HOUSEHOLD INCOME COMPOSITION AND PORTFOLIO CHOICE

EVIDENCE FROM CHINA HOUSEHOLD FINANCE SURVEY

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Master Thesis

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Household Income Composition and Portfolio Choice: Evidence from China Household Finance Survey

Abstract:

Based on panel data from the China Household Finance Survey, this study examines the influence of non-property income composition on urban households' participation in stocks and risky financial assets, as well as the allocation of financial wealth to these assets. The study finds that proportions of different income affect portfolio choice, especially participation, in varying ways. Increase in proportion of wage or decrease in transfer income proportion contributes to higher possibility of making investments in stocks and risky assets, and higher preference for stocks in total portfolio. However, income composition has no significant effects on share of risky financial assets. Besides, growths of different types of income influence portfolio choice differently, with wage income showing most significant promotion effects on participation and stock shares. Furthermore, the study identifies the existence of regional heterogeneity, showing the effects of wage and business proportions are more prominent in developed regions while effects of transfer income proportion are stronger in underdeveloped regions. The research fills research gaps and highlights the importance of considering income composition in households' financial decisions and asset allocation behaviors.

Keywords:

Household Income, Income Composition, Portfolio Choice, Regional Heterogeneity

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1. Introduction

Income is a dominant factor in household's balance sheet, influencing household's decisions on consumption, saving and investment. Most previous studies treat income as a whole, or focus on specific types like labour or property income, but few researches have touched upon income composition and relevant differences in household's behaviors. Therefore, this study aims to investigate the relationship between income composition and portfolio allocation, addressing gaps in the existing literature.

Previous studies on household income and portfolio choice primarily focus on analyzing income increases or income risks. Higher income leads to more active participation in risky assets (Campbell, 2006), while the influence of income risks on asset allocation remains indeterminate, with some studies claiming the uncertainty of income promotes people to approach risky investments more cautiously (Angerer and Lam, 2009; Bonaparte, 2014; Lynch and Tan, 2014), while some papers finding that people show propensity towards risky assets even when income risk is high, due to negative correlation between income risks and market returns (Cocco et al., 2005), or flexibility of managing income risk levels (Merton and Samuelson, 1992). We can speculate that the influence of income composition partially stems from the combination of different income risks. Besides, theories like mental accounting (Thaler, 1985) and precautionary saving (Guiso et al., 1992) can also potentially explains why people with different income weights behave differently.

Using panel data derived from China Household Finance Survey (CHFS), this study carries out empirical study on the effects income composition has on portfolio choice. Household non-property income is discomposed into three categories by their sources (wage, business and transfer income), and income composition is defined in two ways, which are proportions different incomes take up in total income, and values of different income rescaled by household wealth. Portfolio choice is measured by participation decisions and the proportion invested in stock or risky financial assets. The sample consist of 2,480 households and observations of 8 years (one observation in every 2 years).

Using the whole sample, the study conducts empirical analyses, the results of which imply that income composition affects households' investment behaviors. Contrary to prevailing understanding, income composition of this sample appears to be largely independent of most household demographics or features, as indicated by the small correlations between income proportions and these factors. The empirical results indicate that households with a larger share of income from business activities tend to favor stock investments, highlighting the influence of entrepreneurship on investment preferences. Conversely, those relying more on transfer income show less interest in stocks and risky assets with more cautious approach to financial risk. Moreover,

households with comparatively more wage income are inclined to invest more in stocks. Interestingly, our study finds no significant impact of income composition on shares allocated to risky assets, which might be affected by more complicated factors.

Income composition also intertwines with the effects of income increase on portfolio choice. My analysis indicates that while the growth of wage and business income encourages more active involvement in stocks and risky assets, it does not significantly influence the allocation of risky assets within portfolios. Additionally, variations in transfer income do not impact portfolio choice when wage and business income remain constant. Furthermore, to validate the findings, I conduct robustness checks through heterogeneity analysis, and empirical analyses with sub-samples and interaction terms. The overall results align with the findings mentioned above.

The study complements researches on household income in several aspects. Firstly, by utilizing consistent data from Chinese households over a relatively extensive period, the study confirms the existence of an effect: income composition does influence portfolio choice, even when total income remains constant. Secondly, the study offers two approaches to estimating the effects of income composition. One involves constructing internal proportions based on different income sources, while the other entails using rescaled income by wealth to explore how increases in certain types of income affect decision-making behaviors. Thirdly, through heterogeneity checks, the study suggests that regional development level impacts how income composition actually affects portfolio choice. Different income types play dominant roles in different regions, highlighting significant regional disparities.

Practical implications of the findings are substantial. By adjusting income composition through various means such as tax policies, entrepreneurship policies, labor regulations and educational and training programs, households can be guided to improve their asset allocations. To address the disparities between regions especially inequality of investment opportunities and income sources, it is imperative to provide a wider array of financial products and services to meet the diverse needs of various income compositions and investment preferences. Simultaneously, enhancing support for local entrepreneurial activities is crucial to foster participation in financial markets (Paul et al., 2017).

The paper is organized into five sections, structured as follows: Section 2 reviews the literature on the primary variables of interest and outlines the main hypotheses. In Section 3, I describe the data used in the study and present the models. Section 4 presents the empirical results, including results of full sample, regional heterogeneity test and robustness checks. Finally, Section 5 concludes the study and suggests potential avenues for future research.

2. Literature Review and Hypotheses

Campbell (2006) integrates household finance into portfolio theory, proposing that households are faced with more complicated constraints than simply considering risks and returns, which are difficult to measure. Income, as a key aspect of household finance, affects household's portfolio and borrowing decisions by its risks, volatility and expectations.

In Section 2.1, definitions of income composition will be discussed, and results of previous studies on Chinese income composition will be presented. Moving to Section 2.2, I review literature on the impacts of income composition and different components on portfolio choice, and provide brief introductions of theories that potentially support the rationality of income composition's effects. Section 2.3 will summarize other factors influencing portfolio choice. Lastly, Section 2.4 will introduce the hypotheses of this study.

2.1. Income and Income Composition

Researchers strive for a unified framework of aggregating types of income to create an income definition comparable across nations. Smeeding and Weinberg (2001), after examining various income surveys, conclude that income definition exhibits regional specificity, yet recommend a framework which lists cash earnings (wage and self-employment income), cash market income (pension, net interest income, dividends, income from estate), cash transfers as the primary components for cash income.

Likewise, Paul et al. (2017) reveals that different components of income have different impacts on inequality in income distribution. In the study seven components of household income are identified: wages and salaries, business income, property income, pensions, relief income, unemployment allowance and other income. Wages and salaries are the main contributors to inequality while other sources have positive effects on improving income equality. The literature above indicates that one primary approach to analyzing income composition is through categorizing income by its sources.

Studies on Chinese income composition are carried out mainly to address the income distribution and inequality. Khan and Riskin (1992) use diverse approaches to compose income in rural and urban regions, with both containing labor income, enterprise income, rental value of housing, and net transfer from government. They discover obvious regional wealth inequality and significantly different income structures between urban and rural regions. In rural regions, income mainly comes from farming activities and self-consumption, the sum of which exceeds 70%. In urban regions, cash income from wage and pension accounts for over 60%. In a subsequent survey conducted in 2005, it is found that the income composition in rural areas had

shifted towards that of urban areas, particularly with a sharp increase in the proportion of wage income (Khan & Riskin, 2005). Furthermore, the income composition displays notable disparities among provinces, highly correlated with variations in economic development levels. The instability of Chinese household income composition is also verified by research of Paul et al. (2017). The research highlights the rise in business income and its role as an inequality reducing force.

2.2. Income Composition and Portfolio Choice

Studies have proved that income, as a whole, plays an important role in shaping portfolio choice. On the one hand, income growth serves as a catalyst for more active participation in financial markets. On the other hand, The influence of income risk on asset allocation has been observed and verified, but its mechanism is still uncertain.

Using Survey of Consumer Finance, Campbell (2006) explores how income level affects both public equity and private business participation. Aligning with common-sense, income has strong positive effects on public equity participation, and exhibits a U-shaped effect on private business investment, indicating the tendency for richest households to own private businesses. However, for portfolio shares of participants, the main influence becomes wealth, while impact of income is no longer significant.

Apart from the quantity of income, researches point out that risk of income, especially when it comes to labour income, affects household investment behaviors. Study of Merton and Samuelson (1992) reveals key characteristics of income risks. Since income is not perfectly correlated with tradable assets, risk of income can't be fully hedged to neutralize its effect on portfolio. Being idiosyncratic and unhedgable, income risk increases households' effective risk aversion, thus leading to more cautious investment decisions. However, individuals also have considerably flexibility in deciding risk level of labour income by making labour-leisure choice. People simultaneously assess the optimal levels of current consumption, labor input, and a suitable financial investment strategy throughout their life stages. The capacity to adjust labor supply afterward prompts individuals to undertake higher risks in their investment portfolios beforehand.

In addition to its life-cycle nature, income risk is complicated by other factors like permanence and hedging potential. Angerer and Lam (2009) decompose stochastic income risks into permanent and transitory parts. Permanent income risk proves to have a significant impact on household portfolio choice, shifting it towards risk-free assets, but transitory income risk is found to have little impact on portfolio allocation. Bonaparte (2014) measures income risk by the correlation between income growth and market returns, and empirical results show the propensity for financial market participation increases with the correlation decreasing. However, the study also highlights the importance of income hedging potential, by demonstrating that even if

labour income is highly related with market returns, people still actively invest in risky assets when hedging potential is high.

When it comes to sources or categories of income, prior studies mainly focus on explaining how certain categories of income affects the household's risk-taking decisions, among which labour income draws most attention. Some studies identifying the risk properties of labour income find labour income stimulates risky asset investment. Cocco et al. (2005) built calibrated model to solve the optimal consumption and portfolio choice based on the largest longitudinal U.S. dataset, PSID, in order to investigate people's inclination towards risky asset when faced with labour income uncertainty. The optimal portfolio roles suggest that labor income shows negligible correlation with equity returns, instead, it is considered a better alternative to holding risk-free assets rather than equities. Consequently, the inclusion of labor income tends to elevate the demand for stocks, particularly during the early stages of life. Nonetheless, the findings of Lynch and Tan (2004) do not support this view. Through calibration of portfolio decisions among individuals of varying ages and wealth levels in the U.S., they determine that the volatility of idiosyncratic labor income risk exhibits a negative correlation with stock returns, leading to a crowding-out effect on investments in the stock market. Considering that income composition influences the extent of income risk to some degree, and given the acknowledged impacts of income risk on households' portfolio choice, it stands to reason that income composition might also affect households' investment behavior.

Categorizing income into capital and non-capital types is a common approach taking into account that differing risks are associated with each source. In her analysis of PSID, Vissing-Jorgensen (2022) finds that higher non-financial income positively correlates with stock market participation and investment in stocks. However, volatility in non-financial income has a negative impact on these measures. Unlike labor income, the correlation between non-financial income and stock returns does not influence portfolio choice. The presence of fixed transaction costs significantly affects participation decisions, as evidenced by the increased trading frequency among wealthier households.

Households with significant portion of transfer income in their total earnings are often thought to be less inclined to engage in financial markets. However, their participation behaviors are influenced by factors distinct from those affecting labor or capital income. Fischer and Jensen (2014) examines the impact of a re-distributive tax system on consumption, portfolio decisions and asset prices. Their results reveal that tax revenues fluctuate with changes in stock prices, leading to a pro-cyclical pattern in transfer income for poorer agents. This pro-cyclicality not only transfers wealth but also exposes poorer agents to stock market risk, consequently, poorer investors strategically reduce their stock exposure to mitigate the risk.

Though very few studies have so far touched upon the impact that income composition has on portfolio choice, or looked into the mechanism behind households' different financial behavior when their income sources vary, there are several potential theories which might interpret the validity of the existence of the effects.

Mental accounting theory, proposed by psychology professor Thaler (1985), suggests that people mentally compartmentalize their wealth into separate accounts based on different income sources and spending objectives. These accounts operate independently, with money not easily transferred between them. Each account has its own budget and spending rules, with money being non-fungible across accounts. As a result, individuals perceive wealth from different sources differently, affecting their risk attitudes and investment preferences. For example, income from labor and unexpected windfalls are typically allocated to different mental accounts, influencing investment decisions and spending patterns.

Theories on consumption and saving behaviors, such as the permanent income hypothesis and precautionary saving theory, provide valuable insights into the impact of income composition on households' financial decisions. According to the permanent income hypothesis proposed by Friedman (1957), a permanent and steadily increasing income leads decision-makers to allocate most of the augmented income towards consumption, while a temporary increase prompts them to allocate more towards savings. Similarly, changes in income composition, along with their permanence and underlying factors, influence household asset allocation decisions. The precautionary saving theory, as illustrated by Guiso et al. (1992), suggests that greater income uncertainty reduces current consumption and increases future risk, prompting consumers to prefer saving for future consumption. To smooth consumption and mitigate uncertain shocks, individuals may also choose risk assets based on liquidity and return conditions. Given the varying risk levels among income sources, income composition reflects aggregated risk, affecting both consumption and investment decisions.

