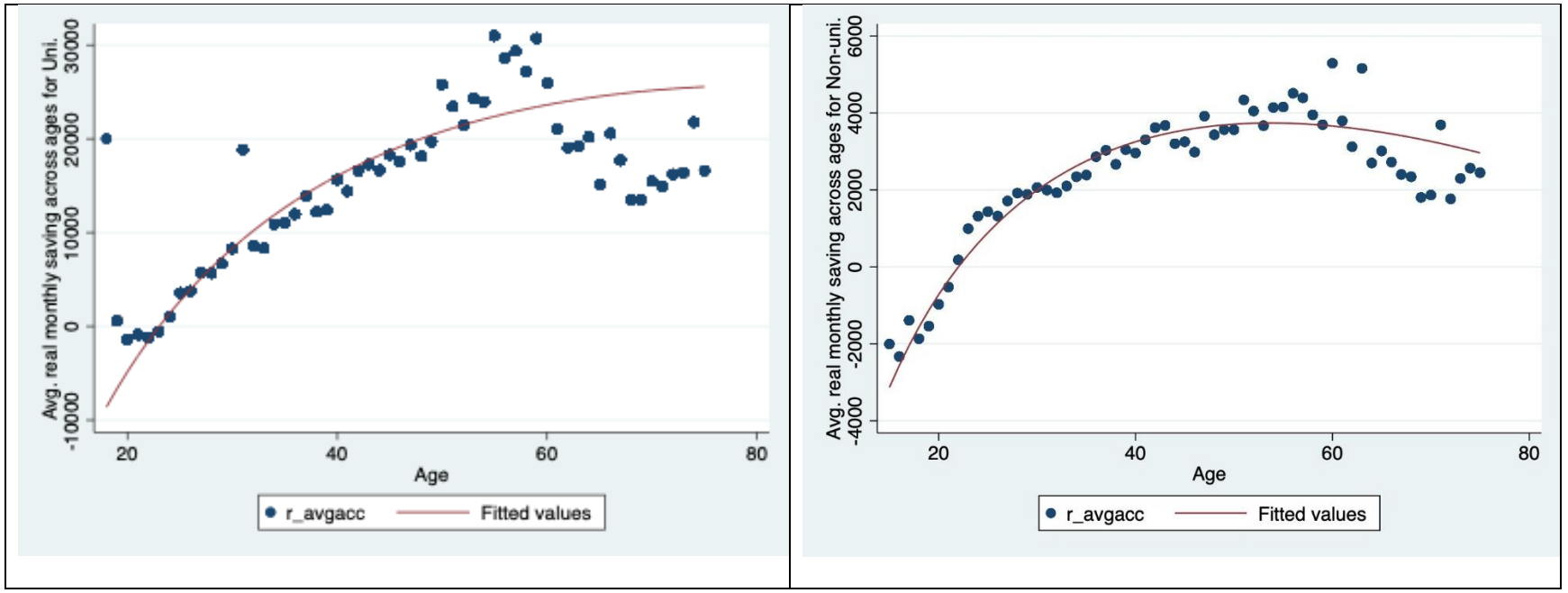

Avg. real monthly saving across ages for Boomers
10000
5000
0
-5000
30
40
50
60
70
80
Age
r_avgacc
Fitted values

From figure 1, across the full sample (the panel in the top left), the relationship between age and saving follows an inverted-U shape that aligns well with the life-cycle hypothesis. Savings tend to rise in early adulthood reflecting wealth accumulation, peak around midlife, and decline gradually in later years, typically in retirement, to finance consumption in later life. This visualization aligns with expectations of age-related financial behavior, reflecting both rising earnings in early life and wealth decumulation in older age. Generation Y (top right panel) exhibits a rapid increase in savings from the mid-20s, reaching just under 10,000 Baht per month of savings at around age 35–40. The bottom left panel shows Generation X, where the peak saving level is approximately 8,000 to 8,500 Baht per month, a level comparable to that of Baby Boomers, at approximate age 45–50. The bottom right panel presents Baby Boomers, whose saving profile peaks around age 55, followed by a noticeable decline into older ages. Compared to older cohorts, Generation X appears to accumulate savings more rapidly and begins the decumulation phase slightly earlier as well. This earlier peak may reflect career trajectories that matured sooner, differences in family formation timing, or increased financial planning awareness. These generational differences underscore not only the life-cycle structure of saving behavior but also highlight differences in financial behavior and socio-economic pattern between cohorts.

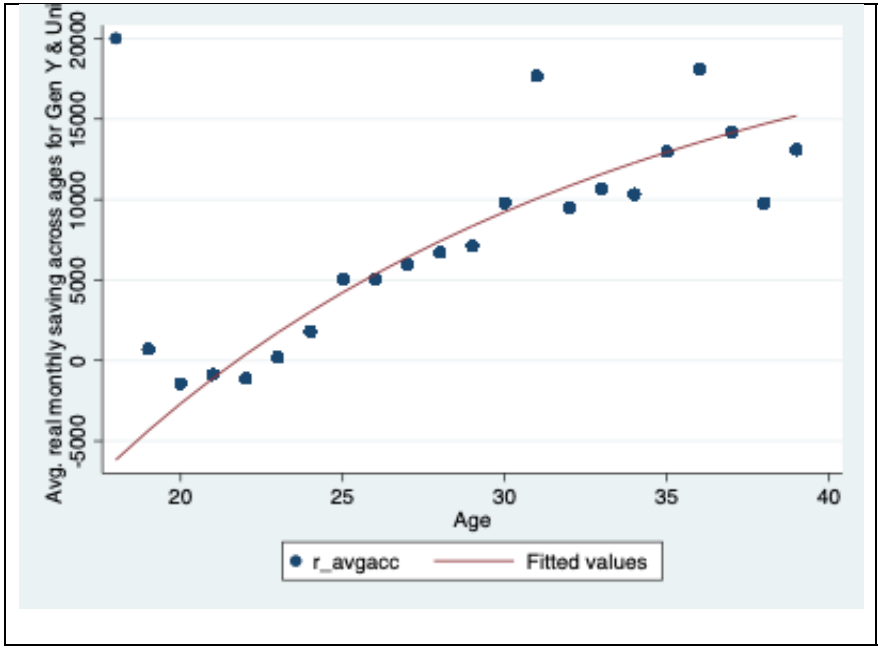
Next, figure 2 investigates the role of education by comparing saving patterns between households with and without university degrees, broken down by generation.

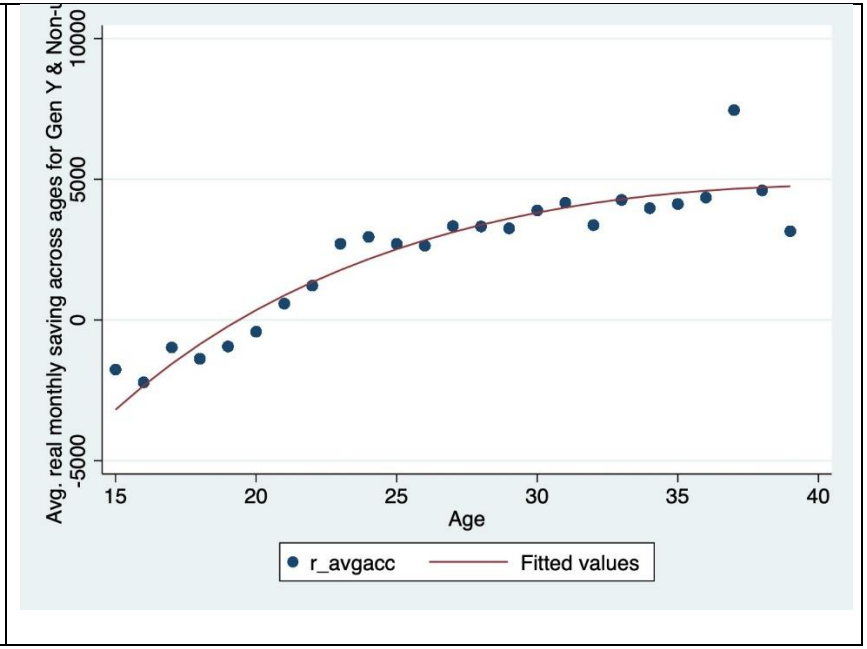
Figure 2: Average real monthly saving across age for whole sample and different generations with and without university degree.

Sub-figure 2.1: Whole sample

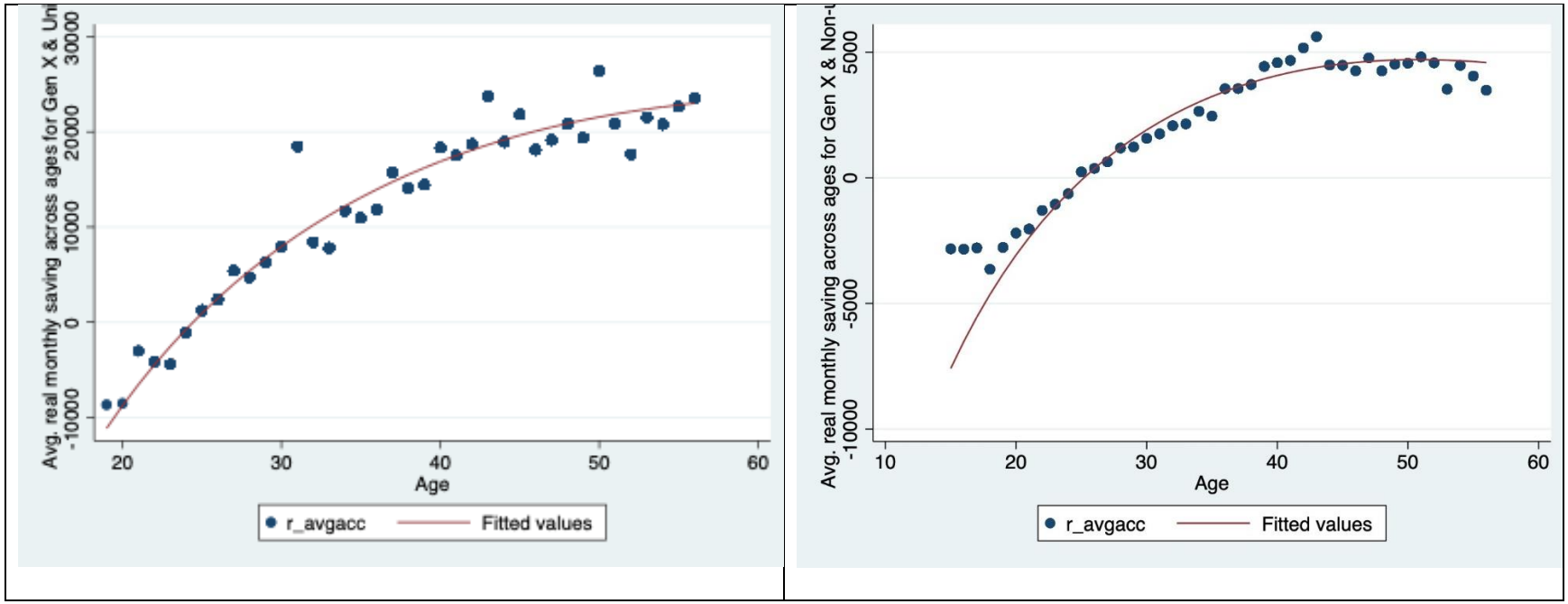


Sub-figure 2.2: Generation Y

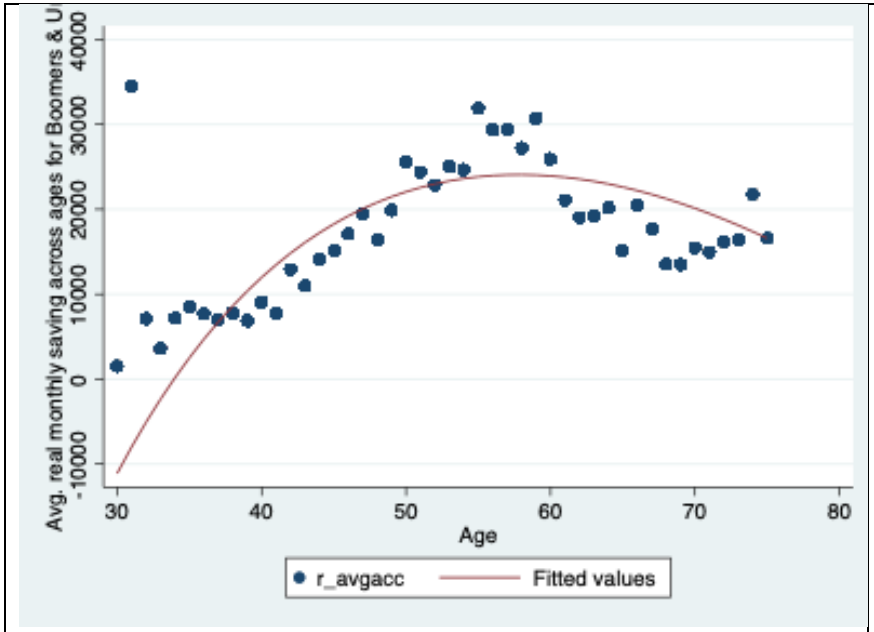




Sub-figure 2.3: Generation X



Sub-figure 2.4: Baby boomers


Avg. real monthly saving across ages for Boomers & U
-10000
0
10000
20000
30000
40000
30
40
50
60
70
80
Age
r_avgacc
Fitted values