2.3. Other Factors

Existing researches have identified numerous factors that impact household portfolio choice. These factors cover demographic characteristics including the effects of family structure, age structure and gender of household heads, education level and financial education background, risk preference, etc.

Demographic Characteristics

Davis (2006) does an empirical study of 72 countries, pointing out that the aging population promotes the bond market more than the stock market, and the aging population will also reduce the private savings and external balance. A recent study of

Li et al. (2022) on Chinese data indicates that gender-ratio in family members will lead to different participation in stock market. Angerer and Lam (2009) analyze investment decisions of households through the path of wealth effect, pointing out that wealth accumulation and income level will affect their shareholding willingness of households at different age level.

Education

Calvet et al. (2009) Education helps to reduce the mistakes in investment behaviour, helping investors to overcome the inertia of investment behavior and develop good investment habits. Likewise, Christelis (2010) points out that the improvement of education level can improve individual cognitive ability, thus reducing the probability of investment mistakes and the cost of participating in the financial market. Behrman And Mitchell (2010) separate financial knowledge from education level, proving that they both exhibit positive correlation with household wealth, and the influence of financial knowledge is even greater than education level.

Risk preference

Risk preference is also a determining factor in households' portfolio choice. Shum and Faig (2006) discover a significant negative relationship between household risk aversion and risk asset investment. Another study by Guiso and Paiella (2004) also discovers that the proportion in risk assets is significantly lower for those who are more risk-averse.

2.4. Hypotheses

Drawing upon the literature discussed above, current research on household income exhibits several characteristics. Firstly, the majority of existing literature examines income as a whole, while income composition is primarily features in macroeconomic studies focusing on its effects on areas such as income inequality or social welfare. Secondly, while risk is most extensively studied among various income characteristics, income composition receives comparatively less attention. Income composition, though intertwined with various family characteristics and other intangible factors (Raffalovich et al., 2009), holds potential significance for household asset allocation if proven to be associated with it, given its clarity and traceability. Therefore, I construct income structure based on income sources and investigate the variations in the impact of different income sources on asset allocation. I propose the following hypotheses:

Hypothesis 1: If wage or business income account for larger proportions in total income, household is more likely to engage in stock market or invest in risky financial assets. On the contrary, if transfer income takes larger proportion in total income, household is less likely to engage in the stock market or invest in risky financial assets.

Hypothesis 2: Household with higher proportions of wage or business income (and lower proportion in transfer income) is more likely to have higher shares of stocks or risky assets in its total financial assets.

Hypothesis 3: If one category of income increases with other categories of income remaining the same, household is more likely to participate in stock and risky financial assets, or enhance the shares invested in stock or risky financial assets. The elasticity of portfolio's reaction to income increase varies across income categories.

3. Data and Methodology

In this section, I will outline the research process, covering data sources and models. Section 3.1 will detail data sources, variables, and sample selection. In Section 3.2, I will present variable statistics and noteworthy insights. Section 3.3 explains the models, and Section 3.4 addresses data and methodological limitations.

3.1. Data

3.1.1. Data Source

The data comes from Chinese Household Finance Survey (CHFS) conducted by Southeastern University of Finance and Economics. The survey is conducted every two years from 2011 to 2019, encompassing samples of 4,752, 16,836, 26,824, 40,011 and 34,643 households respectively, covering 343 districts and counties in 29 provinces. It employs a stratified three-stage PPS random sampling design to ensure the sample is representative at both national and regional levels.

Conducted longitudinally, the survey tracks households that participated in previous years while incorporating new samples. Data collection occurs at both household and individual levels. The study primarily employs household-level data, although certain variables are derived from individual-level data. Each household is identified with a unique ID number, and the household head is specified. The survey yields data on demographic characteristics, assets and liabilities, income and expenditure, social security and insurance, as well as risk preferences in substantial details. The currency of the survey is Chinese yuan. Since the study is based on panel data from CHFS, I will retain this measurement to avoid biases caused by currency conversion[1].

3.1.2. Variables

Income Composition

According to National Bureau of Statistics of China (NBSC), at resident level, income is divided into wage income, business income, property income and transfer income. CHFS adheres to this classification standard and conducts detailed investigations accordingly. CHFS provides are disposable income, net of tax and other compulsory expenses[2].

The study selects wage income, business income and transfer income as research targets. Including property income might induce endogeneity, because part of property

[1] The exchange rate of Chinese Yuan to US Dollar fluctuates between 6.05 to 6.97 from 2013 to 2019.

[2] https://www.stats.gov.cn/sj/ndsj/2015/html/zb06.htm.

income originates from financial assets, the returns of which are heavily affected by portfolio choices. The study of Bonaparte (2014) reveals that people take into consideration the potential of market returns hedging income risks, which will in turn affects their investment capacity. People are aware of the impacts of risky shares on their income, as reflected by increased savings when investment in risky assets rises (Deidda, 2013).

Wage income refers to all labor compensation and benefits obtained by employed individuals through various means, including wages and benefits received from employment by organizations or individuals, as well as all labor compensation and benefits obtained from various freelance, part-time, and sporadic labor activities. In this study, wage income refers to the post-tax income from primary and secondary employment, including bonuses and allowances[3].

Business income refers to the net income obtained by household members from production and business activities. Income from agricultural activities is also included in business income in the study. Net income is obtained by subtracting expenses and costs from annual revenue, including depreciation of fixed assets and taxes, and adding business subsidies.

Transfer income refers to various regular transfer payments from government or social groups to households, as well as transfer income between households. In this study, transfer income includes pensions, compensations for land or housing, government subsidies, reimbursements of medical and business insurance, severance pay, housing provident funds, and private transfers.

Composition of income (*p_wage, p_business, p_transfer*) is measured by the proportions that different types of income take up in the total income. The sum of proportions is equal to 1. When studying income proportions, the assumption is that income proportions change while total income remains the same. However, income has proved to have impacts on portfolio choice (Campbell, 2006), and it's worth further investigating whether different income compositions affect the magnitude of this influence. I rescale the values of three types of income by wealth (*r_wage, r_business, r_transfer*) so as to partially reduce the influence of heterogeneity by wealth on portfolio choice (Nakamura, 2019). All nominal values of income and household wealth are in real terms net of impact of inflation.

Portfolio Choice

Following the framework of the CHFS, I regard cash and deposit as risk-free financial assets, while risky assets consist of stock, bond, fund, derivative, financial product, foreign financial asset, gold and other financial asset. Calvet and Sodini (2014) define

[3] The paper focuses on urban households, and very few of them have agricultural income in the dataset.

risky share as the risky wealth divided by the sum of risk-free wealth and risky wealth. I follow this approach calculating risky share by using value of stock investment dividing total financial wealth (*stock_share, risky_share*). Apart from risky share, stock share is selected as another research focus, because stock is the most representative risky asset and its participation ratio and average investment value are both the second highest among risky financial assets (with the first being financial product), as is shown Table 15, Appendix B.

If household has positive stock or risky share, then the household is recognized as participating in the markets and the dummy variable (*stock_par, risky_par*) is one.

Control Variables

Portfolio choice is affected by various factors, which can be categorized as demographic and financial characteristics. Demographic characteristics cover characteristics such as household head's age, gender, marital status, as well as household size, whether there are children, retired or unemployed individuals in the household. Financial features are characterized by financial knowledge and risk aversion of the household head, leverage ratio, total assets, total debts, annual consumption, whether the household owns real estate and whether there is mortgage on the properties. Definitions and abbreviations for all variables are available within the Table 14, Appendix A.

3.1.3. Sample Selection and Data Processing

To thoroughly examine the hypotheses over time, I construct a balanced panel using data from the CHFS survey spanning from 2013 to 2019. This panel comprises households that consistently participated in the survey throughout the entire period. Before further processing, sample selection is conducted to ensure data integrity and reliability.

Firstly, only samples of the urban regions are kept. In the original data, 0.26% of the rural residents participate in stock market and 14.24% possess risky financial assets, much lower than those of urban regions which are 6.36% in stock and 27.64% in risky assets, potentially causing over-fitting if applied in the regression models. Besides, considering the huge and constantly enlarging rural-urban income gap and discrepancies in income components (Li et al., 2014), incorporating rural data will unavoidably generate heterogeneity problem.

Secondly, I retain samples with positive total income, assets and consumption, and without any missing values in control variables.

Thirdly, samples whose household heads are between 18 and 90 years old are kept to ensure the household head's capability of making financial decisions.

After selection, 2460 households (9840 observations) are retained for further analysis. Some further adjustments are made to nominal values like income, asset, debt, consumption, etc. First, to reduce the impact of outliers, all nominal values including income, asset, debt, consumption are winsorized at 1st and 99th percentile. Specifically, non-zero values of wage, business, and transfer income are winsorized at the 1st and 99th percentiles before constructing variables. This approach accounts for the fact that if a certain type of household income is too low, it should not be included in the income composition. Then, all nominal values are adjusted using CPI data provided by the World Bank, with 2013 serving as the base year, to account for the impact of inflation. Besides, nominal values have taken common logarithm to better investigate variations between variables independent of their original units. Household asset and consumption have been divided by 100 to enhance the numerical stability in regressions by reducing the dimensional difference between variables.

3.2. Summary Statistics

3.2.1. Income Composition

Table 1: Summary Statistics of Income Composition

This table includes urban households with valid data with household head between 18 and 90 years old. All variables are described in Appendix A. Nominal values are winsorized at 1st and 99th percentile and adjusted with CPI ahead of summary statistics. The currency of nominal values is Chinese Yuan.

Variable	N	Zero N	Mean	Non-Zero Mean	SD	Min	Max
wage income	9,840	3,798	41,543.07	67,657.04	57,106.73	0.00	372,563.20
business income	9,840	7,652	25,271.72	113,653.42	105,971.94	0.00	999,200.80
transfer income	9,840	1,181	38,926.18	44,235.32	61,279.75	0.00	610,133.90
total income	9,840	0	110,898.60	110,898.60	150,841.74	476.55	1,228,167.90
p_wage	9,840	3,798	0.4249	0.6920	0.4109	0	1
p_business	9,840	7,652	0.1238	0.5570	0.2851	0	1
p_transfer	9,840	1,181	0.4512	0.5128	0.4167	0	1
r_wage	9,840	3,798	0.1172	0.1909	0.3211	0	2.4910
r_business	9,840	3,798	0.0305	0.1371	0.1043	0	0.7291
r_transfer	9,840	1,181	0.1599	0.1817	0.5586	0	4.3137

The statistics results of nominal income values indicate that wage is a major source of income for household, earned by over 60% of the households. Business income, although held by fewest households, exhibits the highest mean among non-zero observations compared with other income sources, and notably higher deviation. Most households receive transfers, but the average transfer income is lower compared with the other two categories.

For income proportions, it can be inferred that for the majority of households, one type of income predominates. Especially, among households with positive wage income, wage income constitutes 69.20% of their total income on average. In Appendix B, I visualize distributions of income proportions. While wage proportion is significantly left-skewed, business and transfer income both exhibit density concentrated at both ends.

From statistics of rescaled income, business income takes the lowest proportion in total income, indicating that households relying on business income tend to have larger total assets. In Appendix B, all rescaled incomes are right-skewed, which aligns with the actual situation of income distribution in China (Khan et al., 2005).

The study also looks into how income and income composition change over time. It can be seen from Figure 4 in Appendix B that total income increases over time and sharply increased between 2015 and 2017, mainly driven by the increase in business income. Wage and transfer income both exhibit trend of moderate increase. However, income composition remains very stable during the whole period.

Table 2: Summary Statistics of Portfolio Choice

This table includes urban households with valid income and characteristic data with household head between 18 and 90 years old. All variables are described in Appendix A. Stock and risky share are calculated based on stock and risky asset values winsorized at 1st and 99th percentile.

Variable	N	Zero N	Non-Zero Mean	Mean	SD	Min	Max
stock_par	9,840	9,214	1	0.0636	0.2441	0	1
risky_par	9,840	7,120	1	0.2764	0.4473	0	1
stock_share	9,840	9,214	0.2837	0.0180	0.0944	0	1
risky_share	9,840	7,120	0.4548	0.1257	0.2589	0	1

3.2.2. Portfolio Choice and Financial Assets

The statistics of portfolio choice indicate that in the whole sample, 6.36% of households participate in stock market, and 27.64% of households own risky financial assets. For households who have outstanding balances in risky assets, stock share is 28.37% on average while risky share is 45.48%. The details of participation and share in each type of financial assets can be found in Table 15, Appendix B. In addition, composition of financial assets shows that non-risky assets, namely cash and deposit, take up the majority in total financial wealth; among risky financial assets, almost half of the investment goes to financial products, showing preference for diversification to mitigate the risk associated with particular assets (see Figure 6, Appendix B).