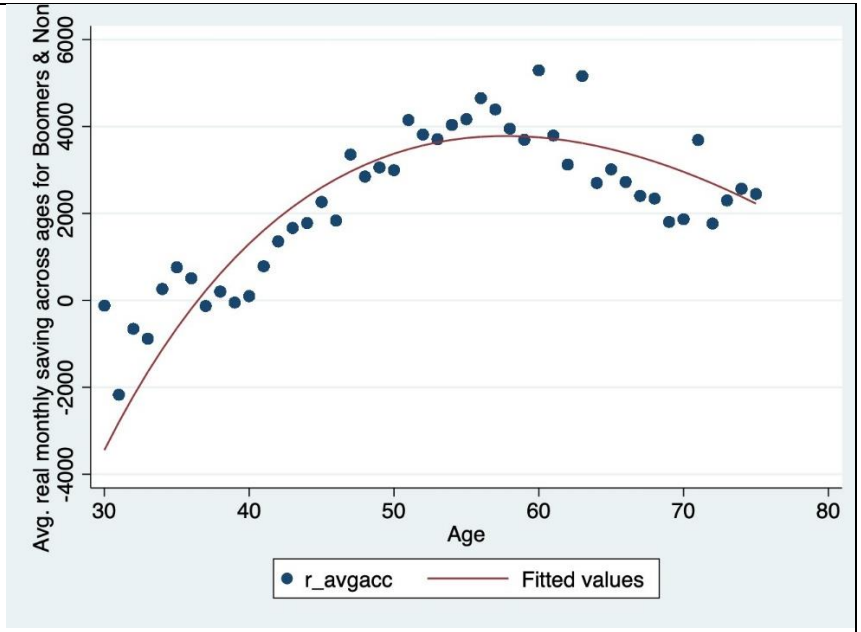

Avg. real monthly saving across ages for Boomers & Non
-4000
-2000
0
2000
4000
6000
30
40
50
60
70
80
Age
r_avgacc
Fitted values

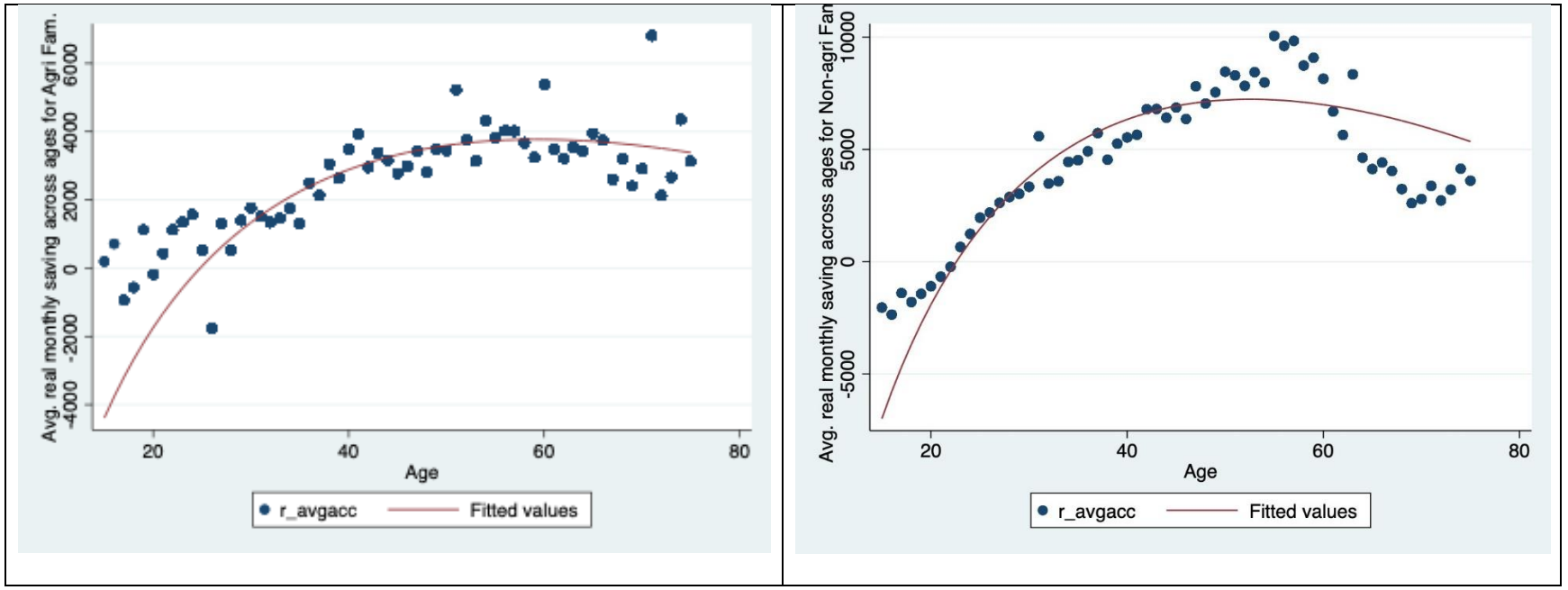
Figure 2 presents a comparison of saving behavior between households with and without university education, disaggregated across the full sample and by generational cohort. The panels reveal consistent disparities in real monthly saving levels, highlighting the compelling role that education plays in shaping long-term financial outcomes.

In sub-figure 2.1, which compares the full sample, households with a university degree (left panel) demonstrate a steep life-cycle saving curve that peaks just above the 30,000 Baht per month mark between the ages of 55 and 60. This trajectory reflects a clear pattern of wealth accumulation during peak earning years. In contrast, non-university households (right panel) exhibit a much flatter curve, with savings peaking at approximately 5,000 to 6,000 Baht per month, and declining later, reflecting longer working age span for this group. This nearly five- to six-fold difference in peak saving level is not only statistically significant but also economically meaningful, highlighting financial advantage associated with obtaining a university degree. Higher education contributes to significantly higher saving capacity across the life cycle compared to their non-university-educated counterparts.

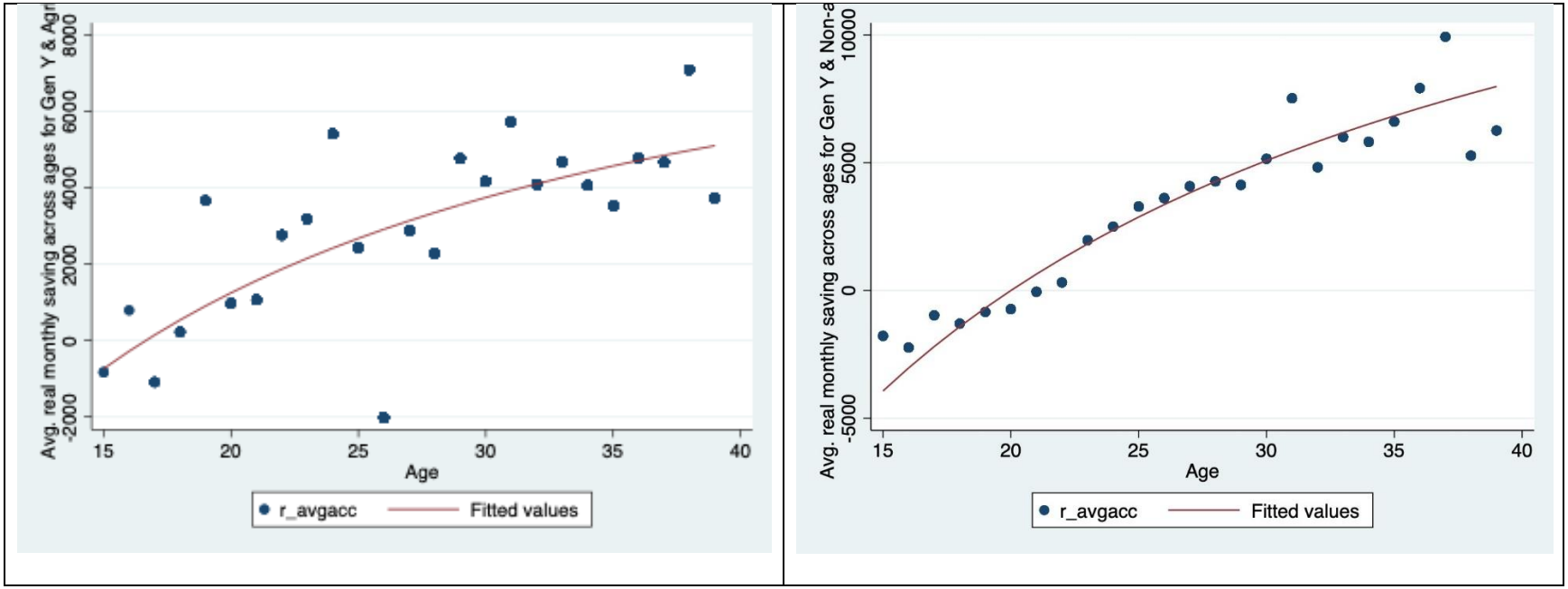
We compare the difference between samples with and without university degree in different generations in sub-figure 2.2-2.4. Across all cohorts, the pattern is similar. Households with university degrees save substantially more relative to their non-university peers—regardless of age or life stage. The gap is more noticeable among older generations in terms of Baht value, but it is also clearly present among younger cohorts. These results underscore the critical role of education not only in improving labor market outcomes but also in shaping long-term financial resilience. The consistency of this education-saving premium across generations has profound implications for inequality, retirement security, and the intergenerational transfer of wealth.

Figure 3: Average real monthly saving across age for whole sample and different generations with and without agricultural income.

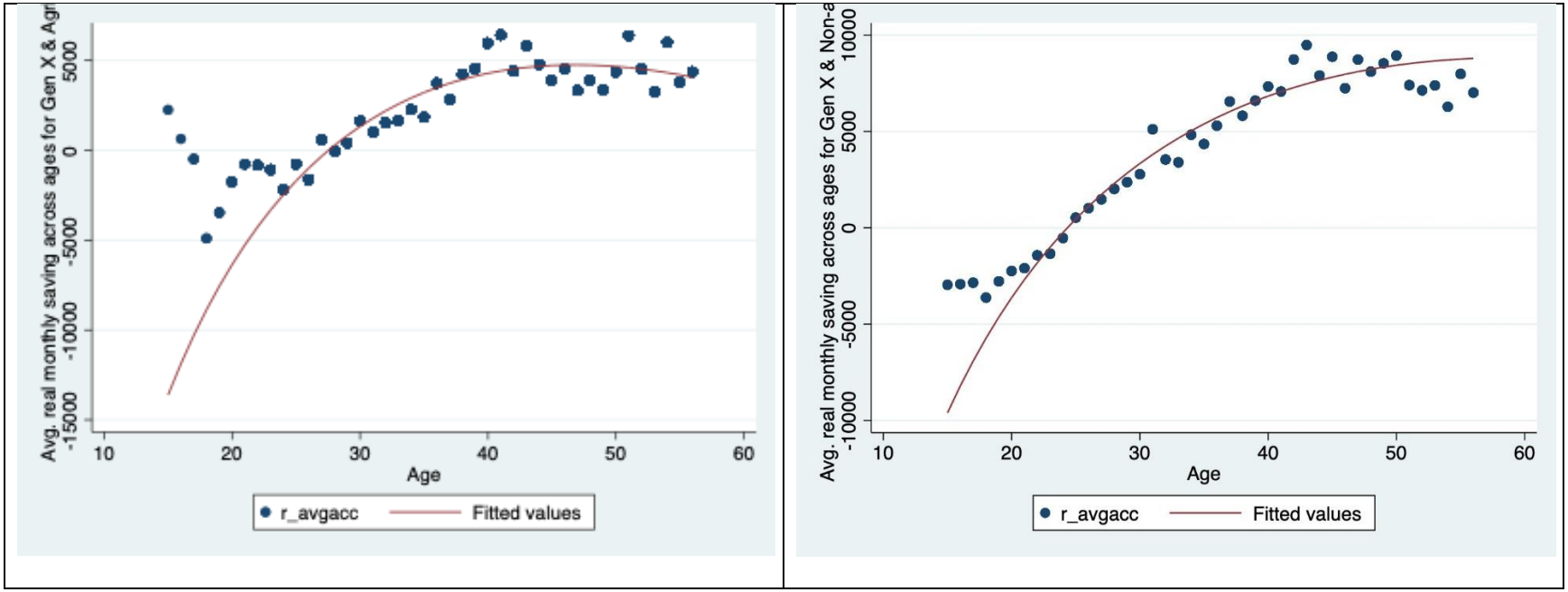
Sub-figure 3.1: Whole sample



Sub-figure 3.2: Generation Y



Sub-figure 3.3: Generation X



Sub-figure 3.4: Baby boomers

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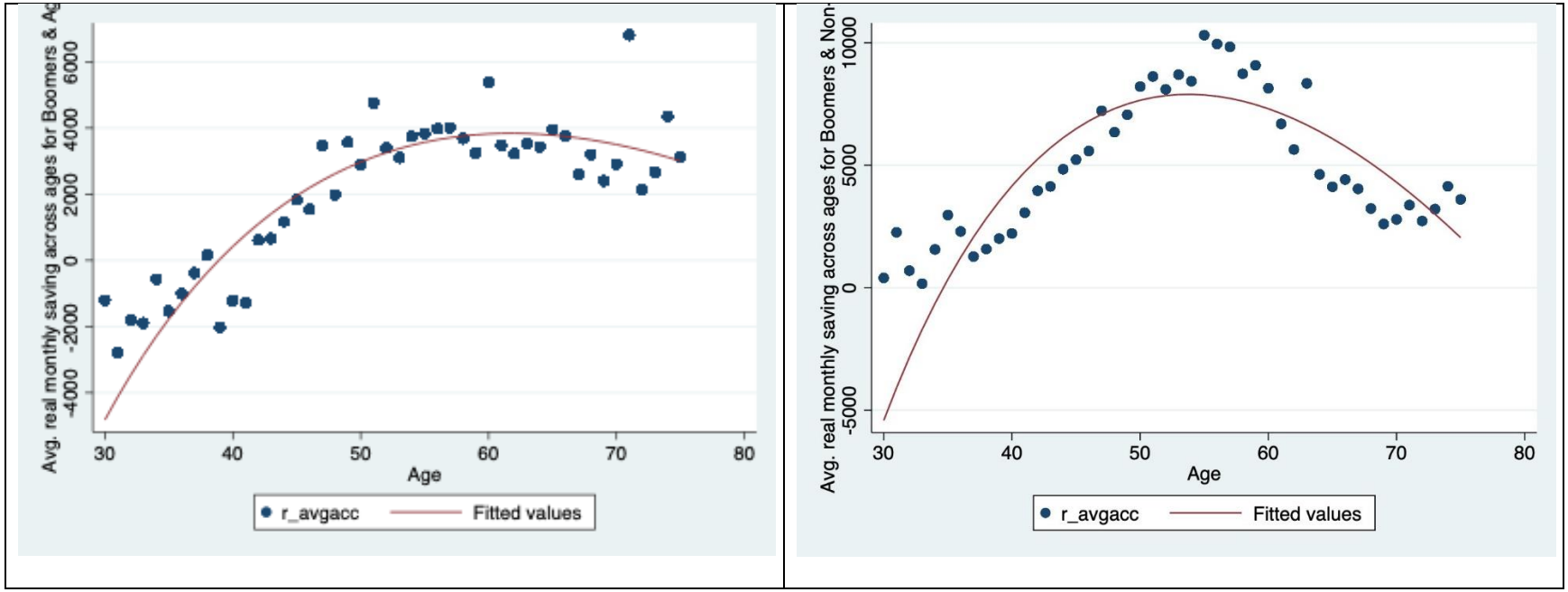

Figure 3.1 presents the comparison of real monthly saving between households with and without agricultural income for the full sample. Households with agricultural income (left panel) show a relatively flat saving profile, peaking modestly between 4,000–6,000 Baht per month. In contrast, households without agricultural income (right panel) achieve significantly higher savings, reaching approximately 10,000 Baht per month at their peak between the ages of 50 and 55. Non-agricultural households save nearly twice as much at peak age as agricultural households, suggesting that sectoral employment remains a key driver of financial inequality, reflecting both lower earning and saving capacity among agricultural households, across the life cycle.