3.2.3. Other Variables and Data Insights

Table 3 demonstrates the summary statistics results of control variables. In Figure 1, I plot the correlation matrix of variables to check if there exists strong correlation between variables that might affect the validity of regression analysis. Most variables don’t exhibit strong correlation with others. Wage and transfer proportions exhibit comparatively higher correlations with demographic characteristics such as age, family size and retirement situation, indicating that income composition is more determined by these factors. Business proportion is more independent of demographic features.

CHFS collects data on risk aversion and financial knowledge, offering more insights into how portfolio choices are influenced. Contrary to conventional wisdom, the shares do not show any clear patterns in relation to risk aversion or financial

knowledge levels. However, participation decreases as risk aversion increases and financial knowledge decreases (see Figure 7 in Appendix B).

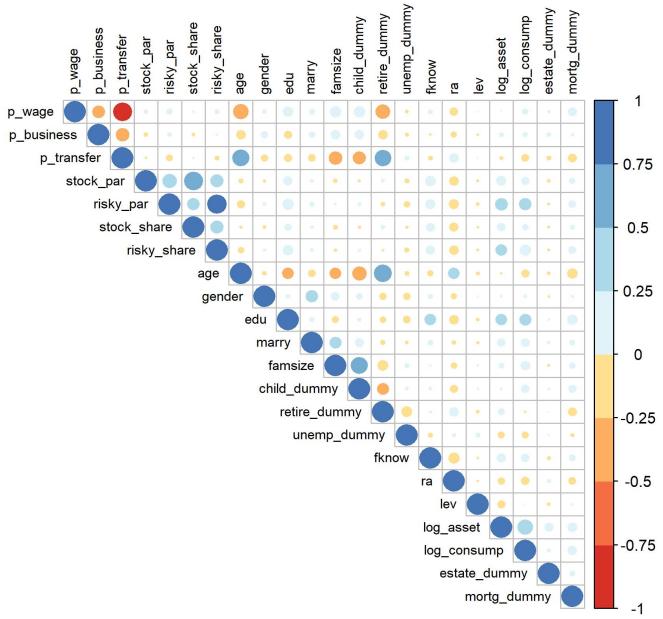
Table 3: Summary Statistics of Other Variables

This table includes urban households with valid income and characteristic data with household head between 18 and 90 years old. All variables are described in Appendix A. Nominal values are winsorized at 1st and 99th percentile and adjusted with CPI ahead of summary statistics. The currency of nominal values is Chinese Yuan. To present the data more intuitively, the table displays the statistical results of total household asset and annual consumption before dividing by 100 and taking the logarithm of the original values.

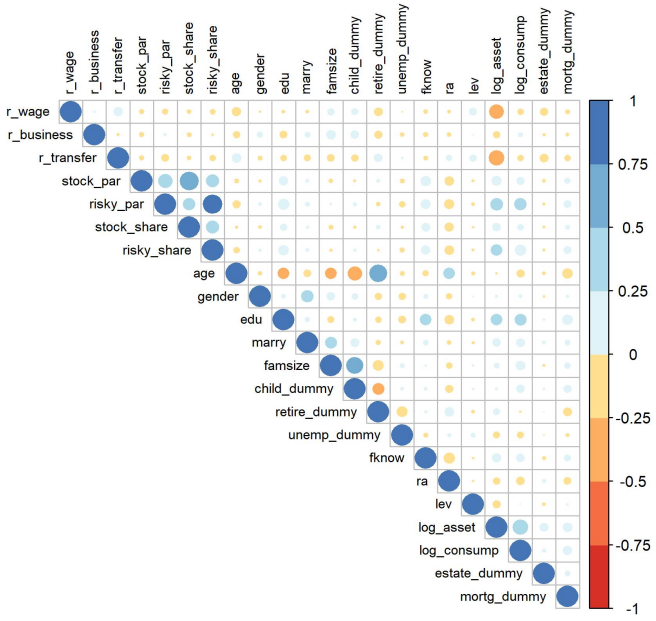
Variable	N	Mean	SD	Min	Max
age	9,840	45.00	13.64	18.00	89.00
gender	9,840	0.72	0.45	0	1
edu	9,840	3.80	1.61	1.00	9.00
marry	9,840	0.87	0.33	0	1
famsize	9,840	3.21	1.42	1.00	15.00
child_dummy	9,840	0.39	0.49	0	1
retire_dummy	9,840	0.37	0.48	0	1
unemp_dummy	9,840	0.08	0.27	0	1
fknow	9,840	2.15	1.04	1.00	5.00
ra	9,840	4.13	1.07	1.00	5.00
tlev	9,840	0.15	2.50	0.00	16.47
consumption	9,840	70,027.80	64,556.49	5,940.00	496,760.70
asset	9,840	1,300,204.12	1,855,184.74	3,681.73	12,495,439.00
estate_dummy	9,840	0.47	0.50	0	1
mortg_dummy	9,840	0.10	0.30	0	1

Figure 1: Correlation Matrix Plots

The figure contains correlation matrix plots of covariates. Plot (1) shows how portfolio choice, income proportions and other control variables are correlated. Plot (2) shows how portfolio choice, rescaled income values and other control variables are correlated. The size and the color of the circles indicate the level of correlation of the variable pair. The bigger and darker the circle is, the stronger the correlation is between the variables.



(1)



(2)

3.3. Regression Models

For Hypothesis 1 estimating the effects of household income composition on portfolio choice, probit model is applied because participation is a binary variable. The model is presented as below.

$$Par_{it} = \beta_1 P_{it} + \gamma_i X_{it} + \tau_t + \mu_i + \varepsilon_{it} \quad (1)$$

$$P_{it} = (p\_wage_{it}, p\_business_{it}, p\_transfer_{it})$$

$$Par_{it} = \begin{cases} 1, \ if\ household\ has\ stocks\ (risky\ financial\ assets) \\ 0, \ if\ household\ has\ no\ stocks\ (risky\ financial\ assets) \end{cases}$$

where Par_{it} denotes whether the household possess any stock or risky share (shown as $stock\_par_{it}$ and $risky\_par_{it}$ in empirical results). $p\_wage_{it}, p\_business_{it}$ and $p\_transfer_{it}$ represent proportions of wage, business and transfer income take in total income. Specially, the sum of the said three independent variables is 1. Therefore, the variables can't be simultaneously regressed, otherwise multicollinearity would be triggered and the result would be rank-deficient. Thus, I will regress one of these independent variables at a time. X_{it} denotes covariates found to be correlated with portfolio choice in previous studies. If income composition does have effects on household's financial decision-making, it's expected that β_1 is significantly different from 0. The error term ε_{it} is the integration of unobserved variables that might contribute to participating decisions. The model is controlled for fixed effects in both time and individual, denoted by τ_t and μ_i. Therefore, no constant term is needed in the model.

For Hypothesis 2, I employs OLS regression model to estimate the impact of income composition on stock or risky share in the household's portfolio.

$$Share_{it} = \beta_1 P_{it} + \gamma_i X_{it} + \tau_t + \mu_i + \varepsilon_{it} \quad (2)$$

$$P_{it} = (p\_wage_{it}, p\_business_{it}, p\_transfer_{it})$$

where $Share_{it}$ denotes how much stocks or risky assets the household allocate their wealth in total financial assets. Similar to Formula (1), only one income component is regressed each time.

For Hypothesis 3, probit model and OLS regression are introduced to estimate the influence on participation and share respectively in Formula (3) and (4).

$$Par_{it} = \beta_1 r\_wage_{it} + \beta_2 r\_business_{it} + \beta_3 r\_transfer_{it} + \gamma_i X_{it} + \tau_t + \mu_i + \varepsilon_{it} \quad (3)$$

$$Par_{it} = \begin{cases} 1, \ if\ household\ has\ stocks\ (risky\ financial\ assets) \\ 0, \ if\ household\ has\ no\ stocks\ (risky\ financial\ assets) \end{cases}$$

$$Share_{it} = \beta_1 r\_wage_{it} + \beta_2 r\_business_{it} + \beta_3 r\_transfer_{it} + \gamma_i X_{it} + \tau_t + \mu_i + \varepsilon_{it} \quad (4)$$

where r_wage_{it}, $r\_business_{it}$ and $r\_transfer_{it}$ are the rescaled income by household wealth, representing the relative importance of income categories in financial structure of household. Compared with Formula (1) and (2), the models avoid multicollinearity by applying rescaled nominal values of income instead of proportions. Especially, by comparing the absolute values of the coefficients, the elasticity of risky asset allocation to change in different types of income can be intuitively observed.

3.4. Limitations of Data and Methodology

While the dataset provides valuable insights, it's crucial to acknowledge certain limitations. To establish a balanced panel, only households participating consistently from 2013 to 2019 were retained. However, this selective approach may compromise sample representativeness, as these households tend to exhibit greater stability in terms of location and household composition. Moreover, most variables in the survey rely on self-reporting, which may deviate from actual practices, particularly concerning variables such as risk aversion level and financial knowledge. To address uncertainty, households are encouraged to provide ranges for uncertain variables which are adjusted by imputation, which may introduce bias and lower data quality.

The selection of the variables potentially lead to two problems. Omitted variable bias might affect the validity of the result. In the models in Section 3.3, the error term ε_{it} captures unobserved factors that affect household investment decisions. These factors might include profession, investment experience, regional difference (Guiso and Jappelli, 2005). Income is also not included in the covariates to avoid multicollinearity. In addition, multicollinearity might decrease the explanatory power of the model. In Figure 1, some variables exhibit comparatively strong correlation, accompanied by instability in coefficient estimates.

4. Empirical Findings

In Section 4.1, I will present and discuss the results of the models introduced in Section 3.3, revealing the relationship between income composition and portfolio choice. In Section 4.2, I will conduct heterogeneity check between developed and underdeveloped regions. The results of the robustness check will be discussed in Section 4.3.

4.1. Results of Main Regressions

4.1.1. Income Composition and Portfolio Choice

Table 4 presents the regression results of income composition on stock participation. Column (1), (2) and (3) report estimates of probit regressions of different income proportions on stock participation respectively. The coefficients of $p\_business_{it}$ and $p\_transfer_{it}$ are both significant on the 1% level, with increase in $p\_business_{it}$ or reduction in $p\_transfer_{it}$ stimulating the willingness in investing in stocks. However, p_wage_{it} shows insignificance regarding stock participation. This finding partially diverges from Hypothesis 1, suggesting that stock participation is primarily influenced by the trade-off between proportions of business and transfer income.

After incorporating other covariates, the coefficients of $p\_business_{it}$ and $p\_transfer_{it}$ are no longer significant at 5% level. This is probably because incorporating controls, while largely reducing omitted variable bias, may lead to overfitting that reduces significance. In fact, the p-values are 0.062 and 0.068, indicating that significance of the results still holds at 10% level. The value of average marginal effect shows that with business income taking up one percentage more in total income, the household is 2.30% more likely to participate in stock market. On the contrary, with transfer income accounting for one percentage more in household income, the household is 1.37% less likely to invest in stocks. As for other variables, total asset, total consumption, financial knowledge exhibit significant positive relationship with stock participation, while increase in age and risk aversion will significantly lower the likelihood of participation. These results align with previous studies (Campbell, 2006; Calvet and Sodini, 2014).

Table 4: Income Composition and Stock Participation

This table reports probit estimates of income composition on stock participation. Standard errors are reported underneath the coefficients in parentheses. Column (1) to (3) present results of income composition on stock participation without including other covariates. Column (4), (6) and (8) report the regression results after including all covariates. Column (5), (7), (9) present the average marginal effects in the regressions. The regressions use samples of urban households with valid data and with household head between 18 and 90 years old. Nominal values are winsorized at 1st and 99th percentile and adjusted with CPI before regression. Asset and consumption are divided by 100 before logged.

	Stock Participation								
	Coefficient	Coefficient	Coefficient	Coefficient	Average Marginal Effect	Coefficient	Average Marginal Effect	Coefficient	Average Marginal Effect
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
p_wage	0.2582			0.1385	0.0046				
	(0.1896)			(0.2128)					
p_business		0.9533**				0.6887	0.0230		
		(0.3326)				(0.3692)			
p_transfer			-0.6457**					-0.4100	-0.0137
			(0.2030)					(0.2247)	
age				-0.0322**	-0.0010	-0.0330**	-0.0011	-0.0311**	-0.0010
				(0.0118)		(0.0118)		(0.0118)	
gender				0.0065	-0.0002	-0.0097	-0.0003	0.0034	-0.0001
				(0.1699)		(0.1699)		(0.1702)	
edu				-0.0609	-0.0020	-0.0541	-0.0018	-0.0595	-0.0019
				(0.0782)		(0.0785)		(0.0785)	
marry				0.4959	0.0159	0.5193	0.0165	0.5148	0.0164
				(0.3096)		(0.3121)		(0.3106)	
famsize				-0.0513	-0.0017	-0.0276	-0.0009	-0.0747	-0.0025
				(0.0900)		(0.0871)		(0.0898)	
child_dummy				0.1243	0.0042	0.0741	0.0025	0.1260	0.0042
				(0.2104)		(0.2110)		(0.2100)	
retire_dummy				0.2894	0.0096	0.2957	0.0098	0.3214	0.0106
				(0.2049)		(0.2046)		(0.2065)	
unemp_dummy				0.2008	0.0068	0.2245	0.0076	0.2271	0.0077
				(0.2838)		(0.2824)		(0.2836)	
log_asset				0.5268***	0.0179	0.5095***	0.0170	0.5196***	0.0174
				(0.0899)		(0.0893)		(0.0900)	
fknow				0.1820**	0.0061	0.1823**	0.0061	0.1800**	0.0060
				(0.0644)		(0.0645)		(0.0645)	
ra				-0.1904***	-0.0065	-0.1869***	-0.0063	-0.1901***	-0.0064
				(0.0541)		(0.0542)		(0.0542)	
lev				-0.1880	-0.0064	-0.2088	-0.0070	-0.1780	-0.0060
				(0.3086)		(0.3177)		(0.3034)	
log_consump				0.2896*	0.0097	0.2714*	0.0091	0.2842*	0.0095
				(0.1158)		(0.1162)		(0.1161)	
estate_dummy				-0.2881	-0.0097	-0.2494	-0.0084	-0.2904	-0.0098
				(0.2487)		(0.2488)		(0.2480)	
mortg_dummy				-0.1602	-0.0053	-0.1751	-0.0058	-0.1485	-0.0049
				(0.1946)		(0.1948)		(0.1943)	
Num. obs.	1152	1152	1152	1152	1152	1152	1152	1152	1152

***p < 0.001; **p < 0.01; *p < 0.05

Table 5: Income Composition and Risky Asset Participation

This table reports probit estimates of income composition on participation of risky financial assets. Standard errors are reported underneath the coefficients in parentheses. Column (1) to (3) present results of income composition on risky participation without including other covariates. Column (4), (6) and (8) report the regression results after including all covariates. Column (5), (7) and (9) present the average marginal effects in the regressions. The regressions use samples of urban households with data and with household head between 18 and 90 years old. Nominal values are winsorized at 1st and 99th percentile and adjusted with CPI before regression. Asset and consumption are divided by 100 before logged.

	Risky Participation								
	Coefficient	Coefficient	Coefficient	Coefficient	Average Marginal Effect	Coefficient	Average Marginal Effect	Coefficient	Average Marginal Effect
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
p_wage	0.1591			0.1115	0.0166				
	(0.0863)			(0.0910)					
p_business		0.2857*				0.0841	0.0125		
		(0.1139)				(0.1184)			
p_transfer			-0.3761***					-0.1910	-0.0284
			(0.0939)					(0.0996)	
age				-0.0216***	-0.0032	-0.0218***	-0.0033	-0.0212***	-0.0032
				(0.0049)		(0.0049)		(0.0049)	
gender				0.0570	0.0085	0.0557	0.0083	0.0549	0.0082
				(0.0796)		(0.0796)		(0.0796)	
edu				-0.0257	-0.0038	-0.0237	-0.0035	-0.0249	-0.0037
				(0.0368)		(0.0367)		(0.0367)	
marry				0.0354	0.0053	0.0311	0.0046	0.0402	0.0060
				(0.1212)		(0.1212)		(0.1213)	
famsize				0.0131	0.0020	0.0188	0.0028	0.0100	0.0015
				(0.0354)		(0.0351)		(0.0354)	
child_dummy				-0.0158	-0.0023	-0.0200	-0.0029	-0.0165	-0.0025
				(0.0941)		(0.0940)		(0.0941)	
retire_dummy				0.0333	0.0050	0.0252	0.0037	0.0448	0.0067
				(0.0970)		(0.0967)		(0.0973)	
unemp_dummy				-0.3260**	-0.047	-0.3285**	-0.0477	-0.3126**	-0.0455
				(0.1103)		(0.1102)		(0.1106)	
log_asset				0.3227***	0.0480	0.3191***	0.0475	0.3170***	0.0472
				(0.0338)		(0.0340)		(0.0339)	
fknow				0.1112***	0.0166	0.1116***	0.0166	0.1119***	0.0167
				(0.0308)		(0.0308)		(0.0308)	
ra				-0.0845**	-0.0126	-0.0838**	-0.0125	-0.0841**	-0.0125
				(0.0274)		(0.0274)		(0.0274)	
lev				0.0376	0.0056	0.0356	0.0053	0.0366	0.0054
				(0.0388)		(0.0385)		(0.0387)	
log_consump				0.2938***	0.0438	0.2912***	0.0434	0.2930***	0.0436
				(0.0495)		(0.0494)		(0.0495)	
estate_dummy				-0.0178	-0.0027	-0.0174	-0.0026	-0.0127	-0.0020
				(0.0976)		(0.0976)		(0.0977)	
mortg_dummy				-0.1383	-0.0204	-0.1366	-0.0201	-0.1345	-0.0198
				(0.0948)		(0.0948)		(0.0948)	
Num. obs.	4864	4864	4864	4864	4864	4864	4864	4864	4864

***p < 0.001; **p < 0.01; *p < 0.05

Table 5 displays the regression results of income composition on participation in risky financial assets. Likewise, Income proportion influences risky participation in an approach similar to that of its effects on stock participation. From simple regressions concerning only income proportion and risky participation, we can conclude that wage proportion doesn't determine whether households invest in risky financial assets.

Among income proportions, only transfer proportion demonstrates a significant association with changes in risky participation at 10% level, with p_value of 0.055. If transfer income takes an extra one percentage in total income, the household is 2.84% less likely to possess risky financial assets. One possible reason is that the growth of transfer income is more evenly reflected in the decline of wages and business, the direction and magnitude of whose impacts on risky participation are unclear and vary among households.

Several covariates exhibit significant impacts on risky participation. In addition to the factors mentioned above, unemployment has a negative impact on households' inclination to invest in risky financial assets. Considering the correlation between factors like unemployment, retirement and age with $p\_transfer_{it}$, part of the impact of transfer proportion can be captured by these factors, but the unexplained portion remains relatively significant.

Table 6 and 7 show the regression results of income composition on stock and risky share respectively. In Table 6, the coefficients of p_wage_{it} is significant at the level of 1% in both simple regression and after adding other covariates, and the coefficient of $p\_transfer_{it}$ remains significant at 0.1% level. Thus, increase in wage income proportion or decrease in transfer income proportion will lead to household's likelihood of investing in stocks. As indicated by the coefficients, if wage proportion increases by one unit, the share of stock takes up in total financial assets will be lifted by 0.0094 units (another 0.0094% of financial assets will go to risky financial assets). With one unit increase in transfer proportion, the share of stock takes up in total financial assets will be drop by 0.0101%.

Table 7 indicates income composition has no significant impact on risky share. It can be inferred from results of other covariates that risky share is mainly affected by risk aversion. This could be attributed to variances in the characteristics of different risky financial assets. By selecting suitable financial assets, households may potentially control risk without necessarily reducing their asset allocation proportions.

Table 6: Income Composition and Stock Share

This table reports OLS estimates of income composition on stock share. Standard errors are reported underneath the coefficients in parentheses. Column (1) to (3) present results of income composition on stock share without including other covariates. Column (4) to (6) report the regression results after including all covariates. The regressions use samples of urban households with valid data and with household head between 18 and 90 years old. Nominal values are winsorized at 1st and 99th percentile and adjusted with CPI before regression. Asset and consumption are divided by 100 before logged.

	Stock Share					
	(1)	(2)	(3)	(4)	(5)	(6)
p_wage	0.0092**			0.0094**		
	(0.0032)			(0.0033)		
p_business		0.0052			0.0038	
		(0.0046)			(0.0046)	
p_transfer			-0.0130***			-0.0126***
			(0.0034)			(0.0035)
age				-0.0002	-0.0002	-0.0002
				(0.0002)	(0.0002)	(0.0002)
gender				-0.0021	-0.0023	-0.0022
				(0.0030)	(0.0030)	(0.0030)
edu				0.0005	0.0006	0.0006
				(0.0014)	(0.0014)	(0.0014)
marry				-0.0001	-0.0006	-0.0001
				(0.0044)	(0.0044)	(0.0044)
famsize				-0.0009	-0.0002	-0.0010
				(0.0013)	(0.0013)	(0.0013)
child_dummy				-0.0012	-0.0018	-0.0014
				(0.0035)	(0.0035)	(0.0035)
retire_dummy				-0.0003	-0.0010	-0.0001
				(0.0033)	(0.0033)	(0.0033)
unemp_dummy				0.0024	0.0018	0.0030
				(0.0037)	(0.0037)	(0.0037)
log_asset				0.0017	0.0016	0.0015
				(0.0010)	(0.0010)	(0.0010)
fknow				0.0019	0.0019	0.0019
				(0.0011)	(0.0011)	(0.0011)
ra				-0.0040***	-0.0040***	-0.0040***
				(0.0011)	(0.0011)	(0.0011)
lev				0.0000	-0.0000	0.0000
				(0.0004)	(0.0004)	(0.0004)
log_consump				0.0032	0.0029	0.0031
				(0.0018)	(0.0018)	(0.0018)
estate_dummy				-0.0028	-0.0029	-0.0028
				(0.0036)	(0.0036)	(0.0036)
mortg_dummy				0.0009	0.0007	0.0011
				(0.0039)	(0.0039)	(0.0039)
Num. obs.	9840	9840	9840	9840	9840	9840
R^2	0.5346	0.5342	0.5350	0.5367	0.5362	0.5370
Adj. R^2	0.3792	0.3787	0.3798	0.3807	0.3801	0.3811

***p < 0.001; **p < 0.01; *p < 0.05

Table 7: Income Composition and Risky Share

This table reports OLS estimates of income composition on risky share. Standard errors are reported underneath the coefficients in parentheses. Column (1) to (3) present results of income composition on risky share without including other covariates. Column (4) to (6) report the regression results after including all covariates. The regressions use samples of urban households with valid data and with household head between 18 and 90 years old. Nominal values are winsorized at 1st and 99th percentile and adjusted with CPI before regression. Asset and consumption are divided by 100 before logged.

	Risky Share					
	(1)	(2)	(3)	(4)	(5)	(6)
p_wage	0.0066			0.0051		
	(0.0094)			(0.0097)		
p_business		0.0063			-0.0060	
		(0.0133)			(0.0134)	
p_transfer			-0.0107			-0.0022
			(0.0099)			(0.0102)
age				-0.0009	-0.0010	-0.0009
				(0.0005)	(0.0005)	(0.0005)
gender				0.0145	0.0145	0.0144
				(0.0086)	(0.0086)	(0.0086)
edu				-0.0015	-0.0015	-0.0015
				(0.0041)	(0.0041)	(0.0041)
marry				0.0025	0.0024	0.0024
				(0.0127)	(0.0127)	(0.0127)
famsize				-0.0023	-0.0020	-0.0021
				(0.0038)	(0.0037)	(0.0038)
child_dummy				0.0118	0.0117	0.0116
				(0.0102)	(0.0102)	(0.0102)
retire_dummy				-0.0014	-0.0018	-0.0016
				(0.0095)	(0.0094)	(0.0095)
unemp_dummy				-0.0066	-0.0072	-0.0067
				(0.0107)	(0.0107)	(0.0108)
log_tasset				0.0167***	0.0167***	0.0166***
				(0.0030)	(0.0030)	(0.0030)
fknow				0.0060	0.0060	0.0060
				(0.0033)	(0.0033)	(0.0033)
ra				-0.0115***	-0.0115***	-0.0115***
				(0.0030)	(0.0030)	(0.0030)
tlev				0.0005	0.0005	0.0005
				(0.0010)	(0.0010)	(0.0010)
log_consump				0.0110*	0.0109*	0.0109*
				(0.0051)	(0.0051)	(0.0051)
estate_dummy				-0.0018	-0.0019	-0.0019
				(0.0103)	(0.0103)	(0.0103)
mortg_dummy				0.0041	0.0039	0.0040
				(0.0114)	(0.0114)	(0.0114)
Num. obs.	9840	9840	9840	9840	9840	9840
R^2	0.4781	0.4781	0.4782	0.4835	0.4835	0.4835
Adj. R^2	0.3038	0.3038	0.3039	0.3097	0.3096	0.3096

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

4.1.2. Rescaled Income Values and Portfolio Choice

The regressions presented in this section are conducted based on Model (3) and (4) from Section 3.3. The primary objective of studying rescaled income values is to investigate whether increase in one type of income leads to a significant change in portfolio choice, and to what extent this change occurs.