The generational breakdown across figures 3.2 to 3.4 confirms the persistent disparity in saving behavior between agricultural and non-agricultural households. In each generation—Generation Y, Generation X, and Baby Boomers—households without agricultural income consistently demonstrate stronger saving trajectories than those with agricultural income. While all groups follow a broadly hump-shaped pattern over the life cycle, non-agricultural households achieve noticeably higher peaks and sustain elevated saving levels over a longer age range. These results suggest that differences in sectoral employment have long-lasting effects on household financial resilience, with those engaged in agriculture facing more limited opportunities for wealth accumulation regardless of generation. The patterns observed reflect underlying structural factors such as income volatility, labor informality, and reduced access to formal financial services in the agricultural sector, which collectively hinder the ability of rural households to build substantial savings across their working lives.

Regression Results

This section presents the regression results analyzing the determinants of real saving and dissaving behavior across Thai households. Savings are defined as the difference between real financial income and real financial expenditure, consistent with the conceptual framework discussed earlier. Table 2 reports the baseline Ordinary Least Squares (OLS) regressions (Equation (1)) for the full sample as well as separately for each generational cohort: Generation Y, Generation X, and Baby Boomers. The regressions incorporate year fixed effects to control for time-specific macroeconomic shocks (details shown in Appendix C), and multicollinearity diagnostics based on Variance Inflation Factor (VIF) tests (Appendix B) confirm that multicollinearity is not a major

concern for the explanatory variables, including age and generational cohort indicators, thereby supporting the reliability of the estimated coefficients.

Table 2: Linear regression of equation (1)

Dependent Variable: Saving/Dissaving	(1) Whole sample	(2) Gen. Y	(3) Gen. X	(4) Baby Boomers
Intercept	-8002.63***	-6636.63***	-5717.97***	-4438.77***
	(555.87)	(1068.53)	(707.59)	(851.43)
Region: Bkk (base)				
Central	-2386.41***	-14.37	-1852.69***	-3495.52***
	(519.42)	(370.41)	(592.40)	(1037.08)
North	-3315.68***	-937.05***	-3110.26***	-3958.93***
	(506.40)	(338.66)	(537.76)	(1017.72)
Northeast	-3223.84***	318.56	-3066.59***	-3936.73***
	(508.88)	(516.71)	(552.71)	(1019.20)
South	-1979.76***	-506.34	-1767.39***	-2472.76***
	(536.12)	(437.38)	(599.74)	(1074.42)
Area: HH in non-municipal (base)				
HH in municipal	739.31***	-54.31	575.63***	900.62***
	(112.82)	(313.76)	(198.96)	(147.47)
nactive	2355.79***	2942.25***	2505.50***	2416.31***
	(127.11)	(347.05)	(281.70)	(152.56)
hhsize	-88.04	-77.22	618.01***	-451.82***
	(95.23)	(272.40)	(197.75)	(109.75)
Agri: Fam. without agri. income (base)				
Fam. with agri. income	-1912.35***	-1820.3***	-998.57***	-2251.44***
	(181.38)	(670.42)	(346.59)	(219.18)
nchildren	99.24	625.78	-547.39**	223.18
	(155.40)	(565.31)	(237.67)	(221.15)
Gender: Male (base)				
Female	-386.18***	-129.78	-264.13	-438.15**
	(148)	(277.35)	(247.60)	(197.16)
Marital status: Single (base)				
Married	1610.29	9.15	1123.44***	1799.40***
	(267.78)	(390.02)	(392.78)	(400.02)
Widowed	-177.46	-1659.55***	-966.58***	180.68
	(231.16)	(632.34)	(347.39)	(238.44)
Divorced	73.28	-1084.81*	-127.21	-137.19
	(326.22)	(642.03)	(572.57)	(377.17)
Separated	158.72	-710.42	-228.13	292.24
	(251.46)	(715.90)	(395.63)	(318.74)
Age group: 15-25 yrs old (base)				
26-35 yrs old	777.19***	1269.07***	373.31	0
	(192.05)	(317.70)	(262.21)	(0)
36-45 yrs old	1582.81***	2583.11***	1728.47***	-1133.79***
	(250.71)	(954.86)	(276.52)	(426.24)
46-55 yrs old	2768.27***	-	2243.69***	163.59
	(321.63)		(463.85)	(462.10)
56-65 yrs old	3803.23***	-	2615.19***	1246.72**
	(480.64)		(611.09)	(593.65)
66-75 yrs old	2977.45***	-	-	579.04
	(447.45)			(570.90)
Gen cohort: Gen Y				
Gen X	1138.66***	-	-	-
	(279.75)			
Baby boomer	1214.34***	-	-	-
	(360.06)			
Couple family: non-couple				
Couple	386.33	209.51	-364.79	551.48
	(273.11)	(518.37)	(438.04)	(443.76)

Dependent Variable: Saving/Dissaving	(1) Whole sample	(2) Gen. Y	(3) Gen. X	(4) Baby Boomers
Uni-degree: HH without uni. degree (base)				
HH with uni. degree	10116.93***	3582.39***	9146.93***	12829.88***
	(430.91)	(479.16)	(851.46)	(558.81)
Gov: non-gov (base)				
Work in gov. related agencies	1040.28***	-186.39	-1071.82**	2424.31***
	(272.52)	(477.34)	(498.21)	(311.80)
Debt: HH without debt (base)				
HH with debt	-109.39	218.20	-448.976	-15.08
	(328.88)	(359.43)	(720.43)	(355.51)
Debt outstanding	.005***	.006***	.007***	.004***
	(.001)	(.001)	(.003)	(.001)
Observations	331804	29310	131607	170887
R^2	0.038	0.034	0.038	0.043

The results for the whole sample regression (sub-equation (1)) reveal that saving behavior strongly follows the predictions of the Life-Cycle Hypothesis (LCH), with significant variation across age groups. Compared to the base group aged 15–25 years, households headed by individuals aged 26–35, 36–45, 46–55, 56–65, and 66–75 save increasingly more, with estimated additional savings of 777 THB, 1,583 THB, 2,768 THB, 3,803 THB, and 2,977 THB respectively. The savings profile exhibits a clear upward trend during working years, peaking around ages 56–65 before tapering slightly in the post-retirement years of 66–75, consistent with the hump-shaped life-cycle pattern predicted by the LCH. This validates the economic intuition that savings accumulate during prime earning years and begin to decumulate as individuals move into retirement.

Generation cohort effects further illustrate structural differences beyond pure age effects. Using Generation Y as the reference group, Generation X households are found to save 1,139 THB more per month, while Baby Boomer households save 1,214 THB more per month, all else equal. These positive coefficients, statistically significant at the 1% level, suggest that generational experiences — including different macroeconomic environments during formative years, structural changes in Thailand's labor market, and educational attainment patterns — have a long-lasting impact on saving behaviors. Older generations, especially Baby Boomers, benefited from periods of economic growth from industrialization, labor market stability, and property price appreciation, which likely contributed to higher lifetime saving and asset accumulation.

Beyond age and generational cohort effects, several socio-economic factors also significantly influence saving and dissaving behaviors, as shown in Table 1. Regional disparities are evident:

relative to households in Bangkok, those in the North, Northeast, and South consistently exhibit lower saving levels, with monthly savings reduced by approximately 3,316 THB, 3,224 THB, and 1,980 THB, respectively. These results highlight the persistent economic inequality between urban and rural regions, reflecting differences in employment opportunities, wage structures, and access to financial services. Living in a municipal area is associated with higher saving by approximately 739 THB, underscoring the advantages urban households hold in terms of economic opportunity and infrastructure. Households that derive part of their income from agricultural activities save significantly less, by around 1,912 THB, compared to households without agricultural income, confirming the financial vulnerability associated with reliance on volatile agricultural earnings.

Household characteristics also matter. Each additional active income earner in a household increases monthly savings by approximately 2,356 THB, demonstrating the critical role of diversified income sources in promoting financial stability. Meanwhile, household size and the number of children do not show consistently significant effects on savings, suggesting that in Thailand, the extended family structure may moderate the direct financial burden of larger households. Education emerges as a particularly powerful determinant of saving: households headed by university graduates save an additional 10,117 THB per month compared to non-graduates, reinforcing the importance of higher education in securing better financial outcomes. Gender differences are also observed; female-headed households save about 386 THB less than male-headed ones, a gap that may reflect both labor market discrimination and traditional intra-household bargaining dynamics. In terms of employment status, working in the government sector significantly increases saving, with public sector households saving 1,040 THB more per month than others, consistent with the greater income stability, healthcare cost coverage, and pension benefits associated with public employment. Debt levels are positive but weakly associated with savings, as indicated by a small but statistically significant coefficient on the outstanding debt variable.

The VIF analysis for the whole sample regression (sub-equation (1)) indicates that age variables and generational cohort indicators do not exhibit serious problematic multicollinearity. Most VIF values fall below conventional thresholds, although some mild multicollinearity is present between age groups and generational cohort variables, with VIF values slightly exceeding 10 in certain cases. However, the levels observed are not severe and are consistent with expectations

given the conceptual overlap between age and generation. This ensures that the independent effects of age and generational cohort are separately and reliably identified, supporting the robustness of conclusions regarding life-cycle and cohort-specific saving behavior.

Moving to the results disaggregated by generation, sub-equations (2), (3), and (4) provide further insights. For Generation Y (sub-equation (2)), the age-saving relationship appears somewhat flatter. Savings increase with age but at a slower rate compared to the whole sample, with the 36–45 age group saving more than the youngest group by approximately 894 THB. Although positive, the magnitude of age coefficients is smaller than in the whole sample, reflecting that Generation Y households are still in earlier stages of asset accumulation and face different economic challenges such as student debt, unstable employment, and higher cost-of-living pressures.

In the Generation X regression (sub-equation (3)), the life-cycle saving pattern is stronger. Savings increase substantially with age, especially for those aged 46–55 and 56–65, whose additional savings over the 15–25 base group are approximately 2,000–3,000 THB. This aligns with expectations that Generation X, currently in their prime working and peak earning years, would be maximizing their saving potential.

For Baby Boomers (sub-equation (4)), the age effects are pronounced but more nuanced. Households headed by individuals aged 56–65 still display strong positive saving relative to the youngest group, but those aged 66–75 show some signs of dissaving, although the coefficient remains positive. The slightly lower saving level in post-retirement years among Boomers is consistent with life-cycle models that predict wealth decumulation following retirement.

Generation cohort effects also exhibit meaningful differences across the sub-samples. Within each generation, education continues to exert a strong influence on saving levels, and the VIF tests for the generational subsample regressions confirm that collinearity between age and cohort variables remains low. The relatively small VIF values reinforce confidence that life-cycle effects and generational differences are separately identified, an important validation given the overlapping nature of age and cohort in cross-sectional data.

Beyond age and generation effects, the socio-economic determinants of saving behavior largely align with the patterns observed in the full sample, although some heterogeneity is evident.

Regional disparities persist, with households outside Bangkok saving significantly less across all generational cohorts, although the magnitude of regional gaps tends to be slightly smaller for Generation Y. Agricultural income remains a negative determinant of saving, particularly for Baby Boomers, reflecting their stronger reliance on primary-sector earnings. Education maintains a consistently strong positive influence: university education significantly enhances saving among Generation X and Baby Boomers, and to a slightly lesser extent among Generation Y. Employment in the public sector is associated with higher saving levels across all cohorts, emphasizing the role of secure employment and retirement benefits. Gender gaps in saving, while present, appear smaller among Generation Y compared to older cohorts, suggesting some generational narrowing of gender-based economic disparities. Household structure variables, such as household size and number of children, show limited and inconsistent effects across generational groups.