In Table 8, I present the results of different categories of income as a fraction of wealth on stock participation in column (1) to (3). Insignificant as the coefficient of r_wage_{it} is in the regression without any control, it turns significant at 1% level after including all the control variables. Keeping other sources of income constant, household is 4.72% more likely to participate in stock market, if its rescaled wage income goes up by one percentage point, namely wage increases by 1% of household's income. The impact of rescaled transfer income turns insignificant after adding control variables. A highly probable reason to this is that confounding effect derived from omitted variable bias is reduced after introducing the covariates, especially log_asset and age, which explain the relationship between transfer income and stock participation, as households with higher transfer income are likely to have lower total assets (as is shown in Figure 2 in Section 3.2.3).

From columns (4) to (6), it can be observed that risky participation is influenced by different income sources in a similar manner. Increases in both wage and business income will promote the growth of risky share, with the marginal effects being 5.83% and 12.80% respectively. In comparison to wage, business income exhibits greater elasticity with respect to risky participation, with the marginal effect indicating that the growth of business income is more likely to promote household investment in risky assets. This effect is difficult to explain by other factors, as indicated by the weak correlation observed with $r\_business_{it}$. Transfer income is found to be statistically insignificant. Its influence can largely be explained by variables such as age, employment status, and total assets. However, numerically, households with increasing transfer income are less inclined to invest in risky financial assets.

Table 9 displays the result of regressing rescaled income values on stock and risky share. None of these types of income have shown significant influence on either stock or risky share, which aligns with the findings in Section 4.1.1 The growth of income might encourage households to invest more in financial assets, but has little impact on their asset allocation. Instead, factors such as risk aversion level and total assets still play a dominant role in determining households' asset allocation.

Table 8: Rescaled Income Values and Financial Market Participation

This table reports probit estimates of rescaled income values on stock participation and risky participation. Standard errors are reported underneath the coefficients in parentheses. Column (1) and (4) present results of rescaled income values on participation without including other covariates. Column (2) and (5) report the regression results after including all covariates. Column (3) and (6) report the marginal effects of each variable in column (2) and (5). The regressions use samples of urban households with valid data with household head between 18 and 90 years old. Nominal values are winsorized at 1st and 99th percentile and adjusted with CPI before regression. Asset and consumption are divided by 100 before logged.

	Stock Participation			Risky Participation		
	Coefficient	Coefficient	Average Marginal Effect	Coefficient	Coefficient	Average Marginal Effect
	(1)	(2)	(3)	(4)	(5)	(6)
r_wage	-0.1532	1.4206**	0.0472	-0.0947	0.3925**	0.0583
	(0.4344)	(0.4947)		(0.1055)	(0.1223)	
r_business	0.1323	1.4516	0.0483	0.6510*	0.8592**	0.1280
	(0.9701)	(1.2216)		(0.2581)	(0.2700)	
r_transfer	-0.5953**	-0.0823	-0.0027	-0.3890***	-0.0260	-0.0039
	(0.1858)	(0.2320)		(0.0788)	(0.0841)	
age		-0.0327**	-0.0010		-0.0217***	-0.0032
		(0.0119)			(0.0049)	
gender		0.0293	0.0010		0.0573	0.0085
		(0.1705)			(0.0798)	
edu		-0.0717	-0.0024		-0.0270	-0.0040
		(0.0795)			(0.0368)	
marry		0.5258	0.0166		0.0201	0.0030
		(0.3099)			(0.1211)	
famsize		-0.0712	-0.0024		0.0067	0.0010
		(0.0887)			(0.0354)	
child_dummy		0.1180	0.0039		-0.0270	-0.0040
		(0.2115)			(0.0943)	
retire_dummy		0.3040	0.0100		0.0417	0.0062
		(0.2070)			(0.0970)	
unemp_dummy		0.2264	0.0076		-0.2990**	-0.0434
		(0.2853)			(0.1108)	
log_asset		0.6750***	0.0224		0.3838***	0.0570
		(0.1105)			(0.0433)	
fknow		0.1815**	0.0062		0.1111***	0.0165
		(0.0648)			(0.0309)	
ra		-0.1875***	-0.0062		-0.0837**	-0.0124
		(0.0545)			(0.0275)	
lev		-0.2202	-0.0073		0.0360	0.0053
		(0.4279)			(0.0401)	
log_consump		0.2664*	0.0089		0.2797***	0.0415
		(0.1171)			(0.0498)	
estate_dummy		-0.2986	-0.0100		0.0148	0.0022
		(0.2509)			(0.0983)	
mortg_dummy		-0.1605	-0.0053		-0.1400	-0.0205
		(0.2001)			(0.0950)	
Num. obs.	1152	1152	1152	4864	4864	4864

***p < 0.001; **p < 0.01; *p < 0.05

Table 9: Rescaled Income Values and Financial Market Shares

This table reports probit estimates of rescaled income values on stock share and risky share. Standard errors are reported underneath the coefficients in parentheses. Column (1) and (3) present results of income composition on share without including other covariates. Column (2) and (4) report the regression results after including all covariates. The regressions use samples of urban households with valid data and with household head between 18 and 90 years old. Nominal values are winsorized at 1st and 99th percentile and adjusted with CPI before regression. Asset and consumption are divided by 100 before logged.

	Stock Share		Risky Share	
	(1)	(2)	(3)	(4)
r_wage	0.0015	0.0030	-0.0101	0.0134
	(0.0032)	(0.0036)	(0.0092)	(0.0104)
r_business	0.0036	0.0041	0.0225	0.0327
	(0.0098)	(0.0099)	(0.0285)	(0.0287)
r_transfer	-0.0035	-0.0022	-0.0152**	0.0028
	(0.0018)	(0.0022)	(0.0053)	(0.0064)
age		-0.0002		-0.0009
		(0.0002)		(0.0005)
gender		-0.0022		0.0145
		(0.0030)		(0.0086)
edu		0.0006		-0.0016
		(0.0014)		(0.0041)
marry		-0.0004		0.0018
		(0.0044)		(0.0127)
famsize		-0.0003		-0.0027
		(0.0013)		(0.0037)
child_dummy		-0.0016		0.0117
		(0.0035)		(0.0102)
retire_dummy		-0.0008		-0.0016
		(0.0033)		(0.0094)
unemp_dummy		0.0019		-0.0057
		(0.0037)		(0.0107)
log_asset		0.0014		0.0197***
		(0.0014)		(0.0040)
fknow		0.0019		0.0059
		(0.0011)		(0.0033)
ra		-0.0040***		-0.0115***
		(0.0011)		(0.0031)
lev		-0.0000		0.0005
		(0.0004)		(0.0010)
log_consump		0.0031		0.0104*
		(0.0018)		(0.0052)
estate_dummy		-0.0025		-0.0013
		(0.0036)		(0.0104)
mortg_dummy		0.0009		0.0038
		(0.0039)		(0.0114)
Num. obs.	9840	9840	9840	9840
R^2	0.5343	0.5363	0.4789	0.4837
Adj. R^2	0.3787	0.3800	0.3047	0.3097

***p < 0.001; **p < 0.01; *p < 0.05

4.2. Regional Heterogeneity Test

Previous studies have highlighted significant regional disparities in China. Li and Xu's (2008) research examines data spanning from 1978 to 2005, revealing a trend of initially increasing and subsequently decreasing income disparities among provinces, yet these disparities persist. Their study further suggests that disparities among the four major regions, particularly between the eastern region and the others, primarily contribute to inter-provincial disparities.

Following this segmentation, I extract the data from eastern provinces as the developed regions from the entire sample, while the other regions (central, western, and northeastern) are categorized as underdeveloped.

Table 16 in Appendix B summarizes the key financial characteristics of households in developed and underdeveloped regions. On average, the total income of households in developed regions is 33.75% higher than that of households in underdeveloped regions. In developed regions, a higher proportion of households have wage income, while fewer have business and transfer income compared to underdeveloped regions. Significant gaps exist in both the amount and composition of income between the two regions. Although the participation ratios of stocks and risky assets vary greatly between the regions, the average share among participants is very similar in both regions. Additionally, other financial factors exhibit significant discrepancies, with total assets and real estate values being the most notable.

The findings of how income composition affects participation and share in risky financial assets are presented in Table 10 to Table 13. Overall, the effects of wage and business income mainly come from developed regions, while effects of transfer income derive from underdeveloped regions. In developed regions, an increase in the business proportion significantly enhances stock participation at the 1% level, while a decrease is observed at the 5% level with an increase in the transfer proportion, similar to whole sample results. The absolute values of their average marginal effects, 0.0823 and 0.0319, are larger than those in whole sample regression, indicating the impacts are reinforced in developed regions. Likewise, the impacts of wage and transfer income on stock share are prominent in developed regions. A one percentage point increase in income proportion or decrease in transfer proportion will result in a corresponding 0.0185 and 0.0253 percentage point increase in stock share, respectively.

On the contrary, in underdeveloped regions, risky participation is more affected by income composition, specifically, increase in transfer income proportion significantly reduces the participation propensity in risky assets. With a one-unit increase in transfer proportion, there is a 3.74% reduction in the likelihood of investing in risky financial assets. This phenomenon may be due to the relatively large proportion of households with transfer income in underdeveloped areas, and the significance of the data may be

affected by sample size. The threshold for stock investment is relatively higher, and households in underdeveloped areas may find it difficult to access such assets. They may choose to invest in risk assets such as financial products that are easier to obtain, which explains why risky participation is affected more than stock participation in underdeveloped regions.

When studying the heterogeneity of values of different income types, it's found that the promotion effect of wage growth on participation in stock and risky assets is more pronounced in underdeveloped regions (see Table 17 and Table 18, Appendix C). This could possibly be explained by crowding-out effects. In developed regions, people face greater pressures in consumption and real estate investment (Zhou et al., 2017), so income growth is primarily directed towards these avenues, resulting in relatively lower likelihood of investing in stocks.

Table 10: Heterogeneity Test of Income Composition on Stock Participation

This table reports probit estimates of income composition on stock participation in developed and underdeveloped regions. Standard errors are reported underneath the coefficients in parentheses. Column (1) to (3) present relationship between income composition and stock participation in developed regions, while Column (4) to (6) present relationship between income composition and stock participation in underdeveloped regions. The regressions use samples of urban households with valid data and with household head between 18 and 90 years old. Nominal values are winsorized at 1st and 99th percentile and adjusted with CPI before regression. Asset and consumption are divided by 100 before logged. The average marginal effects of the variables are not reported due to the constraints of space and will be mentioned in the main text.

	Stock Participation					
	Developed Region			Underdeveloped Region		
	(1)	(2)	(3)	(4)	(5)	(6)
p_wage	0.2124			0.0307		
	(0.2802)			(0.3553)		
p_business		1.5668**			0.1585	
		(0.5969)			(0.5016)	
p_transfer			-0.6045*			-0.1400
			(0.2843)			(0.4042)
age	-0.0330*	-0.0331*	-0.0325*	-0.0413*	-0.0420*	-0.0406*
	(0.0164)	(0.0165)	(0.0165)	(0.0201)	(0.0198)	(0.0201)
gender	-0.0605	-0.1185	-0.0601	0.1362	0.1367	0.1357
	(0.2307)	(0.2314)	(0.2310)	(0.2710)	(0.2710)	(0.2713)
edu	-0.1402	-0.1273	-0.1477	0.0045	0.0055	0.0085
	(0.1157)	(0.1165)	(0.1164)	(0.1124)	(0.1124)	(0.1131)
marry	0.4473	0.5724	0.4615	0.7052	0.7015	0.7199
	(0.4281)	(0.4319)	(0.4266)	(0.4976)	(0.4964)	(0.4996)
famsize	-0.2238	-0.1840	-0.2704*	0.1213	0.1275	0.1159
	(0.1256)	(0.1199)	(0.1255)	(0.1435)	(0.1411)	(0.1426)
child_dummy	0.7703*	0.6738*	0.7977**	-0.5712	-0.5831	-0.5749
	(0.3076)	(0.3062)	(0.3074)	(0.3182)	(0.3200)	(0.3176)
retire_dummy	0.2567	0.2420	0.3033	0.6268	0.6416	0.6367
	(0.2462)	(0.2462)	(0.2485)	(0.4264)	(0.4290)	(0.4273)
unemp_dummy	0.1037	0.1448	0.1367	0.4109	0.4224	0.4224
	(0.4251)	(0.4238)	(0.4249)	(0.4111)	(0.4123)	(0.4114)
log_asset	0.5829***	0.5723***	0.5771***	0.5267**	0.5147**	0.5237**
	(0.1188)	(0.1181)	(0.1195)	(0.1640)	(0.1657)	(0.1622)
fknow	0.2592**	0.2578**	0.2513**	0.0989	0.0986	0.1004
	(0.0851)	(0.0851)	(0.0854)	(0.1058)	(0.1057)	(0.1058)
ra	-0.2070**	-0.2102**	-0.2086**	-0.1529	-0.1503	-0.1518
	(0.0711)	(0.0715)	(0.0713)	(0.0874)	(0.0876)	(0.0873)
lev	0.3563	0.3225	0.3446	-0.2810	-0.2883	-0.2756
	(0.7950)	(0.8767)	(0.8039)	(0.3528)	(0.3552)	(0.3480)
log_consump	0.1995	0.1493	0.1885	0.5108**	0.5084**	0.5118**
	(0.1504)	(0.1518)	(0.1508)	(0.1969)	(0.1970)	(0.1971)
estate_dummy	-0.3453	-0.2739	-0.3654	-0.1519	-0.1428	-0.1449
	(0.3135)	(0.3125)	(0.3126)	(0.4622)	(0.4639)	(0.4621)
mortg_dummy	-0.0608	-0.1527	-0.0519	-0.3773	-0.3713	-0.3686
	(0.2798)	(0.2863)	(0.2804)	(0.2917)	(0.2932)	(0.2921)
Num. obs.	692	692	692	460	460	460

***p < 0.001; **p < 0.01; *p < 0.05

Table 11: Heterogeneity Test of Income Composition on Risky Participation

This table reports probit estimates of income composition on risky participation in developed and underdeveloped regions. Standard errors are reported underneath the coefficients in parentheses. Column (1) to (3) present relationship between income composition and risky participation in developed regions, while Column (4) to (6) present relationship between income composition and risky participation in underdeveloped regions. The regressions use samples of urban households with valid data and with household head between 18 and 90 years old. Nominal values are winsorized at 1st and 99th percentile and adjusted with CPI before regression. Asset and consumption are divided by 100 before logged. The average marginal effects of the variables are not reported due to the constraints of space and will be mentioned in the main text.