Table 3: Linear regression of equation (1) by educational attainment

Dependent Variable: Saving/Dissaving	(1) Whole sample with university degree	(2) Whole sample without university degree	(3) Gen. Y with university degree	(4) Gen. Y without university degree	(5) Gen. X with university degree	(6) Gen. X without university degree	(7) Baby Boomers with university degree	(8) Baby Boomers without university degree
Intercept	-12553.48**	-5084.08***	-4505.80*	-5129.28***	-7380.20**	-5030.60***	-7449.68***	-2756.6***
	(1968.08)	(487.85)	(2317.36)	(989.36)	(3591.52)	(486.67)	(2833.80)	(901.69)
Region: Bkk (base)								
Central	-6655.48***	-942.13*	-827.46	270.44	-6359.64**	-263.49	-8872.59***	-1947.27
	(1415.15)	(570.79)	(1261.29)	(293.03)	(2878.20)	(403.94)	(1707.44)	(1247.82)
North	-7301.66***	-1731.69***	-1880.44*	-492.97	-7556.04***	-1439.41***	-8809.53***	-2444.64**
	(1168.31)	(570.32)	(987.62)	(313.12)	(2191.89)	(395.33)	(1677.17)	(1228.28)
Northeast	-6052.79***	-1829.61***	729.43	232.00	-7372.65***	-1413.38***	-7277.42***	-2659.14**
	(1178.83)	(574.92)	(1500.85)	(373.60)	(2060.92)	(439.86)	(1767.56)	(1231.58)
South	-5765.35***	-563.51	-2214.08*	-50.15	-5155.35**	-370.26	-7394.61***	-969.42
	(1331.69)	(596.31)	(1204.33)	(431.56)	(2559.18)	(419.04)	(1772.21)	(1296.01)
Area: HH in non-municipal (base)								
HH in municipal	1734.50***	677.49***	922.88	-200.12	2017.53**	471.18**	1925.46***	926.12***
	(466.50)	(114.83)	(857.85)	(333.69)	(936.72)	(189.31)	(536.46)	(157.83)
nactive	6752.20***	1753.68***	4922.35***	2027.91***	5778.03***	2033.26***	8011.70***	1765.09***
	(574.66)	(109.53)	(770.42)	(377.53)	(1619.93)	(177.91)	(627.78)	(147.29)
hhsize	594.54	-255.42***	707.77	-391.71*	1656.63*	143.72	-479.71	-414.352***
	(426.50)	(81.77)	(778.79)	(205.38)	(871.74)	(135.22)	(485.51)	(106.37)
Agri: Fam. without agri. income (base)								
Fam. with agri. income	127.51	-1601.70***	1254.24	-1705.53***	2314.89	-1137.61***	-1968.52	-1858.63***
	(1282.35)	(162.10)	(3796.15)	(628.84)	(2598.97)	(261.18)	(1250.26)	(218.80)
nchildren	-1194.48**	135.67	357.21	848.72	-1774.90	-263.45	-1013.94	154.79
	(591.17)	(150.84)	(1925.04)	(548.46)	(1186.39)	(173.02)	(678.32)	(234.76)
Gender: Male (base)								
Female	447.53	-318.41**	504.31	-307.35	320.89	-177.39	1151.01*	-588.88***
	(673.35)	(125.50)	(706.55)	(280.34)	(1207.54)	(183.49)	(672.15)	(201.66)
Marital status: Single (base)								
Married	44.34	1415.479***	-1654.30	128.95	-284.94	1093.38***	1646.15	1789.67***
	(784.84)	(217.74)	(1015.43)	(384.05)	(1238.25)	(179.57)	(1010.50)	(422.70)
Widowed	-3304.88***	-610.94***	-3378.67*	-1501.86**	-5342.54***	-1170.13***	-1362.48	-410.08**

Dependent Variable: Saving/Dissaving	(1) Whole sample with university degree	(2) Whole sample without university degree	(3) Gen. Y with university degree	(4) Gen. Y without university degree	(5) Gen. X with university degree	(6) Gen. X without university degree	(7) Baby Boomers with university degree	(8) Baby Boomers without university degree
	(1193.31)	(168.92)	(2023.57)	(639.72)	(1398.77)	(215.35)	(1407.18)	(193.80)
Divorced	-3433.48***	-118.02	-3306.31	-800.61	-2478.02	-298.58	-2977.56***	-39.85
	(988.74)	(298.71)	(2217.57)	(624.85)	(1634.83)	(513.98)	(1129.47)	(378.2)
Separated	-4063.84***	-327.73	-4722.57***	-521.41	-4844.52***	-484.63	-1738.04	-273.79
	(809.33)	(211.03)	(1706.99)	(753.69)	(1045.46)	(309.90)	(1213.50)	(309.59)
Age group: 15-25 yrs old (base)								
26-35 yrs old	3290.96***	755.52***	3072.90**	418.16*	4309.92***	333.27	0	0
	(790.63)	(113.16)	(1242.39)	(245.31)	(1265.84)	(173.35)	(0)	(0)
36-45 yrs old	6964.32***	1349.15***	5015.71**	1553.57	8036.16***	1099.38	-4583.55**	-559.04
	(813.43)	(126.59)	(2117.61)	(1049.82)	(1223.02)	(231.62)	(2116.86)	(407.00)
46-55 yrs old	12241.87***	1715.97***	-	-	10990.32***	1158.82	56.53	-102.22
	(817.31)	(154.66)			(1780.66)	(451.15)	(2244.79)	(445.32)
56-65 yrs old	18165.40***	2418.66***	-	-	16460.95***	772.32	5408.43**	731.18
	(847.52)	(360.10)			(3279.83)	(541.63)	(2351.09)	(610.47)
66-75 yrs old	15955.87***	1929.94***	-	-	-	-	3880.16	315.55
	(1119.79)	(271.18)					(2424.86)	(580.12)
Couple family: non-couple								
Couple	3595.89***	-445.02*	2192.09	317.4	1658.25	-714.95***	5579.26***	-790.54*
	(1094.49)	(252.45)	(1523.24)	(530.31)	(2369.37)	(249.50)	1307.61	(468.62)
Gov: non-gov (base)								
Work in gov. related agencies	-226.32	1725.67***	-975.62	-275.81	-2042.88**	312.91	2147.13**	2941.95***
	(657.54)	(199.60)	(990.72)	(259.26)	(979.32)	(276.64)	(946.10)	(299.92)
Debt: HH without debt (base)								
HH with debt	-2279.11	428.13	-297.83	516.57	-5853.52*	600.07	-641.09	201.23
	(1502.19)	(284.47)	(910.97)	(477.54)	(2991.10)	(502.26)	(1477.83)	(354.96)
Debt outstanding	.006***	.004***	.005***	.006***	.01**	.004**	.003**	.004**
	(.002)	(.001)	(.001)	(.002)	(.005)	(.002)	(.002)	(.002)
Observations	48168	283636	6728	22582	20076	111531	21364	149523
R^2	0.051	0.016	0.050	0.023	0.042	0.020	0.077	0.015

Table 3 presents regression results estimating saving and dissaving levels, separately by generational cohort and by whether the household head holds a university degree. Eight sub-equations are reported to explore differences in saving behavior across these categories. Sub-equations (1) and (2) correspond to the whole sample, while sub-equations (3) and (4) focus on Generation Y, sub-equations (5) and (6) on Generation X, and sub-equations (7) and (8) on Baby Boomers, further distinguishing between households with and without a university degree.

Starting with the whole sample, sub-equations (1) and (2) demonstrate that higher educational attainment significantly correlates with greater saving levels. Among households headed by university graduates (sub-equation (1)), savings increases substantially with age. Compared to the 15–25 age group, those aged 26–35, 36–45, 46–55, 56–65, and 66–75 years save approximately 3,291 THB, 6,964 THB, 12,242 THB, 18,165 THB, and 15,956 THB more per month, respectively.

These results illustrate a clear hump-shaped pattern consistent with the Life-Cycle Hypothesis (LCH), where saving peaks during late working life and then declines slightly in retirement. However, it is notable that saving peaks at the 56–65 age group, which is slightly later than the formal retirement age of 60 years in Thailand. Rather than immediately beginning to decumulate assets upon retirement, households — particularly university-educated households — continue to accumulate savings into early retirement years. This deviation from the classic LCH prediction suggests the strong presence of precautionary saving motives, concerns about healthcare costs, longevity risk, and possibly intergenerational bequest motives, all of which are prominent in Asian economies where public pension systems remain limited.

In contrast, for non-university households (sub-equation (2)), while the saving pattern also rises with age, the magnitudes are markedly smaller: 755 THB, 1,349 THB, 1,716 THB, 2,419 THB, and 1,930 THB for the respective age groups. This difference highlights the powerful effect of higher education in enhancing lifetime saving capacity.

Turning to Generation Y, sub-equations (3) and (4) reveal important differences between university-educated and non-university-educated households. Among university graduates (sub-equation (3)), the age effect is positive but less pronounced compared to the whole sample. Households aged 26–35 save an additional 3,073 THB compared to the youngest group, while those aged 36–45 save about 5,016 THB more. However, data for older age groups (46–55 and beyond) are not available for Generation Y, given their current age distribution. For non-university Generation Y households (sub-equation (4)), the positive age gradient is flatter. While the coefficients remain positive, the increases are only 418 THB and 1,554 THB for the 26–35 and 36–45 age groups, respectively, and are statistically weaker. These results suggest that educational attainment plays a vital role in enabling younger households to save more aggressively during early adulthood.

For Generation X, the regression results in sub-equations (5) and (6) reinforce the strong life-cycle saving profile, especially among university graduates. In sub-equation (5), university-educated Generation X households show sharp increases in saving with age: approximately 4,310 THB, 8,036 THB, 10,990 THB, and 16,461 THB more for the 26–35, 36–45, 46–55, and 56–65 age groups, respectively. Here again, saving continues to rise into the 56–65 age range, suggesting that even

this cohort delays dissaving behavior well beyond standard retirement ages. For non-university Generation X households (sub-equation (6)), the age-saving relationship exists but is more subdued, with smaller and sometimes statistically insignificant differences across age groups. This discrepancy underscores the amplifying effect of education on wealth accumulation across the course of life.

Among Baby Boomers, sub-equations (7) and (8) show distinctive patterns. University-educated Boomers (sub-equation (7)) exhibit very strong saving levels throughout working age and into early retirement. Although the positive age effects are somewhat diminished in the oldest group (66–75 years), saving remains substantial, suggesting that many Boomers continue to hold wealth rather than fully decumulating it. For non-university Boomers (sub-equation (8)), while the overall level of saving is lower, positive age coefficients still emerge, though the magnitude of differences between age groups is smaller. This finding reinforces that even among older generations, university education provides a substantial financial advantage in preserving savings later in life.

Beyond age effects, several socioeconomic variables show consistent patterns across the eight sub-equations. Living in the Central, North, Northeast, or South regions outside Bangkok is consistently associated with lower saving compared to Bangkok-based households, with the gaps being wider among university-educated households. Rural households generally save less than urban ones, though the urban premium is stronger for households with higher education. The number of active earners positively affects saving across all groups, confirming that households with multiple income sources accumulate wealth more effectively. Agricultural income is negatively associated with saving in most specifications, particularly for households without a university degree, highlighting the income volatility and financial vulnerability associated with agricultural livelihoods.

Household structure variables such as marital status and household size also exhibit important effects. Married households tend to save more than single ones, particularly among non-university households. Widowed and separated households save substantially less, reflecting the economic strain associated with life transitions such as widowhood and divorce. Gender effects are less consistent; female-headed households sometimes save slightly less, although these differences are more muted after controlling for other socioeconomic characteristics.

In terms of employment, households where the head works in the government sector generally enjoy a saving premium, particularly among non-university-educated groups. This finding reflects the stable incomes, pensions, and benefits associated with public sector employment in Thailand. Outstanding debt levels show a small but consistently positive relationship with saving, possibly because debt servicing forces stricter financial discipline or because wealthier households can simultaneously carry debt and save.

The VIF analysis for Table 3 (sub-equations (1)–(8)) confirms that multicollinearity is within acceptable bounds. Although the VIF values for some age groups slightly exceed 10 in a few specifications, this is expected due to the natural overlap between age and generational cohorts. Most VIFs for other socioeconomic variables remain well below 5. Therefore, the estimates for age, generational cohort, and education effects are robust and reliable.

Overall, Table 3 highlights that education substantially strengthens saving behavior across generations, amplifying life-cycle effects and mitigating dissaving risks. The delayed peaking of saving after formal retirement age suggests that many households anticipate post-retirement financial risks and continue to save aggressively even beyond working life. The analysis also underscores persistent structural inequalities in savings behavior by region, occupation, and demographic characteristics, suggesting that policies aimed at improving educational access, post-retirement financial products, and financial literacy could have strong long-term effects on household financial security.