	Risky Participation					
	Developed Region			Underdeveloped Region		
	(1)	(2)	(3)	(4)	(5)	(6)
p_wage	-0.1301			0.2921*		
	(0.1474)			(0.1191)		
p_business		0.2953			-0.0918	
		(0.2092)			(0.1468)	
p_transfer			-0.0146			-0.2875*
			(0.1544)			(0.1335)
age	-0.9778*	-0.9627*	-0.9923*	-0.8035**	-0.8722**	-0.8177**
	(0.3891)	(0.3894)	(0.3891)	(0.3000)	(0.2981)	(0.2998)
gender	-0.0022	-0.0065	-0.0021	0.0754	0.0750	0.0722
	(0.1255)	(0.1256)	(0.1255)	(0.1044)	(0.1043)	(0.1043)
edu	-0.0241	-0.0269	-0.0279	-0.0104	-0.0101	-0.0067
	(0.0601)	(0.0599)	(0.0601)	(0.0476)	(0.0476)	(0.0475)
marry	-0.2973	-0.2841	-0.2892	0.2812	0.2699	0.2818
	(0.2070)	(0.2069)	(0.2069)	(0.1530)	(0.1527)	(0.1530)
famsize	0.0981	0.0873	0.0883	-0.0279	-0.0171	-0.0247
	(0.0615)	(0.0607)	(0.0618)	(0.0443)	(0.0441)	(0.0443)
child_dummy	0.0330	0.0344	0.0325	-0.0294	-0.0418	-0.0388
	(0.1544)	(0.1545)	(0.1545)	(0.1217)	(0.1215)	(0.1216)
retire_dummy	-0.1409	-0.1249	-0.1210	0.1399	0.1199	0.1554
	(0.1388)	(0.1375)	(0.1388)	(0.1369)	(0.1370)	(0.1374)
unemp_dummy	-0.5756**	-0.5544**	-0.5621**	-0.2232	-0.2428	-0.2060
	(0.1902)	(0.1900)	(0.1907)	(0.1388)	(0.1385)	(0.1393)
log_asset	0.2405***	0.2338***	0.2393***	0.4458***	0.4425***	0.4310***
	(0.0469)	(0.0471)	(0.0471)	(0.0502)	(0.0506)	(0.0501)
fknow	0.1457**	0.1452**	0.1455**	0.0943*	0.0933*	0.0964*
	(0.0476)	(0.0476)	(0.0476)	(0.0414)	(0.0414)	(0.0414)
ra	-0.1318**	-0.1316**	-0.1315**	-0.0693	-0.0679	-0.0673
	(0.0429)	(0.0429)	(0.0429)	(0.0367)	(0.0366)	(0.0367)
lev	-0.0146	-0.0107	-0.0111	0.0559	0.0529	0.0519
	(0.1292)	(0.1286)	(0.1288)	(0.0438)	(0.0433)	(0.0430)
log_consump	0.3250***	0.3228***	0.3262***	0.2585***	0.2545***	0.2555***
	(0.0772)	(0.0773)	(0.0773)	(0.0657)	(0.0656)	(0.0657)
estate_dummy	-0.1757	-0.1642	-0.1707	0.1085	0.1072	0.1148
	(0.1500)	(0.1501)	(0.1502)	(0.1321)	(0.1318)	(0.1321)
mortg_dummy	0.0586	0.0585	0.0618	-0.3043*	-0.3028*	-0.2926*
	(0.1629)	(0.1631)	(0.1630)	(0.1190)	(0.1189)	(0.1190)
Deviance	2153.7231	2152.5688	2154.4807	2976.1876	2981.6593	2977.4924
Num. obs	1960	1960	1960	2904	2904	2904

***p < 0.001; **p < 0.01; *p < 0.05

Table 12: Heterogeneity Test of Income Composition on Stock Share

This table reports OLS estimates of income composition on stock share in developed and underdeveloped regions. Standard errors are reported underneath the coefficients in parentheses. Column (1) to (3) present relationship between income composition and stock share in developed regions, while Column (4) to (6) present relationship between income composition and stock share in underdeveloped regions. The regressions use samples of urban households with valid data and with household head between 18 and 90 years old. Nominal values are winsorized at 1st and 99th percentile and adjusted with CPI before logged. Asset and consumption are divided by 100 before regression.

	Stock Share					
	Developed Region			Underdeveloped Region		
	(1)	(2)	(3)	(4)	(5)	(6)
p_wage	0.0185*			0.0042		
	(0.0075)			(0.0032)		
p_business		0.0117			0.0014	
		(0.0116)			(0.0043)	
p_transfer			-0.0253**			-0.0056
			(0.0078)			(0.0034)
age	-0.0002	-0.0002	-0.0001	-0.0003	-0.0003	-0.0003
	(0.0004)	(0.0004)	(0.0004)	(0.0002)	(0.0002)	(0.0002)
gender	-0.0073	-0.0077	-0.0076	0.0003	0.0002	0.0003
	(0.0065)	(0.0065)	(0.0065)	(0.0029)	(0.0029)	(0.0029)
edu	-0.0017	-0.0014	-0.0018	0.0015	0.0016	0.0016
	(0.0031)	(0.0031)	(0.0031)	(0.0014)	(0.0014)	(0.0014)
marry	0.0024	0.0020	0.0030	-0.0009	-0.0011	-0.0010
	(0.0096)	(0.0096)	(0.0096)	(0.0043)	(0.0043)	(0.0043)
famsize	-0.0050	-0.0034	-0.0057	0.0008	0.0011	0.0008
	(0.0031)	(0.0030)	(0.0031)	(0.0012)	(0.0012)	(0.0012)
child_dummy	0.0078	0.0076	0.0081	-0.0055	-0.0059	-0.0056
	(0.0080)	(0.0080)	(0.0080)	(0.0034)	(0.0034)	(0.0034)
retire_dummy	-0.0049	-0.0068	-0.0047	0.0034	0.0032	0.0035
	(0.0067)	(0.0066)	(0.0066)	(0.0033)	(0.0033)	(0.0033)
unemp_dummy	-0.0039	-0.0049	-0.0027	0.0052	0.0050	0.0056
	(0.0087)	(0.0087)	(0.0087)	(0.0035)	(0.0035)	(0.0035)
log_asset	0.0026	0.0024	0.0023	0.0014	0.0013	0.0012
	(0.0020)	(0.0020)	(0.0020)	(0.0011)	(0.0011)	(0.0011)
fknow	0.0029	0.0030	0.0028	0.0015	0.0015	0.0015
	(0.0024)	(0.0024)	(0.0024)	(0.0011)	(0.0011)	(0.0011)
ra	-0.0082***	-0.0082***	-0.0081***	-0.0016	-0.0015	-0.0015
	(0.0022)	(0.0022)	(0.0022)	(0.0010)	(0.0010)	(0.0010)
lev	0.0002	0.0001	0.0002	-0.0001	-0.0000	-0.0001
	(0.0007)	(0.0007)	(0.0007)	(0.0004)	(0.0004)	(0.0004)
log_consump	0.0049	0.0047	0.0047	0.0019	0.0017	0.0019
	(0.0037)	(0.0037)	(0.0037)	(0.0018)	(0.0018)	(0.0018)
estate_dummy	-0.0085	-0.0087	-0.0082	0.0000	0.0000	-0.0000
	(0.0076)	(0.0076)	(0.0076)	(0.0035)	(0.0035)	(0.0035)
mortg_dummy	0.0004	-0.0003	0.0004	0.0010	0.0010	0.0012
	(0.0090)	(0.0090)	(0.0090)	(0.0038)	(0.0038)	(0.0038)
Num. obs.	3620	3620	3620	6220	6220	6220
R^2	0.5772	0.5764	0.5779	0.4432	0.4430	0.4434
Adj. R^2	0.4324	0.4314	0.4334	0.2547	0.2544	0.2549

***p < 0.001; **p < 0.01; *p < 0.05

Table 13: Heterogeneity Test of Income Composition on Risky Share

This table reports OLS estimates of income composition on risky share in developed and underdeveloped regions. Standard errors are reported underneath the coefficients in parentheses. Column (1) to (3) present relationship between income composition and risky share in developed regions, while Column (4) to (6) present relationship between income composition and risky share in underdeveloped regions. The regressions use samples of urban households with valid data and with household head between 18 and 90 years old. Nominal values are winsorized at 1st and 99th percentile and adjusted with CPI before logged. Asset and consumption are divided by 100 before regression.

	Risky Share					
	Developed Region			Underdeveloped Region		
	(1)	(2)	(3)	(4)	(5)	(6)
p_wage	-0.0033			0.0080		
	(0.0188)			(0.0110)		
p_business		0.0165			-0.0149	
		(0.0289)			(0.0146)	
p_transfer			-0.0039			0.0006
			(0.0195)			(0.0117)
age	-0.0019	-0.0019	-0.0019	-0.0005	-0.0005	-0.0005
	(0.0010)	(0.0010)	(0.0010)	(0.0006)	(0.0006)	(0.0006)
gender	-0.0013	-0.0015	-0.0013	0.0219*	0.0220*	0.0217*
	(0.0163)	(0.0163)	(0.0163)	(0.0100)	(0.0100)	(0.0099)
edu	0.0002	0.0001	0.0000	-0.0030	-0.0030	-0.0029
	(0.0077)	(0.0077)	(0.0077)	(0.0048)	(0.0048)	(0.0048)
marry	-0.0376	-0.0372	-0.0373	0.0230	0.0230	0.0226
	(0.0240)	(0.0240)	(0.0240)	(0.0146)	(0.0146)	(0.0146)
famsize	-0.0050	-0.0054	-0.0057	-0.0014	-0.0011	-0.0009
	(0.0077)	(0.0075)	(0.0077)	(0.0042)	(0.0042)	(0.0042)
child_dummy	0.0319	0.0320	0.0320	0.0014	0.0014	0.0009
	(0.0199)	(0.0199)	(0.0199)	(0.0117)	(0.0117)	(0.0117)
retire_dummy	-0.0038	-0.0038	-0.0032	0.0013	0.0008	0.0010
	(0.0166)	(0.0165)	(0.0166)	(0.0114)	(0.0114)	(0.0114)
unemp_dummy	-0.0090	-0.0083	-0.0084	-0.0048	-0.0059	-0.0054
	(0.0216)	(0.0216)	(0.0217)	(0.0120)	(0.0120)	(0.0120)
log_tasset	0.0119*	0.0117*	0.0119*	0.0204***	0.0207***	0.0204***
	(0.0051)	(0.0051)	(0.0051)	(0.0037)	(0.0037)	(0.0037)
fknow	0.0130*	0.0130*	0.0130*	0.0024	0.0024	0.0024
	(0.0060)	(0.0060)	(0.0060)	(0.0038)	(0.0038)	(0.0038)
ra	-0.0261***	-0.0260***	-0.0260***	-0.0029	-0.0030	-0.0028
	(0.0055)	(0.0055)	(0.0055)	(0.0036)	(0.0036)	(0.0036)
tlev	-0.0005	-0.0005	-0.0005	0.0011	0.0011	0.0011
	(0.0016)	(0.0016)	(0.0016)	(0.0013)	(0.0013)	(0.0013)
log_consump	0.0188*	0.0186*	0.0188*	0.0059	0.0058	0.0056
	(0.0093)	(0.0093)	(0.0093)	(0.0061)	(0.0061)	(0.0061)
estate_dummy	-0.0008	-0.0006	-0.0006	-0.0036	-0.0035	-0.0036
	(0.0191)	(0.0191)	(0.0191)	(0.0121)	(0.0121)	(0.0121)
mortg_dummy	0.0362	0.0361	0.0364	-0.0106	-0.0111	-0.0108
	(0.0226)	(0.0226)	(0.0226)	(0.0128)	(0.0128)	(0.0129)
Num. obs.	3620	3620	3620	6220	6220	6220
R^2	0.5099	0.5100	0.5099	0.4476	0.4477	0.4475
Adj. R^2	0.3421	0.3422	0.3421	0.2606	0.2606	0.2605

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

4.3. Robustness Check

In addition to regional heterogeneity test, three methods are employed to further check the robustness of the results. Firstly, I repeat the regression using subsets of samples comprising only those households who participate in stock or risky financial asset markets. This approach is chosen to ensure a more focused analysis on the specific relationship of interest, mitigating the potential influence of non-participants on the results and enhancing the validity of the study.