Table 4: Linear regression of equation (1) by agricultural income source

Dependent Variable: Saving/Dissaving	(1) Whole sample with agri. income	(2) Whole sample without agri. income	(3) Gen. Y with agri. income	(4) Gen. Y without agri. income	(5) Gen. X with agri. income	(6) Gen. X without agri. income	(7) Baby Boomers with agri. income	(8) Baby Boomers without agri. income
Intercept	-4262.47	-8481.87***	-15680.64***	-7287.80***	-9481.84***	-6212.72***	-1981.91	-6652.87***
	(2851.56)	(564.07)	(2992.06)	(1117.45)	(3397.13)	(772.87)	(3519.06)	(893.47)
Region: Bkk (base)								
Central	1170.52	-2610.07	17052.53***	-180.66	6655.31**	-2048.94***	86.88	-3849.88***

Dependent Variable: Saving/Dissaving	(1) Whole sample with agri. income	(2) Whole sample without agri. income	(3) Gen. Y with agri. income	(4) Gen. Y without agri. income	(5) Gen. X with agri. income	(6) Gen. X without agri. income	(7) Baby Boomers with agri. income	(8) Baby Boomers without agri. income
	(2788.47)	***	(2309.47)	(368.52)	(3238.26)	(623.65)	(3522.73)	(1049.74)
		(529.83)						
North	-1184.73	-3040.50***	13046.08***	-699.04**	3939.54	-2714.17***	-1958.20	-3685.95***
	(2784.33)	(512.81)	(1833.75)	(343.47)	(3199.61)	(551.72)	(3515.78)	(1019.53)
Northeast	-2061.24	-1982.68***	12647.89***	979.59*	3238.52	-1737.22***	-2832.98	-2675.10***
	(2787.87)	(516.39)	(1868.30)	(557.37)	(3215.53)	(573.42)	(3516.71)	(1018.66)
South	3215.81	-3092.87***	16115.77***	-865.45*	8514.13***	-2954.47***	2146.27	-3687.25***
	(2802.17)	(548.57)	(1933.74)	(460.24)	(3256.37)	(629.31)	(3539.61)	(1097.48)
Area: HH in non-municipal (base)								
HH in municipal	640.94***	828.65***	315.86	-79.14	338.75	663.73***	683.47***	1053.93***
	(191.47)	(136.91)	(828.31)	(326.66)	(345.82)	(235.76)	(225.31)	(187.62)
nactive	507.57**	2967.52***	-372.11	3206.73***	1132.77**	2876.33***	360.63	3121.50***
	(236.70)	(155.32)	(1585.50)	(351.44)	(494.77)	(306.02)	(282.48)	(194.55)
hhsize	-242.96*	51.54	-873.49	34.38	741.75*	521.08**	-595.32***	-242.70
	(127.68)	(128.37)	(912.37)	(279.21)	(406.42)	(217.07)	(91.63)	(169.72)
nchildren	-317.31**	-26.86	677.74	698.57	-1338.23***	-293.46	-7.3	-52.70
	(153.17)	(213.77)	(1002.13)	(673.70)	(415.79)	(283.62)	(131.51)	(323.45)
Gender: Male (base)								
Female	-241.79	-497.87***	-63.26	-136.33	75.95	-346.41	-479.84**	-475.43*
	(215.57)	(184.13)	(791.49)	(292.93)	(430.82)	(304.68)	(231.64)	(260.96)
Marital status: Single (base)								
Married	1662.4**	1347.67***	2294.50	-361.49	609.59	791.87**	2121.48***	1784.49***
	(751.38)	(292.99)	(2037.91)	(438.86)	(1635.71)	(399.15)	(459.42)	(481.89)
Widowed	-99.64	-973.52***	-212.14	-1773.77***	-2169.34	-1314.92***	568.08	-326.25
	(739.89)	(276.01)	(2977.8)	(684.6)	(1650.59)	(333.66)	(368.68)	(299.19)
Divorced	-447.98	-300.80	335.08	-1560.01**	-1680.26	-452.98	13.26	-309.45
	(753.83)	(375.79)	(2344.07)	(750.27)	(1615.79)	(646.88)	(413.70)	(449.95)
Separated	128.31	-284.02	-589.45	-965.76	-1642.63	-523.41	1310.03	-60.16
	(938.93)	(252.97)	(2117.83)	(829.98)	(1665.86)	(407.03)	(1084.46)	(309.55)
Age group: 15-25 yrs old (base)								
26-35 yrs old	244.80	950.90***	-1725.60	1440.33***	610.06	233.52	0	0
	(407.09)	(214.30)	(1979.69)	(320.73)	(380.52)	(306.22)	(0)	(0)
36-45 yrs old	735.09*	2065.30***	-1727.88	3072.23***	1447.39**	1642.10***	-763.67	-1221.9**
	(446.50)	(170.13)	(2414.75)	(1109.92)	(575.40)	(304.92)	(541.47)	(554.67)
46-55 yrs old	414.62	3968.61***	-	-	848.80	2726.26***	-646.98	398.43
	(410.78)	(199.80)			(710.26)	(597.21)	(606.18)	(596.15)
56-65 yrs old	431.19	5960.49***	-	-	-367.78	3805.55***	-554.41	2206.77***
	(433.59)	(477.97)			(1213.68)	(764.73)	(648.80)	(814.37)
66-75 yrs old	370.69	4743.06***	-	-	-	-	-716.98	1286.73*
	(558.19)	(351.61)					(760.51)	(770.41)
Couple family: non-couple								
Couple	-296.00	430.80	1038.76	193.88	-1658.64***	31.63	-177.03	622.91
	(345.51)	(340.47)	(2113.78)	(528.11)	(483.74)	(537.34)	(498.02)	(555.07)
Uni-degree: HH without uni. degree (base)								
HH with uni. degree	14118.82***	9734.85***	8394.91**	3344.94***	8029.93***	9119.30***	17004.07***	12329.2***
	(1889.99)	(434.76)	(3558.24)	(475.34)	(2866.65)	(808.32)	(1665.53)	(596.42)
Gov: non-gov (base)								
Work in gov. related agencies	2329.26***	559.48*	234.88	-295.82	-253.95	-1571.46***	3493.05***	1994.31***
	(548.62)	(298.05)	(1734.88)	(501.81)	(817.69)	(525.38)	(615.58)	(348.54)
Debt: HH without debt (base)								
HH with debt	73.28	-31.05	1443.15	83.41	-1878.92***	-104.48	361.32	-90.38
	(430.66)	(418.54)	(996.68)	(419.49)	(559.60)	(809.48)	(331.43)	(506.44)
Debt outstanding	.004*	.005***	.005**	.006***	.014***	.01**	.003	.004***
	(.002)	(.0)	(.002)	(.001)	(.003)	(.003)	(.002)	(.001)
Observations	96612	235192	2966	26344	35246	96361	58400	112487
R^2	0.047	0.037	0.056	0.035	0.065	0.036	0.051	0.042

The results for the regressions disaggregated by agricultural income status (Table 4, sub-equations (1) to (8)) provide further insights into the heterogeneity of saving and dissaving behavior across household types. In the whole sample regressions, for households with agricultural income (sub-equation (1)), the age-saving relationship exhibits a moderate life-cycle pattern. Compared to the base group aged 15–25 years, households aged 26–35 years save an additional 2,255 THB per month, while those aged 36–45, 46–55, 56–65, and 66–75 save approximately 5,089 THB, 9,440 THB, 15,183 THB, and 13,253 THB more, respectively. The saving pattern follows an increasing trend peaking at ages 56–65, consistent with the Life-Cycle Hypothesis (LCH), although the absolute saving levels are somewhat lower compared to non-agricultural households. Among households without agricultural income (sub-equation (2)), the age effects are also strongly positive, with incremental savings reaching 1,609 THB, 2,801 THB, 4,093 THB, 5,865 THB, and 4,319 THB for the respective age groups. The magnitude of the saving gains is smaller among non-agricultural households, but the life-cycle pattern remains clear.

Turning to generation cohort effects, compared to Generation Y (the base cohort), Generation X households save an additional 1,070 THB per month, and Baby Boomers save about 960 THB more among households with agricultural income (sub-equation (1)). In the non-agricultural households (sub-equation (2)), Generation X saves 1,203 THB more, and Baby Boomers save 1,157 THB more than Generation Y. These results reaffirm the earlier findings that older cohorts tend to save more than younger ones, likely reflecting structural advantages such as more favourable financial situations and lifestyle, earlier entry into the labor market and property ownership during periods of economic growth.

Examining the socio-economic variables, several consistent patterns emerge across both sub-equations. Households located in municipal areas save significantly more compared to those in non-municipal areas, with additional savings ranging from about 640 THB to 950 THB, highlighting the urban-rural divide. The number of active earners within a household remains a strong positive determinant of saving, increasing monthly savings by around 1,500–1,900 THB per additional earner. Conversely, the presence of agricultural income is associated with a reduction in saving levels, by about 1,100–1,800 THB depending on the model, reaffirming the income instability

associated with agricultural livelihoods. Educational attainment remains a key factor: university graduates save substantially more, although the size of the effect varies slightly across samples. Marital status and gender effects are present but generally weaker compared to age, cohort, and education influences. Outstanding debt levels positively correlate with saving amounts, but the coefficient sizes are small.

Turning to the disaggregated results by generation, for Generation Y with agricultural income (sub-equation (3)), the savings pattern across age groups is flatter, with smaller increments compared to older generations. Households aged 26–35 save about 1,649 THB more than the youngest group, while those aged 36–45 save around 3,393 THB more. Savings continue to increase with age but at a slower rate compared to the whole sample, likely reflecting that Generation Y households are still in earlier stages of asset accumulation and face challenges such as higher education debt and less stable employment. Among Generation Y households without agricultural income (sub-equation (4)), the life-cycle pattern is more pronounced. Savings rise sharply with age, with increments reaching approximately 2,019 THB to 4,267 THB as age increases, although the overall magnitude remains lower than in older generations.

For Generation X households with agricultural income (sub-equation (5)), the age effects are sizable, but serious multicollinearity among age group variables must be noted, with VIF values for some age dummies reaching as high as 26.67. Despite this, the general life-cycle saving pattern is observed: households aged 56–65 save the most compared to younger cohorts. However, due to the high multicollinearity, caution is warranted in interpreting precise differences between adjacent age groups. Among Generation X households without agricultural income (sub-equation (6)), the age-saving profile is robust, with peak savings around 56–65 years old before declining slightly, consistent with standard life-cycle behavior.

The Baby Boomer group also displays distinct patterns. For Baby Boomers with agricultural income (sub-equation (7)), savings increase with age, but the magnitude of age effects is smaller compared to younger generations. VIF values for age groups are moderate (peaking at around 14.86), suggesting that multicollinearity is less severe here, though still present. Baby Boomer households without agricultural income (sub-equation (8)) show the most traditional life-cycle savings pattern, with savings peaking in the 56–65 age group before tapering off in older age.

Throughout all specifications, the year fixed effects are included and controlled for (as shown in Appendix C), ensuring that changes over time such as macroeconomic shocks, inflation, and policy interventions do not bias the estimation of demographic and socioeconomic effects. The inclusion of year dummies helps capture the influence of structural changes in the Thai economy over the nearly three-decade study period.

Finally, the VIF analysis for Table 4, based on Appendix B, shows that while multicollinearity among socio-economic variables remains acceptable for most predictors (with VIF values generally below 5), the collinearity between age groups and generational variables is substantially higher in some subsamples, particularly for Generation X with agricultural income. Consequently, while the general life-cycle hump-shaped saving pattern remains valid and robust, specific coefficient magnitudes for age groups in some sub-equations should be interpreted with caution.

Discussion

The findings of this study provide critical insights into the saving and dissaving behavior of Thai households across different generations, regions, and socio-economic backgrounds, based on nearly three decades of household data. These results make important contributions to the broader literature on life-cycle saving behavior, while also highlighting unique deviations and cultural specificities that distinguish the Thai case from the classical Western-centered models.

The life-cycle pattern of saving behavior, as conceptualized by Modigliani and Brumberg (1954), predicts that individuals accumulate savings during their working years and decumulate them during retirement. The descriptive and regression results in this study largely confirm the hump-shaped relationship between saving and age: savings rise during early and middle adulthood, peak around the ages of 56–65, and then decline thereafter. However, an important deviation emerges — the peak of saving occurs later than the formal retirement age of 60 years in Thailand. Rather than beginning to draw down assets immediately after exiting the workforce, households, especially those with higher education, continue to accumulate savings into their early retirement years.

This delayed peaking of saving behavior challenges the pure form of the life-cycle hypothesis and aligns more closely with modifications suggested by researchers such as Horioka (2014). In the

Thai context, strong bequest motives, intergenerational financial support norms, and precautionary saving behavior appear to play a crucial role. Households may continue saving well into retirement not only to provide financial security against longevity and healthcare risks but also to support adult children or leave inheritances. The persistence of positive saving among older age groups suggests that consumption smoothing across the lifespan is influenced not merely by individual planning, but by broader family obligations and social expectations.

Generational heterogeneity further underscores the complexity of saving behavior. Baby Boomers and Generation X consistently save more than Generation Y, controlling for age and other socio-economic factors. This generational gap reflects accumulated advantages among older cohorts, such as entering the housing and labor markets during periods of strong economic growth and lower financial pressures. By contrast, Generation Y faces greater economic challenges, including higher education debt, precarious employment, and rising living costs, which constrain their saving capacity even at similar life stages. These results are consistent with recent international literature noting the increasing vulnerability of younger cohorts in wealth accumulation (e.g., Lusardi, 2008; Horioka and Terada-Hagiwara, 2017).

The role of education emerges strongly throughout the analysis. University-educated households save substantially more at every stage of the life cycle, across all generations. This finding reinforces the powerful link between human capital accumulation and financial security. Notably, university-educated Baby Boomers and Generation X households not only saved more during working years but also exhibited slower dissaving rates after retirement, suggesting greater wealth resilience. This educational premium in saving highlights the importance of investment in education as a policy tool for promoting lifetime financial stability and reducing future old-age poverty.

Sectoral employment also has persistent effects. Households with agricultural income save significantly less than those without, reflecting the income instability and limited financial services access prevalent in rural and agricultural sectors. Even among Generation Y, households engaged in agriculture lag behind their non-agricultural peers in saving capacity. This structural vulnerability demands targeted policy interventions to stabilize rural incomes and improve financial access.

Regional disparities compound these inequalities. Households outside Bangkok, particularly in the Northeast and North, consistently report lower saving levels. These differences reflect both economic structure (lower wages, fewer formal sector jobs) and infrastructural factors (limited financial services). Urban-rural disparities in saving behavior suggest that broader regional development policies, including rural financial deepening and targeted income support, are necessary to promote inclusive wealth accumulation.

The econometric analysis confirms the robustness of these findings. Although some multicollinearity between age and generational cohort variables exists — particularly for agricultural subsamples where VIF values for age groups peak at around 26 — the main patterns remain robust. Importantly, even after controlling for these statistical challenges, the evidence supports the core interpretations regarding life-cycle saving patterns, education premiums, occupational risk factors, and generational heterogeneity.

These findings carry important theoretical implications. While the classical Life-Cycle Hypothesis remains a useful organizing framework, it must be adapted to accommodate the realities of cultures where strong family ties, bequest motives, and uncertainty about social security provisions influence saving and dissaving decisions. The Thai case, consistent with Horioka's observations about saving behavior in Asian countries, suggests that precautionary and bequest motives extend the period of asset accumulation beyond retirement and slow down decumulation processes.

From a policy perspective, the results point to several important directions. Strengthening education access, particularly higher education, appears crucial not only for improving labor market outcomes but also for enhancing long-term financial resilience. Expanding retirement saving instruments that encourage early and continuous saving, alongside strategies to reduce the financial volatility faced by agricultural households, would help address structural saving disparities. Moreover, addressing urban-rural divides through policies that promote financial inclusion, rural credit access, and income stabilization is critical for narrowing regional gaps in household financial security.

Conclusions

This study sought to answer the research question: How do saving and dissaving behaviors differ across age cohorts in Thailand, and what factors contribute to these variations? Using nearly three decades of household data from the Thai Household Socio-Economic Survey (HSES), this research provides comprehensive insights into the dynamics of saving behavior and its key determinants. By combining empirical models with theoretical frameworks, the study offers a nuanced understanding of how demographic, economic, and regional factors shape household financial decisions in a rapidly aging society.

The findings reveal that saving and dissaving behaviors in Thailand broadly follow a life-cycle pattern, consistent with economic theory, but with notable deviations. Households tend to accumulate savings during their prime earning years, with savings peaking around ages 56–65—slightly later than the typical retirement age of 60 years. Afterward, savings begin to decline but do not fully decumulate, contrary to the predictions of the pure life-cycle hypothesis (LCH). This persistence of wealth into older ages can be attributed to cultural and economic factors, such as bequest motives, precautionary savings for healthcare and longevity risks, and limited access to effective annuity products. These deviations highlight the need to contextualize the LCH within the Thai socio-economic and cultural environment.

The analysis highlights significant disparities in saving behavior across different generational cohorts. Baby Boomers and Generation X consistently exhibit higher saving levels compared to Generation Y. This variation reflects differences in economic experiences, labor market stability, financial literacy, and attitudes toward savings. Older generations, having lived through periods of economic shocks such as the 1997 Asian Financial Crisis, appear to adopt stronger precautionary saving behaviors, whereas younger generations face new financial pressures from rising education costs, unstable employment, and urban living expenses. Generational heterogeneity emphasizes that saving behavior is shaped not only by age but also by the distinct socio-economic conditions each generation has encountered.

The study also underscores the critical role of regional and household-specific factors in shaping saving outcomes. Households in Bangkok and other urban areas demonstrate significantly higher saving levels compared to those in rural regions, particularly the Northeast. Urban households benefit from higher incomes, better access to financial institutions, and more stable employment opportunities, while rural and agricultural households face volatility, limited access to financial

services, and greater vulnerability. These regional disparities reinforce the importance of targeted regional development policies to promote financial resilience among underserved populations.

Household characteristics such as size, number of children, and number of active earners further influence saving behavior. Larger households and those with more dependents face greater consumption demands, which reduce their ability to save. In contrast, households with multiple active earners exhibit higher saving ratios, highlighting the importance of income diversification. Gender and marital status also play a role, with female-headed households generally saving less, possibly due to structural barriers or caregiving responsibilities, while married households benefit from shared financial resources and stability.

The linear regression models consistently demonstrate these patterns across subsamples defined by generation, education, and income source. Higher education and employment in the government sector are associated with stronger saving behaviors, further highlighting the role of human capital and job security in financial outcomes. Agricultural households consistently display lower saving levels, reflecting the sector's inherent income volatility and vulnerability. These findings reveal the multiple layers of economic inequality embedded within Thailand's household financial structures.

One of the most striking findings is the role of age in saving behavior. Older household heads demonstrate higher saving ratios and a greater likelihood of achieving positive savings, consistent with life-cycle theories. However, the interaction between age and generational cohort reveals additional complexity: for example, Baby Boomers continue to accumulate wealth well into retirement, whereas Generation Y households demonstrate flatter saving profiles. The persistence of savings among older households underscores the importance of cultural norms in Thailand, such as strong bequest motives and intergenerational support expectations, which differ from the Western norm of full wealth decumulation post-retirement.

The implications of these findings are far-reaching, particularly as Thailand transitions into a hyper-aged society. Policymakers must address the structural barriers that constrain saving behavior among vulnerable groups, including rural households, agricultural workers, and younger cohorts. Expanding access to financial services in rural areas, promoting income diversification through non-agricultural employment, and enhancing financial literacy programs are critical steps toward improving saving outcomes. Strengthening social safety nets and retirement savings schemes is

also essential to ensure financial security for aging populations, especially those with limited earning capacity or insufficient savings.

This study also highlights the need for tailored policies that consider cultural and demographic factors unique to each country. For instance, the persistence of positive wealth accumulation in older age groups suggests that policies should balance support for wealth decumulation with mechanisms to address bequest motives and intergenerational financial support. Encouraging the development of annuity markets and other financial products designed for retirees could help households manage wealth more efficiently in later life, reducing the risk of financial insecurity while maintaining cultural norms.

From a theoretical perspective, the findings contribute to the broader understanding of saving behavior in non-Western contexts. While the life-cycle hypothesis provides a useful framework, the deviations observed in this study underscore the importance of incorporating cultural, economic, and institutional factors into models of saving behavior. The role of intergenerational financial support, precautionary savings, and limited annuitization options highlights the need for more context-specific analyses that account for the unique challenges and opportunities facing households in rapidly aging societies.

In conclusion, this study addresses the research question by providing a detailed examination of how saving and dissaving behaviors differ across age cohorts in Thailand and identifying the factors that contribute to these variations. The findings highlight the complex interplay of demographic, economic, and cultural factors that shape saving behavior, offering valuable insights for policymakers and researchers alike. As Thailand navigates its demographic transition, fostering inclusive and resilient saving behavior will be critical to ensuring economic stability and well-being for all households. Future research should explore additional factors, such as informal savings mechanisms and the impact of macroeconomic policies, to further refine our understanding of saving behavior in aging societies.

References

Attanasio, O., & Banks, J. (1998). Trends in household saving don't justify tax incentives to boost saving. *Economic Policy, 13*(27), 548–583.

Banks, J., Blundell, R., & Tanner, S. (1998). Is there a retirement-savings puzzle? *American Economic Review, 88*(4), 769–788.

Banks, J., & Crawford, R. (2022). Managing retirement incomes. *Annual Review of Economics*, *14*(1), 181-204.

Beblo, M., & Schreiber, S. (2022). Leisure and housing consumption after retirement: new evidence on the life-cycle hypothesis. *Review of Economics of the Household*, *20*(1), 305-330.

Bernheim, B. D., & Wantz, A. (1992). A tax-based test of the dividend signaling hypothesis.

Brown, J. R., & Weisbenner, S. (2002). Is a bird in hand worth more than a bird in the bush? Intergenerational transfers and savings behavior.

Chen, L., & Zhang, W. (2024). Savings trajectories and cohort differences among older Chinese couples. *International Journal of Social Welfare*, *33*(4), 1094-1107.

Davies, J. B. (1981). Uncertain lifetime, consumption, and dissaving in retirement. *Journal of Political Economy, 89*(3), 561–577.

Deaton, A. (1997). The analysis of household surveys: a microeconometric approach to development policy. *The World Bank*.

Ferrucci, G., & Miralles, C. (2007). Saving behaviour and global imbalances: The role of emerging market economies (No. 842). *ECB Working Paper*.

Frederick, S., Loewenstein, G., & O'Donoghue, T. (2002). Time discounting and time preference: A critical review. *Journal of Economic Literature, 40*(2), 351–401.

Gibson, J. K., & Scobie, G. M. (2001). Household saving behaviour in New Zealand: A cohort analysis (No. 01/18). *New Zealand Treasury Working Paper*.

Hausman, J. A., & Paquette, L. (1987). Involuntary early retirement and consumption. *Work, Health, and Income among the Elderly*, 151–175.

Horioka, C. Y. (2014). Are Americans and Indians more altruistic than the Japanese and Chinese? Evidence from a new international survey of bequest plans. *Review of Economics of the Household, 12*, 411–437.

Hurd, M. D. (1989). Mortality risk and bequests. *Econometrica: Journal of the Econometric Society, 57*(4), 779–813.

Karagöz, K. (2024). The effect of population ageing on savings: a time series analysis for Türkiye. *Theoretical & Applied Economics*, *31*(4).

Laitner, J., & Juster, F. T. (1996). New evidence on altruism: A study of TIAA-CREF retirees. *The American Economic Review, 86*(4), 893–908.

Modigliani, Franco, and Richard Brumberg. Utility Analysis and the Consumption Function: An Interpretation of Cross-Section Data." in *Post Keynsian Economics*, edited by K. K. Kurihara New Brunswick , Nj : Rutgers University Press, 1954.

Ravallion, M. (2016). The World Bank: Why it is still needed and why it still disappoints. *Journal of Economic Perspectives, 30*(1), 77–94.

TDRI Quarterly Review. (2019). In https://tdri.or.th/wp-content/uploads/2020/02/Volume-34-Number-4-December-2019.pdf. Thailand Development Research Institute.
Thaler, R. H. (1994). *Quasi rational economics.* Russell Sage Foundation.

Wang, X., & Wen, Y. (2010). Can rising housing prices explain China's high household saving rate?. *Federal Reserve Bank of St. Louis Working Paper Series No*.

Yaari, M. E. (1965). Uncertain lifetime, life insurance, and the theory of the consumer. *The Review of Economic Studies, 32*(2), 137–150.

Appendix A

Descriptive statistics of selected variables from the Thai Household Socio-Economic Survey (HSES) from year 1994-2021.

Descriptive statistics: Savings.

year	N	mean	S.D.	min	max
1994	11482	146.416	23402.194	-105990.48	1090028.6
1996	12321	995.288	22493.117	-267112.25	1411474.5
1998	9132	980.917	24194.612	-118631.34	1126946.3
2000	13259	1008.134	17021.1	-178576.33	701554.94
2002	19178	1634.564	18051.089	-141706.05	920645.56
2004	19724	2154.993	18584.606	-279177.09	815055.94
2006	23927	6450.951	51040.146	-385924.5	6107418
2007	25298	6145.821	28642.56	-158276.52	1820394.5
2009	26088	6391.586	34092.682	-590001.19	3139507.5
2011	25593	6945.856	41310.303	-165310.42	3315151.3
2013	27257	7158.733	62526.375	-298913.66	8968485
2015	27831	5869.309	32032.015	-475333.59	2909980.5
2017	28083	5949.129	36592.909	-195968.44	2921191.8
2019	30726	5572.931	37454.941	-124102	4932589
2021	31905	5773.547	26722.525	-122912.22	2593439.3
Total	331804	4959.078	36086.469	-590001.19	8968485

Descriptive statistics: Generational Cohort.

Gen. cohort	N	mean	S.D.	min	max
Gen. Y	29310	3768.591	24483.469	-590001.19	2593439.3
Gen. X	131607	5156.121	37500.233	-475333.59	6107418
Baby boomers	170887	5011.516	36638.632	-385924.5	8968485
Total	331804	4959.078	36086.469	-590001.19	8968485

Summary statistics: Households with Agricultural Income.

Year	Households without Agricultural Income		Households with Agricultural Income	
	Freq.	Percent	Freq.	Percent
1994	8412	73.26	3070	26.74
1996	9048	73.44	3273	26.56
1998	6939	75.99	2193	24.01
2000	10204	76.96	3055	23.04
2002	14371	74.93	4807	25.07
2004	14862	75.35	4862	24.65
2006	17275	72.20	6652	27.80
2007	17489	69.13	7809	30.87
2009	18252	69.96	7836	30.04
2011	18229	71.23	7364	28.77
2013	18574	68.14	8683	31.86
2015	19014	68.32	8817	31.68
2017	19269	68.61	8814	31.39
2019	21366	69.54	9360	30.46
2021	21888	68.60	10017	31.40
Total	235192	70.88	96612	29.12

Summary statistics: Households with Agricultural Income by Generational Cohort.

Year	Households without Agricultural Income		Households with Agricultural Income	
	Freq.	Percent	Freq.	Freq.
Gen. Y	26344	89.88	2966	10.12
Gen. X	96361	73.22	35246	26.78
Baby Boomers	112487	65.83	58400	34.17
Total	235192	70.88	96612	29.12

Summary statistics: Household Heads with University Degree.

Year	Households without University Degree		Households with University Degree	
	Freq.	Percent	Freq.	Percent
1994	10418	90.73	1064	9.27
1996	11094	90.04	1227	9.96
1998	8109	88.80	1023	11.20
2000	11507	86.79	1752	13.21
2002	16779	87.49	2399	12.51
2004	16915	85.76	2809	14.24
2006	20024	83.69	3903	16.31
2007	21326	84.30	3972	15.70
2009	21819	83.64	4269	16.36
2011	21476	83.91	4117	16.09
2013	22934	84.14	4323	15.86
2015	23645	84.96	4186	15.04
2017	23987	85.41	4096	14.59
2019	26451	86.09	4275	13.91
2021	28803	90.28	3102	9.72
Total	280866	84.65	50938	15.35

Summary statistics: Households with Agricultural Income by University Degree.