Table 19 in Appendix C reports results of income composition on stock and risky share. For stock share, wage and transfer proportion remain significant at the level of 1%, similar to the results in regression of whole sample. One unit increase in wage proportion corresponds to a 0.1631% increase in the allocation of stocks in total financial assets, while one unit increase in transfer income proportion results in a 0.1867% decrease. The marginal effects are higher than those obtained using whole sample, which is in line with reality, since including non-participants smooths out marginal effects. For risky share, all the coefficients remain insignificant, consistent with the results of the regression on the whole sample. Table 20 shows that even within the subsets, income values exhibit no significant effects on stock or risky share.

Secondly, I replicate the whole sample regressions using the subsample comprising households with household heads that are under 60 years old. The main purpose of using this subsample is to address the issue of overfitting caused by the strong collinearity between age_{it} and transfer-related variables. The results are similar to those in whole sample regressions. It's worth noting that significance level of coefficient of $p\_ftransfer_{it}$ increases to 5% in regressions of income composition on stock participation, reinforcing the conclusion that transfer proportion has negative impact on stock participation.

Thirdly, I construct interaction terms to investigate how the effects of income composition vary with different risk aversion levels. In whole sample regressions, risk aversion is highly significant in most scenarios. In reality, income composition is affected by risk aversion level, but the direction of the impacts are uncertain. On the one hand, it's commonly believed that households participating more in business, for example, are more adventurous, which should be seen in their investment behavior as well. On the other hand, business income is more volatile and exposed to higher risks, resulting in households less willing to invest in risky assets to prevent their total wealth from shrinking (Fang and Nofsinger, 2019). To directly obtain the marginal effects of all the risk aversion levels, I group the sample by risk aversion level, and create four dummy variables ra_2_{it}, ra_3_{it}, ra_4_{it} and ra_5_{it}. For instance, ra_2_{it} is one when risk aversion level is 2, otherwise zero. Interaction terms are created by multiplying income proportions or rescaled income values with the dummy variables. By adding interaction term of income composition and risk aversion, I study for different types of income,

how risk aversion adjust the their effects on portfolio choice. The results are shown in Table 24 to 26 in Appendix C.

After including interaction terms, the regression results remain robust. The significance levels of the original coefficient for p_wage_{it} and $p\_transfer_{it}$ are enhanced. This may suggest that the impacts of wage or transfer proportion on stock investment are modulated by the level of risk aversion. In other words, the influences of wage or transfer income proportion on stock investment are significantly affected by varying degrees of risk aversion, making this relationship more pronounced. Interaction term $p\_wage_{it} \times ra\_n_{it}$ has significantly negative coefficients in both regressions with stock participation and stock share, confirming when wage income rises, the possibility of investing in stocks or the stock share increases slower for households with higher risk aversion level. Similarly, the result of $p\_transfer_{it} \times ra\_n_{it}$ shows that when transfer income rises, more risk-averse households are more likely to exit the stock market, and reduce their shares more sharply. For business income, the coefficients are sometimes positive, but since few coefficients are significant, the interaction effect can't be identified.

5. Conclusion

The paper explores households' asset allocation decisions based on different income compositions. Empirical findings drawn from the CHFS reveal that, even when a household maintains a constant amount of non-property income, income composition still influences its behavior in financial markets. Specifically, households with relatively higher business income or lower transfer income exhibit a greater propensity to engage in risky financial assets. Meanwhile, households with relatively higher wage income and lower transfer income tend to prefer more stocks in their portfolios. However, the overall share of risky financial assets remains unaffected by income composition.

In addition to income composition, the study investigates how the increase of different types of income as a fraction of household wealth affects households' portfolio choices. It is observed that increases in wage and business assets make households more likely to invest in risky financial assets. However, the growth in none of the income types has an impact on the share of risky assets in the portfolio. Regional heterogeneity has been empirically demonstrated to exist in the results. Portfolio choice is more affected by wage and business income in developed regions, and by transfer income in underdeveloped regions. These impacts are determined by a combination of regional macro factors and individual household characteristics, and the paradigms of different regions also hold research value for future exploration.

With the advent of the post-real estate era, the importance of property income within household earnings continues to escalate, while the mutual interactions among various income sources make the structure of household income increasingly complex. If property income were to be integrated as a subject of study, it could potentially impact the outcomes. Furthermore, the impact of the pandemic on people's income and risk attitudes may result in significantly different research findings, and the results based on recent data might be different. Due to data constraints, however, the underlying mechanisms behind this phenomenon remain undisclosed. This field holds considerable research significance and invites further exploration in future studies.

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Appendix A: Definition of Variables

Table 14: Definition of Variables

This table summarizes the variables used in the regressions of the study. Nominal values are winsorized at 1st and 99th percentile and adjusted with CPI. Age, asset and consumption have taken common logarithm to avoid the impact of their original units. The currency for nominal values is Chinese Yuan.

Variable	Abbreviation	Description
Wage proportion	p_wage	The proportion that wage income takes in total income.
Business proportion	p_business	The proportion that business income takes in total income.
Transfer proportion	p_transfer	The proportion that transfer income takes in total income.
Rescaled wage income	r_wage	Wage income dividing total wealth of the household.
Rescaled business income	r_business	Business income dividing total wealth of the household.
Rescaled transfer income	r_transfer	Transfer income dividing total wealth of the household.
Stock Participation	stock_par	One if the household owns public or private stocks of positive value.
Risky Participation	risky_par	One if the household owns any risky financial assets (stock, bond, fund, derivatives, financial product, foreign asset, gold, other financial assets) with positive value.
Stock Share	stock_share	The proportion that stocks take in total financial assets.
Risky Share	risky_share	The proportion that risky financial assets take in total financial assets.
Age	age	Age of household head.
Gender	gender	One if the household head is male.
Education	edu	Highest educational level of the household head, with value of 1 to 9 from the lowest to the highest.
Marriage situation	marry	One if the household is married.
Family size	famsize	The number of household members.
Child dummy	child_dummy	One if there is any child under 18 years old in the household.
Retirement dummy	retire_dummy	One if any household member has retired and receives pensions.
Unemployment dummy	unemp_dummy	One if any household member is between jobs.
Financial knowledge	fknow	Level of self-reported financial knowledge of the household head, taking values of 1 to 5 from the lowest to highest.
Risk aversion level	ra	Level of self-reported risk aversion of the household head, taking values of 1 to 5 representing the lowest to the highest aversion level.
Household annual consumption	log_consump	Household's annual consumption including consumption of food, clothing, residential, service, travel, telecom, education, entertainment, health, etc. The value is divided by 100 and logged.
Household total asset	log_asset	Household's total wealth, including financial assets and non-financial assets of business, agriculture, lands, real estates, vehicles and other properties. The value is divided by 100 and logged.
Leverage ratio	lev	Household's debt dividing total asset. Total debt is the sum of financial debts, real estate mortgage, vehicle mortgage, loans or borrowings for business or agricultural activities, health, education, etc.
Real estate dummy	estate_dummy	One if the household owns real estate property.
Mortgage dummy	mortg_dummy	One if the household has outstanding mortgage.

Appendix B: Other Statistics Results and Data Insights

Table 15: Summary Statistics of Financial Assets by Category

This table includes urban households with valid income and characteristic data with household head between 18 and 90 years old. Nominal values are winsorized at 1st and 99th percentile and adjusted with CPI ahead of summary statistics. The currency of nominal values is Chinese Yuan.

Variable	N	Zero N	Mean	Non-Zero Mean	SD	Min	Max
cash	9,840	268	8,072.09	7,717.17	34,122.45	0	1,159,059.00
deposit	9,840	2,490	67,668.40	85,053.54	221,077.31	0	12,923,750.00
stock	9,840	9,214	6,730.54	100,267.98	59,802.59	0	2,067,800.00
bond	9,840	9,756	751.16	82,647.15	14,071.03	0	759,577.50
fund	9,840	9,437	2,699.50	62,529.31	28,630.29	0	1,033,900.00
derivatives	9,840	9,832	87.19	102,297.25	4,214.93	0	275,000.00
financial product	9,840	8,727	18,036.33	147,175.79	107,888.59	0	2,306,865.00
foreign asset	9,840	9,799	139.58	31,547.68	5,338.25	0	450,120.00
gold	9,840	9,788	228.24	41,093.61	7,854.74	0	516,950.00
other asset	9,840	8,508	10,206.12	69,865.07	80,851.63	0	3,375,900.00

Table 16: Summary Statistics of Financial Data in Developed and Underdeveloped Regions

This table includes urban households with valid income and characteristic data with household head between 18 and 90 years old. Nominal values are winsorized at 1st and 99th percentile and adjusted with CPI ahead of summary statistics. The currency of nominal values is Chinese Yuan. For variables with zero values, mean is calculated among non-zero values, otherwise mean is calculated among the whole sample.

	Developed Region				Underdeveloped Region			
Variable	N	Zero N	Mean	SD	N	Zero N	Mean	SD
wage income	3,620	1,490	81,927.95	67,338.56	6,220	2,308	59,886.83	49,798.10
business income	3,620	3,056	135,576.00	103,877.77	6,220	4,596	106,039.90	107,106.21
transfer income	3,620	326	59,896.50	74,039.43	6,220	855	34,619.67	50,275.44
total income	3,620	0	131,941.20	165,237.82	6,220	0	98,651.93	140,360.95
stock par	3,620	3,216	0.1116	0.3149	6,220	5,998	0.0357	0.1855
stock share	3,620	3,216	0.2900	0.1263	6,220	5,998	0.2721	0.0679
risky par	3,620	2,330	0.3564	0.4790	6,220	4,790	0.2299	0.4208
risky share	3,620	2,330	0.4761	0.2930	6,220	4,790	0.4356	0.2330
non-risky financial asset	3,620	11	107,830.70	237,758.63	6,220	23	50,000.21	197,042.85
risky financial asset	3,620	2,330	183,655.70	223,996.54	6,220	4,790	83,293.19	98,124.76
total asset	3,620	0	2,300,729.41	2,514,730.19	6,220	0	717,904.83	918,278.07
total debt	3,620	2,902	199,592.70	135,968.43	6,220	4,371	129,646.40	111,328.05
leverage ratio	3,620	2,902	0.5220	2.8395	6,220	4,371	0.5783	2.2728
consumption	3,620	0	82,866.48	74,746.02	6,220	0	62,555.78	56,483.81
real estate	3,620	606	2,112,729.00	2,162,521.91	6,220	943	522,186.00	590,466.33
mortgage	3,620	3,319	312,634.60	107,642.78	6,220	5,613	231,339.90	90,065.25

Figure 2: Distribution of Income Compositions

This figure exhibits the distribution of income composition by category. The figure is plotted based on non-zero values in each category.