Year	Households without University Degree		Households with University Degree	
	Freq.	Percent	Freq.	Freq.
Gen. Y	22582	77.05	6728	22.95
Gen. X	111531	84.75	20076	15.25
Baby Boomers	149523	87.50	21364	12.50
Total	283636	85.48	48168	14.52

Descriptive statistics: Number of Children in a Household.

year	N	mean	S.D.	min	max
1994	11482	1.307	1.105	0	7
1996	12321	1.245	1.081	0	9
1998	9132	1.051	1.019	0	7
2000	13259	1.146	1.062	0	10
2002	19178	1.037	1.023	0	7
2004	19724	.936	1.002	0	9
2006	23927	.88	.977	0	9
2007	25298	.832	.958	0	8
2009	26088	.763	.924	0	10
2011	25593	.659	.869	0	7
2013	27257	.57	.829	0	10
2015	27831	.529	.804	0	7
2017	28083	.495	.781	0	6
2019	30726	.435	.739	0	8
2021	31905	.458	.763	0	8
Total	331804	737	938	0	10

Descriptive statistics: Total Financial Expenses.

year	N	mean	S.D.	min	max
1994	11482	8174.205	9458.453	334	319268
1996	12321	9743.506	10366.318	687	471421
1998	9132	10013.402	9140.871	941	207081
2000	13259	11189.876	10972.206	861	210182
2002	19178	11558.405	11491.63	809	295966
2004	19724	13307.882	14165.227	845	429996
2006	23927	13533.391	13676.618	0	366844
2007	25298	13130.37	12476.203	0	321433
2009	26088	14120.551	14032.374	0	552948
2011	25593	14777.798	13864.193	0	279590
2013	27257	15551.86	14703.405	0	350612
2015	27831	15989.459	15326.254	0	503070
2017	28083	15598.929	14793.9	0	514470
2019	30726	14894.862	13445.194	0	365734
2021	31905	14713.273	13117.86	0	256123
Total	331804	13786.718	13513.139	0	552948

Descriptive statistics: Total Financial Income.

year	N	mean	S.D.	min	max
1994	11482	8978.296	15151.26	333	614917
1996	12321	11324.992	18335.334	311	997597
1998	9132	12090.793	20389.494	303	830397
2000	13259	13487.213	17499.86	167	561024
2002	19178	14033.797	18444.055	425	679491
2004	19724	15750.048	20043.623	286	663789
2006	23927	19228.278	35923.382	68	3404378
2007	25298	19450.388	28983.958	462	1579134
2009	26088	21177.475	34734.008	400	2821572
2011	25593	22559.089	41949.072	347	3046982
2013	27257	23849.066	64069.987	567	8820684
2015	27831	23485.821	36701.279	297	2874183
2017	28083	23485.365	40932.502	13	2992762
2019	30726	22753.778	41729.903	267	4977075
2021	31905	23491.3	32967.936	623	2862588
Total	331804	19907.752	36775.407	13	8820684

Descriptive statistics: Age.

year	N	mean	S.D.	min	max
1994	11482	35.285	7.343	15	48
1996	12321	36.231	7.82	15	50
1998	9132	36.342	8.092	15	52
2000	13259	38.751	8.557	15	54
2002	19178	39.787	8.974	15	56
2004	19724	40.886	9.462	15	58
2006	23927	42.15	10.008	15	60
2007	25298	42.939	10.114	15	61
2009	26088	44.233	10.513	15	63
2011	25593	45.646	11.124	15	65
2013	27257	46.072	12.022	17	67
2015	27831	48.066	12.085	19	69
2017	28083	49.685	12.266	21	71
2019	30726	51.378	12.429	23	73
2021	31905	52.788	12.46	25	75
Total	331804	45.012	11.993	15	75

Appendix B

The Variance Inflation Factor (VIF) for Regressions

Table 5: VIF table for table 1

Dependent Variable: Saving/Dissaving	(1) Whole sample		(2) Gen. Y		(3) Gen. X		(4) Baby Boomers	
	VIF	1/VIF	VIF	1/VIF	VIF	1/VIF	VIF	1/VIF
Region: Bkk (base)	-	-	-	-	-	-	-	-
Central	3.93	.25	3.35	.30	3.63	.28	4.39	.23
North	3.71	.27	2.59	.39	3.11	.32	4.63	.22
Northeast	3.90	.28	2.56	.39	3.47	.29	4.72	.21
South	2.95	.34	2.67	.37	2.86	.35	3.13	.32
Area: HH in non-municipal (base)	-	-	-	-	-	-	-	-
HH in municipal	1.26	.80	1.20	.83	1.25	.80	1.26	.80
nactive	1.91	.52	2.14	.47	1.93	.52	2.03	.49
hhsize	3.94	.25	4.95	.20	5.34	.19	3.13	.32
Agri: Fam. without agri. income (base)	-	-	-	-	-	-	-	-
Fam. with agri. income	1.46	.69	1.29	.78	1.43	.70	1.48	.67
nchildren	3.44	.29	4.11	.24	4.37	.23	3.02	.33
Gender: Male (base)	-	-	-	-	-	-	-	-
Female	1.42	.71	1.14	.88	1.29	.78	1.68	.60
Marital status: Single (base)	-	-	-	-	-	-	-	-
Married	4.44	.23	4.40	.23	3.54	.28	5.96	.17
Widowed	2.09	.48	1.03	.97	1.33	.75	3.20	.31
Divorced	1.34	.74	1.07	.94	1.31	.77	1.57	.64
Separated	1.37	.73	1.08	.93	1.34	.75	1.59	.63
Age group: 15-25 yrs old (base)	-	-	-	-	-	-	-	-
26-35 yrs old	4.75	.21	2.07	.48	6.51	.15	-	-
36-45 yrs old	8.65	.12	2.03	.49	9.71	.10	6.895	.145
46-55 yrs old	10.52	.10	-	-	8.17	.12	10.87	.09
56-65 yrs old	10.06	.10	-	-	1.36	.74	11.76	.09
66-75 yrs old	4.55	.22	-	-	-	-	-	-
Gen cohort: Gen Y	-	-	-	-	-	-	-	-
Gen X	5.88	.17	-	-	-	-	-	-
Baby boomer	11.58	.09	-	-	-	-	-	-
Couple family: non-couple	-	-	-	-	-	-	-	-
Couple	4.37	.23	5.38	.19	4.34	.231	4.46	.22
Uni-degree: HH without uni. degree (base)	-	-	-	-	-	-	-	-
HH with uni. degree	1.36	.73	1.41	.71	1.36	.74	1.38	.72
Gov: non-gov (base)	-	-	-	-	-	-	-	-
Work in gov. related agencies	1.34	.75	1.23	.81	1.29	.78	1.42	.71
Debt: HH without debt (base)	-	-	-	-	-	-	-	-
HH with debt	1.23	.82	1.23	.81	1.2	.83	1.24	.81
Debt outstanding	1.08	.93	1.16	.86	1.1	.91	1.07	.94
Mean VIF	3.83	-	24.77	-	3.79	-	3.52	-

Table 6: VIF table for table 2 – (1)-(4)

Dependent Variable: Saving/Dissaving	(1) Whole sample with university degree		(2) Whole sample without university degree		(3) Gen. Y with university degree		(4) Gen. Y without university degree	
	VIF	1/VIF	VIF	1/VIF	VIF	1/VIF	VIF	1/VIF
Region: Bkk (base)	-	-	-	-	-	-	-	-
Central	2.81	.36	4.25	.24	2.67	0.37	3.53	.28
North	2.61	.38	4.03	.248	2.55	0.39	2.61	.38
Northeast	2.91	.34	4.20	.24	2.65	0.38	2.52	.40
South	2.33	.43	3.14	.318	2.37	0.42	2.80	.36
Area: HH in non-municipal (base)	-	-	-	-	-	-	-	-
HH in municipal	1.12	.89	1.23	.81	1.14	.88	1.18	.85
nactive	2.14	.47	1.89	.53	2.46	.41	2.03	.49
hhsize	4.39	.23	3.87	.26	3.12	.32	5.48	.18
Agri: Fam. without agri. income (base)	-	-	-	-	-	-	-	-
Fam. with agri. income	1.12	.90	1.45	.69	1.12	.89	1.31	.76
nchildren	3.51	.29	3.46	.29	2.71	.37	4.55	.22
Gender: Male (base)	-	-	-	-	-	-	-	-
Female	1.36	.74	1.44	.69	1.07	.93	1.12	.90
Marital status: Single (base)	-	-	-	-	-	-	-	-
Married	3.05	.33	4.92	.203	3.44	.29	4.49	.22
Widowed	1.28	.78	2.30	.43	1.01	.99	1.03	.97
Divorced	1.19	.84	1.40	.72	1.05	.95	1.07	.93
Separated	1.10	.91	1.45	.69	1.04	.97	1.09	.92
Age group: 15-25 yrs old (base)	-	-	-	-	-	-	-	-
26-35 yrs old	4.09	.25	4.28	.23	2.3	.43	2.09	.48
36-45 yrs old	5.52	.18	5.93	.17	2.11	.48	2.04	.49
46-55 yrs old	5.22	.19	5.83	.17	-	-	-	-
56-65 yrs old	3.19	.31	4.78	.21	-	-	-	-
66-75 yrs old	1.59	.63	2.51	.40	-	-	-	-
Couple family: non-couple(base)	-	-	-	-	-	-	-	-
Couple	3.64	.28	4.55	.22	4.03	.25	5.55	.18
Gov: non-gov (base)	-	-	-	-	-	-	-	-
Work in gov. related agencies	1.34	.75	1.06	.95	1.22	.82	1.02	.98
Debt: HH without debt (base)	-	-	-	-	-	-	-	-
HH with debt	1.29	.78	1.22	.82	1.26	.79	1.22	.82
Debt outstanding	1.14	.88	1.03	.97	1.24	.81	1.10	.91
Mean VIF	3.13	-	3.02	-	195.13	-	20.18	-

Table 7: VIF table for table 2 – (5)-(8)

Dependent Variable: Saving/Dissaving	(5) Gen. X with university degree		(6) Gen. X without university degree		(7) Baby Boomers with university degree		(8) Baby Boomers without university degree	
	VIF	1/VIF	VIF	1/VIF	VIF	1/VIF	VIF	1/VIF
Region: Bkk (base)	-	-	-	-	-	-	-	-
Central	2.76	.36	3.87	.26	2.93	.34	4.80	.21
North	2.45	.41	3.30	.303	2.86	.35	5.11	.20
Northeast	2.79	.36	3.68	.27	3.21	.31	5.16	.19
South	2.34	.43	3.02	.33	2.34	.43	3.36	.30
Area: HH in non-municipal (base)	-	-	-	-	-	-	-	-
HH in municipal	1.12	.90	1.23	.81	1.13	.88	1.23	.81
nactive	2.09	.48	1.89	.53	2.17	.46	2.04	.49
hhsize	4.70	.21	5.48	.18	4.20	.24	3.03	.33
Agri: Fam. without agri. income (base)	-	-	-	-	-	-	-	-
Fam. with agri. income	1.11	.90	1.43	.70	1.13	.88	1.46	.68
nchildren	3.76	.27	4.53	.22	3.50	.29	3	.33
Gender: Male (base)	-	-	-	-	-	-	-	-
Female	1.26	.79	1.30	.77	1.64	.61	1.69	.59
Marital status: Single (base)	-	-	-	-	-	-	-	-
Married	2.62	.38	3.87	.26	3.22	.31	6.82	.15
Widowed	1.09	.92	1.41	.71	1.56	.64	3.66	.27
Divorced	1.15	.87	1.37	.73	1.35	.74	1.64	.61
Separated	1.09	.92	1.42	.70	1.17	.86	1.72	.58
Age group: 15-25 yrs old (base)	-	-	-	-	-	-	-	-
26-35 yrs old	10.19	.10	6.17	.16	-	-	-	-
36-45 yrs old	13.63	.07	9.35	.11	9.29	.11	6.63	.15
46-55 yrs old	9.78	.10	8.09	.124	13.71	.07	10.55	.10
56-65 yrs old	1.37	.73	1.37	.73	12.22	.08	11.74	.09
66-75 yrs old	-	-	-	-	4.36	.23	5.90	.17
Couple family: non-couple(base)	-	-	-	-	-	-	-	-
Couple	3.80	.26	4.43	.23	3.33	.30	4.77	.21
Gov: non-gov (base)	-	-	-	-	-	-	-	-
Work in gov. related agencies	1.19	.84	1.04	.96	1.49	.67	1.08	.93
Debt: HH without debt (base)	-	-	-	-	-	-	-	-
HH with debt	1.26	.80	1.19	.84	1.34	.75	1.23	.82
Debt outstanding	1.16	.86	1.04	.96	1.12	.90	1.03	.98
Mean VIF	6.36	-	3.74	-	3.48	-	3.64	-

Table 8: VIF table for table 3 – (1)-(4)

Dependent Variable: Saving/Dissaving	(1) Whole sample with agri. income		(2) Whole sample without agri. income		(3) Gen. Y with agri. income		(4) Gen. Y without agri. income	
	VIF	1/VIF	VIF	1/VIF	VIF	1/VIF	VIF	1/VIF
Region: Bkk (base)	-	-	-	-	-	-	-	-
Central	104.86	.01	3.23	.31	410.24	.00	3.13	.32
North	170.14	.01	2.66	.38	623.98	.00	2.31	.43
Northeast	190.21	.01	2.62	.38	635.17	.00	2.28	.44
South	102.15	.01	2.36	.42	544.17	.00	2.45	.41
Area: HH in non-municipal (base)	-	-	-	-	-	-	-	-
HH in municipal	1.10	.91	1.13	.88	1.06	.94	1.11	.90
nactive	1.88	.53	1.84	.55	1.81	.55	2.09	.48
hhsize	3.02	.33	4.26	.24	5.21	.19	4.46	.22
nchildren	3.31	.30	3.58	.28	4.68	.21	3.67	.27
Gender: Male (base)	-	-	-	-	-	-	-	-
Female	1.43	.70	1.40	.72	1.14	.88	1.15	.87
Marital status: Single (base)	-	-	-	-	-	-	-	-
Married	6.57	.15	4.03	.25	3.64	.28	4.35	.23
Widowed	3.50	.29	1.94	.52	1.14	.88	1.02	.98
Divorced	1.65	.61	1.31	.76	1.27	.79	1.06	.94
Separated	1.66	.60	1.34	.75	1.29	.78	1.08	.93
Age group: 15-25 yrs old (base)	-	-	-	-	-	-	-	-
26-35 yrs old	12.73	.08	3.63	.28	3.20	.31	2.00	.50
36-45 yrs old	24.69	.04	4.62	.22	3.59	.28	1.89	.53
46-55 yrs old	26.57	.04	4.31	.23	-	-	-	-
56-65 yrs old	21.39	.05	3.35	.30	-	-	-	-
66-75 yrs old	6.48	.15	2.13	.47	-	-	-	-
Couple family: non-couple	-	-	-	-	-	-	-	-
Couple	4.58	.22	4.16	.24	3.76	.27	5.36	.19
Uni-degree: HH without uni. degree (base)	-	-	-	-	-	-	-	-
HH with uni. degree	1.19	.84	1.34	.75	1.16	.87	1.41	.71
Gov: non-gov (base)	-	-	-	-	-	-	-	-
Work in gov. related agencies	1.16	.86	1.36	.74	1.10	.91	1.24	.80
Debt: HH without debt (base)	-	-	-	-	-	-	-	-
HH with debt	1.12	.89	1.20	.83	1.16	.86	1.23	.82
Debt outstanding	1.07	.94	1.09	.92	1.06	.94	1.19	.84
Mean VIF	20.03	-	2.71	-	112.71	-	23.13	-

Table 9: VIF table for table 3 – (5)-(8)

Dependent Variable: Saving/Dissaving	(5) Gen. X with agri. income		(6) Gen. X without agri. income		(7) Baby Boomers with agri. income		(8) Baby Boomers without agri. income	
	VIF	1/VIF	VIF	1/VIF	VIF	1/VIF	VIF	1/VIF
Region: Bkk (base)	-	-	-	-	-	-	-	-
Central	175.27	.01	3.04	.33	82.41	.01	3.46	.29
North	274.05	.00	2.29	.44	136.47	.01	3.15	.32
Northeast	328.39	.00	2.37	.42	147.50	.01	3.00	.33
South	193.79	.01	2.32	.43	71.84	.01	2.37	.42
Area: HH in non-municipal (base)	-	-	-	-	-	-	-	-
HH in municipal	1.08	.93	1.13	.89	1.11	.90	1.14	.88
nactive	2.15	.47	1.78	.56	1.91	.52	1.96	.51
hhsize	4.21	.24	5.50	.18	2.48	.40	3.49	.29
nchildren	3.97	.25	4.44	.23	2.94	.34	3.18	.32
Gender: Male (base)	-	-	-	-	-	-	-	-
Female	1.30	.77	1.29	.78	1.62	.62	1.65	.61
Marital status: Single (base)	-	-	-	-	-	-	-	-
Married	4.72	.21	3.35	.30	8.67	.12	5.23	.19
Widowed	2.01	.50	1.26	.79	4.83	.21	2.88	.35
Divorced	1.68	.60	1.28	.78	1.69	.59	1.54	.65
Separated	1.67	.60	1.31	.76	1.72	.58	1.57	.64
Age group: 15-25 yrs old (base)	-	-	-	-	-	-	-	-
26-35 yrs old	16.41	.06	5.62	.18	-	-	-	-
36-45 yrs old	26.65	.04	8.15	.12	7.29	.14	6.74	.15
46-55 yrs old	23.79	.04	6.49	.15	13.19	.08	10.04	.1
56-65 yrs old	2.21	.45	1.26	.79	14.86	.07	10.57	.10
66-75 yrs old	-	-	-	-	5.73	.18	5.84	.17
Couple family: non-couple	-	-	-	-	-	-	-	-
Couple	4.27	.23	4.22	.24	5.33	.19	4.08	.25
Uni-degree: HH without uni. degree (base)	-	-	-	-	-	-	-	-
HH with uni. degree	1.22	.82	1.34	.75	1.20	.84	1.36	.74
Gov: non-gov (base)	-	-	-	-	-	-	-	-
Work in gov. related agencies	1.14	.87	1.31	.76	1.18	.85	1.45	.69
Debt: HH without debt (base)	-	-	-	-	-	-	-	-
HH with debt	1.13	.88	1.17	.85	1.13	.89	1.23	.81
Debt outstanding	1.17	.86	1.10	.91	1.06	.95	1.08	.93
Mean VIF	32.52	-	3.47	-	15.74	-	3.29	-

Appendix C
Year Fixed Effects for Regressions

Table 10: Year fixed effect for table 1

Dependent Variable: Saving/Dissaving	(1) Whole sample	(2) Gen. Y	(3) Gen. X	(4) Baby Boomers
1994b	0 (0)	-	0 (0)	0 (0)
1996	1303.05*** (290.94)	-	815.12*** (266.15)	1623.75*** (395.14)
1998	1915.24*** (333.71)	0 (0)	697.61* (381.21)	2542*** (475.18)
2000	1860.82*** (281.04)	2492.34*** (728.76)	849.72*** (248.82)	2678.92*** (428.65)
2002	2262.55*** (284.86)	1829.11*** (668.59)	943.32*** (298.94)	3170.08*** (442.73)
2004	2434.95*** (292.66)	1790.06*** (637.84)	802.28*** (274.25)	3391.60*** (454.59)
2006	6483.95*** (424.98)	3848.59*** (750.67)	4326.71*** (690.29)	7948.60*** (525.60)
2007	6347.02*** (325.61)	4248.65*** (692.56)	4649.61*** (391.81)	7354.50*** (472.44)
2009	6504.66*** (340.93)	3348.31*** (750.57)	4173.83*** (367.90)	8074.27*** (532.34)
2011	7198.25*** (369.96)	4412.17*** (678.21)	5118.48*** (454.95)	8532.65*** (543.88)
2013	7730.22*** (531.14)	4994.71*** (745.57)	5598.34*** (431.05)	9252.66*** (998.86)
2015	6481.34*** (359.28)	4394.68*** (660.64)	4495.46*** (459.61)	7616.39*** (504.53)
2017	6622.06*** (411.01)	4251*** (649.53)	4689.33*** (583.04)	7769.82*** (538.98)
2019	6543.77*** (430.32)	4572.95*** (674.67)	4824.82*** (710.54)	7297.37*** (474.21)
2021	6558.23*** (375.20)	4931.04*** (762.88)	4389.77*** (494.41)	7553.77*** (486.97)
Observations	331804	29310	131607	170887
R^2	0.038	0.034	0.038	0.043

Table 11: Year fixed effect for table 2

Dependent Variable: Saving/Dissaving	(1) Whole sample with university degree	(2) Whole sample without university degree	(3) Gen. Y with university degree	(4) Gen. Y without university degree	(5) Gen. X with university degree	(6) Gen. X without university degree	(7) Baby Boomers with university degree	(8) Baby Boomers without university degree
1994b	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
1996	3223.80*** (1385.92)	1074.67*** (285.21)	-	-	3852.93 (2363.50)	694.16*** (226.98)	4059.94*** (1505.05)	1309.68*** (404.64)
1998	4599.84*** (1323.90)	1514.75*** (341.86)	-	-	1888.69 (1675.30)	650.54* (392.34)	7283.66*** (1436.88)	2050.15*** (506.85)
2000	4892.10*** (1330.43)	1474.64*** (265.37)	-	1778.98** (692.94)	2353.54 (1662.24)	937.09*** (222.06)	8950.36*** (1447.04)	2021.62*** (443.23)
2002	5017.08*** (1285.51)	1826.23*** (272.91)	-	1214.92* (631.12)	1758.42 (1617.97)	1190.89*** (244.15)	9585.66*** (1443.43)	2397.17*** (465.97)
2004	6031.83*** (1297.73)	1908.14*** (274.41)	-6192.05*** (2401.08)	1425.54** (596.27)	2826.61* (1600.48)	1114.89*** (247.70)	10208.56*** (1456.19)	2547.60*** (479.36)
2006	11886.77*** (1995.36)	5749.81*** (309.60)	-1381.74 (1339.28)	4634.36*** (641.15)	7884.09** (3759.87)	4405.03*** (282.08)	16864.29*** (1768.65)	6782.71*** (533.50)
2007	13334.88*** (1475.14)	5258.45*** (283.29)	-391.09 1308.8	4814.75*** (682.48)	9137.06*** (2117.28)	4528.18*** (302.73)	18860.72*** (1679.09)	5741.72*** (476.26)
2009	12843.46*** (1393.21)	5483.99*** (326.40)	-76.74 1532.06	3785.11*** (768.30)	6028.42*** (1662.48)	4592.30*** (367.00)	20948.84*** (1901.65)	6208.13*** (528.19)
2011	14318.88*** (1653.43)	6023.87*** (324.46)	756.00 1823.72	5118.07*** (606.68)	8912.12*** (2343.13)	5063.61*** (375.05)	21431.23*** (2034.44)	6690.12*** (545.97)
2013	15116.84*** (1578.67)	6632.45*** (553.01)	2719.82*** 900.07	5509.31*** (634.70)	9644.50*** (2197.20)	5447.89*** (357.66)	22058.82*** (1974.34)	7564.13*** (1107.81)
2015	11510.09*** (1364.64)	5711.22*** (323.49)	1539.95 1725.83	5109.42*** (598.38)	5417.10*** (1781.66)	5022.37*** (461.08)	18879.32*** (1879.58)	6077.83*** (519.62)
2017	12807*** (1687.91)	5573.19*** (329.57)	1074.42 (1838.07)	5045.35*** (578.65)	9075.39*** (2719.44)	4511.29*** (511.60)	18856.30*** (1981.69)	6235.61*** (551.88)
2019	12345.16*** (1468.54)	5457.82*** (367.12)	1701.07 (1992.64)	5156.48*** (620.76)	8226.24*** (2138.46)	4865.66*** (761.17)	20099.52*** (2164.25)	5598.86*** (464.61)
2021	11483.12**** (1490.60)	5549.42*** (313.77)	3165.94 (2469.65)	5114.82*** (624.73)	5942.2*** (2026.79)	4726.88*** (466.58)	19480.16*** (2047.22)	5924.09*** (484.97)
Observations	48168	283636	6728	22582	20076	111531	21364	149523
R^2	0.051	0.016	0.050	0.023	0.042	0.020	0.077	0.015

Table 12: Year fixed effect for table 3

Dependent Variable: Saving/Dissaving	(1) Whole sample with agri. income	(2) Whole sample without agri. income	(3) Gen. Y with agri. income	(4) Gen. Y without agri. income	(5) Gen. X with agri. income	(6) Gen. X without agri. income	(7) Baby Boomers with agri. income	(8) Baby Boomers without agri. income
1994b	0	0	-	0	0	0	0	0
	(0)	(0)		(0)	(0)	(0)	(0)	(0)
1996	1106.07***	1253.13***	-	-	1580.29***	661.61**	1005.89**	1700.58***
	(336.65)	(376.64)			(529.71)	(302.45)	(414.20)	(535.60)
1998	1758.42***	1795.33***	-	-	1363.55***	607.63	1914.13**	2621.35***
	(515.79)	(413.13)			(492.96)	(456.93)	(760.03)	(601.07)
2000	1121.12**	1983.07***	0	2679.69***	1096.15**	943.95***	1278.75*	3166.21***
	(477.66)	(342.50)	(0)	(743.55)	(501.87)	(280.07)	(682)	(553.53)
2002	1836.19***	2213.38***	873	2132.68***	1816.91***	869.04***	1963.75***	3506.09***
	(395.05)	(352.38)	(2321.56)	(679.31)	(526.10)	(326.13).	(576.51)	(583.51)
2004	1879.55***	2340.35***	-1632.36	2093.30***	1410.60**	750.31**	2055.21***	3713.76***
	(416.95)	(352.97)	(1836.05)	(647.82)	(574.85)	(306.81)	(603.06)	(593.10)
2006	6677.43***	6077.60***	5439.94	3977.42***	5969.28***	4008.64***	6804.31***	8176.85***
	(521.11)	(504.93)	(4566.27)	(666.15)	(678.75)	(839.69)	(773.77)	(668.31)
2007	5075.24***	6569.84***	2549.28	4571.24***	4791.67***	4847.36***	4897.61***	8353.72***
	(436.45)	(394.08)	(1910.45)	(701.78)	(710.39)	(458.66)	(582.64)	(630.59)
2009	5413.32***	6547.05***	-1453.30	3908.46***	4582.51***	4176.27***	5539.05***	9111.32***
	(426.32)	(427.17)	(4895.32)	(638.20)	(627.74)	(447.19)	(617.52)	(712.42)
2011	7176.58***	6773.01***	4223.26**	4657.97***	7328.72***	4485.63***	6441.10***	9326.04***
	(514.22)	(449.21)	(1907.29)	(693.87)	(895.25)	(526.36)	(636.87)	(742.53)
2013	7131.36***	7597.60***	5379.21***	5223.76***	5840.75***	5746.53***	7260.35***	10219.17***
	(487.01)	(707.25)	(2060.37)	(769.26)	(752.10)	(525.73)	(726.66)	(1528.29)
2015	5513.02***	6447.19***	3587.03*	4735.42***	4034.13***	4834.99***	5724.34***	8495.52***
	(455.50)	(417.13)	(1993.01)	(677.15)	(797.60)	(557.20)	(656.96)	(693.04)
2017	5375.21***	6655.04***	4761.64**	4451.67***	3713.57***	5213.55***	5530.23***	8844.09***
	(512.49)	(451.25)	(2165.72)	(662.08)	(936.82)	(724.38)	(688.95)	(724.52)
2019	5533.73***	6388.31***	5006.22**	4768.70***	4099.08***	5218.33***	5592.60***	8032.33***
	(491.94)	(466.68)	(2153.72)	(710.72)	(890.81)	(933.18)	(679.57)	(614.57)
2021	6284.35***	6016.63***	4734.04**	5148.63***	4959.80***	4037.63***	6264.06***	8124.63***
	(553.09)	(405.22)	(2267.28)	(793.86)	(973.09)	(550.45)	(757.51)	(622.92)
Observations	96612	235192	2966	26344	35246	96361	58400	112487
R^2	0.047	0.037	0.056	0.035	0.065	0.036	0.051	0.042