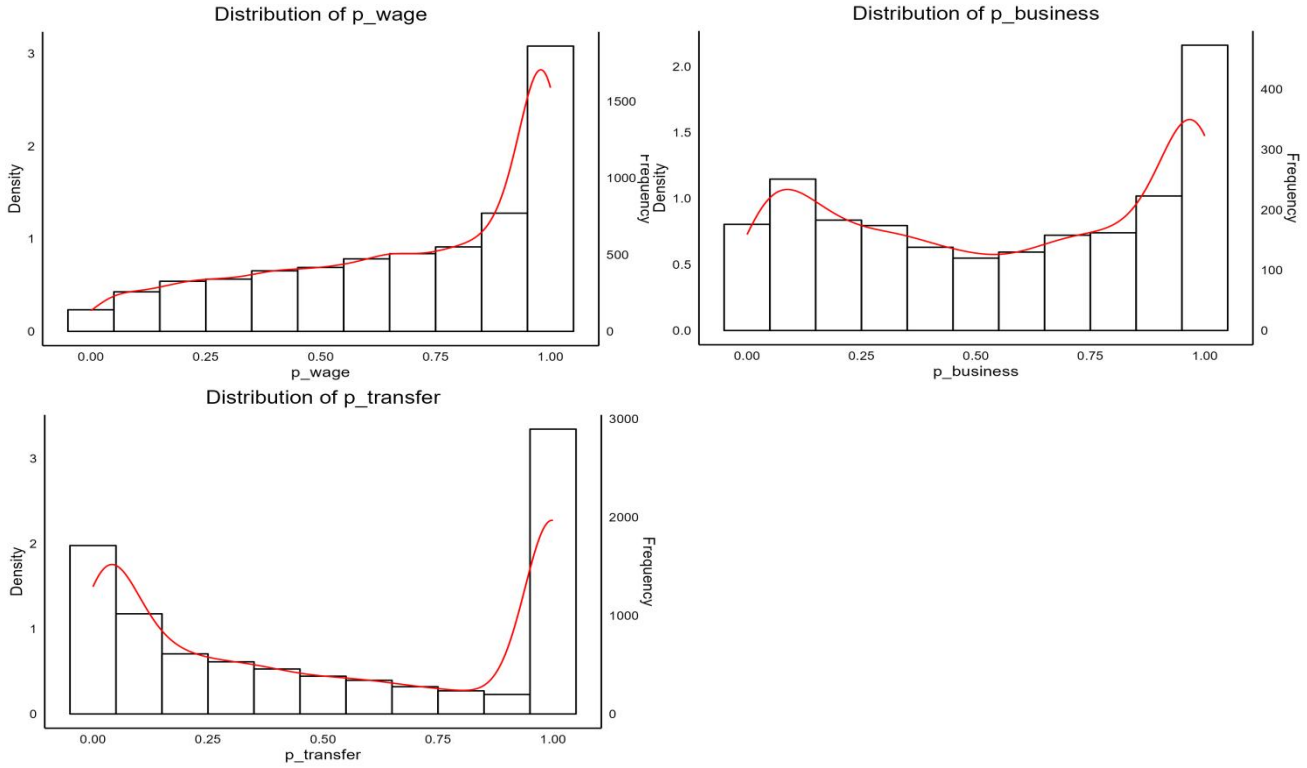


Figure 3: Distribution of Rescaled Income by Category

This figure exhibits the distribution of rescaled income by category. The figure is plotted based on non-zero values in each category.

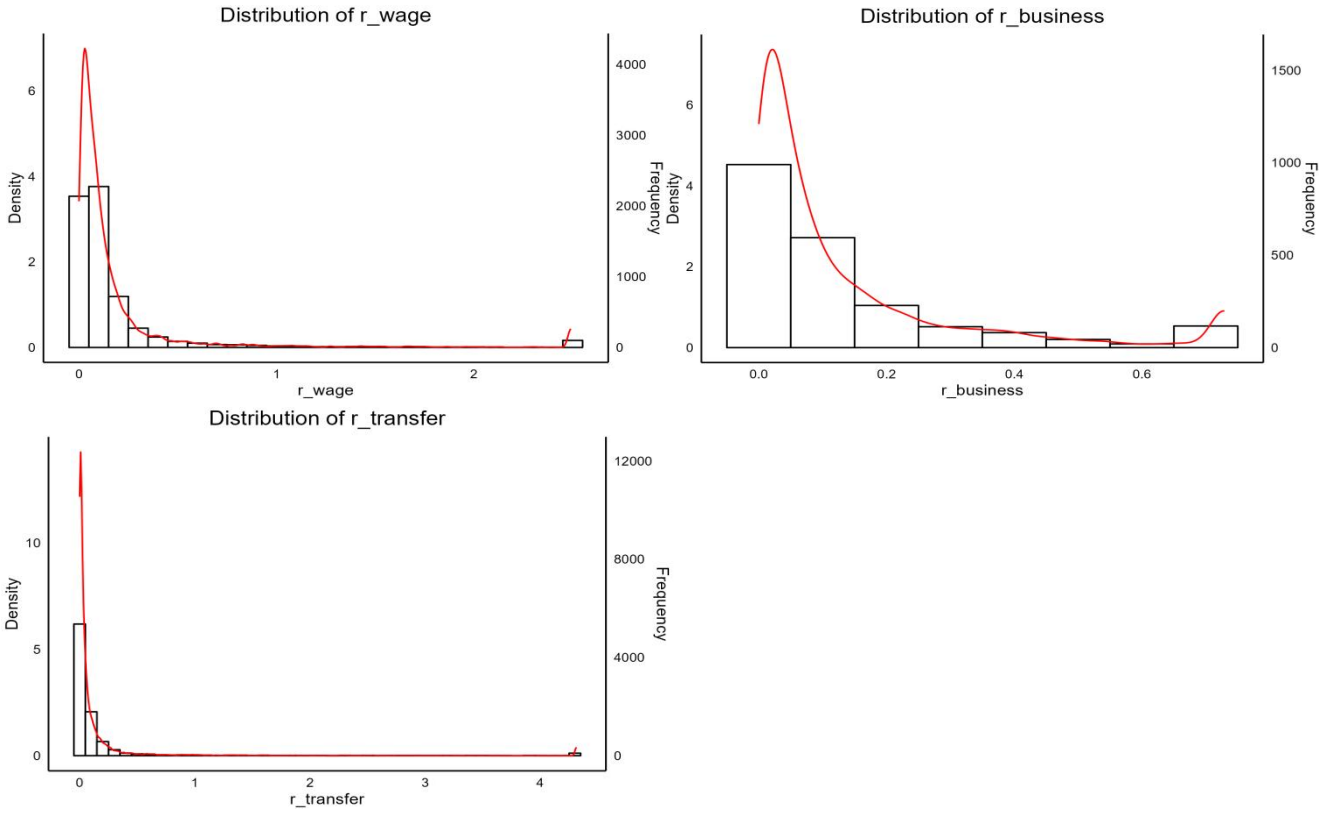


Figure 4: Distribution of Stock Share and Risky Share

This figure exhibits the distribution of stock share and risky share. The figure is plotted based on households who participate in stock market or possess risky financial assets.

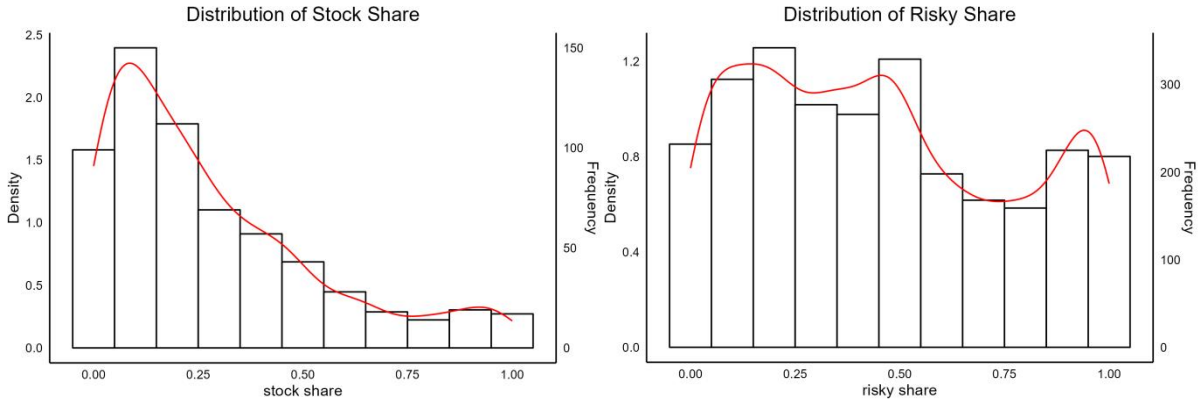
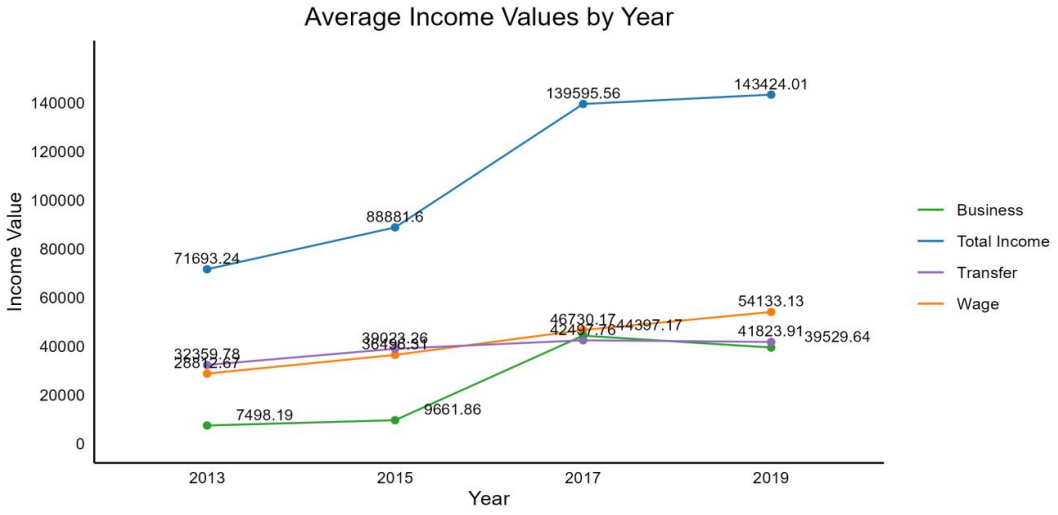
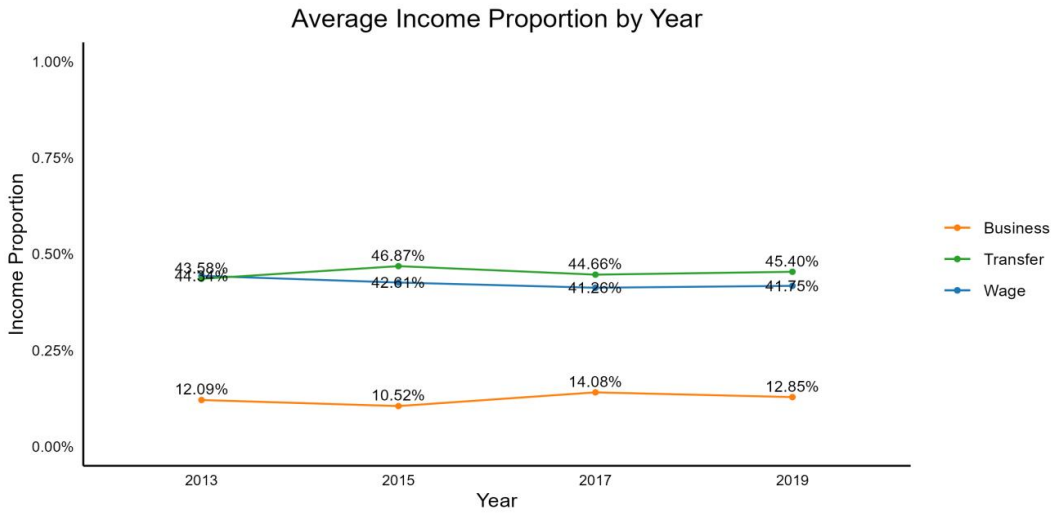


Figure 5: Temporal Trend of Income and Income Composition

This figure depicts changes in income and its composition over time. Plot (1) shows the average total income and various income types for each year. Plot (2) displays the average income proportions over time. Nominal values are adjusted by winsorizing at the 1st and 99th percentile and then adjusted with the CPI before plotting.



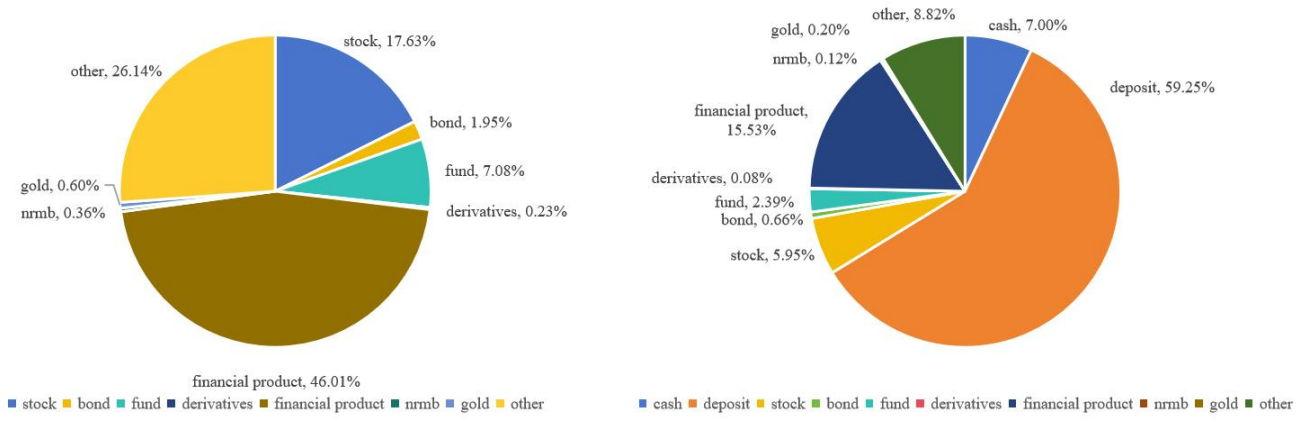
（1）



（2）

Figure 6: Composition of Financial Assets

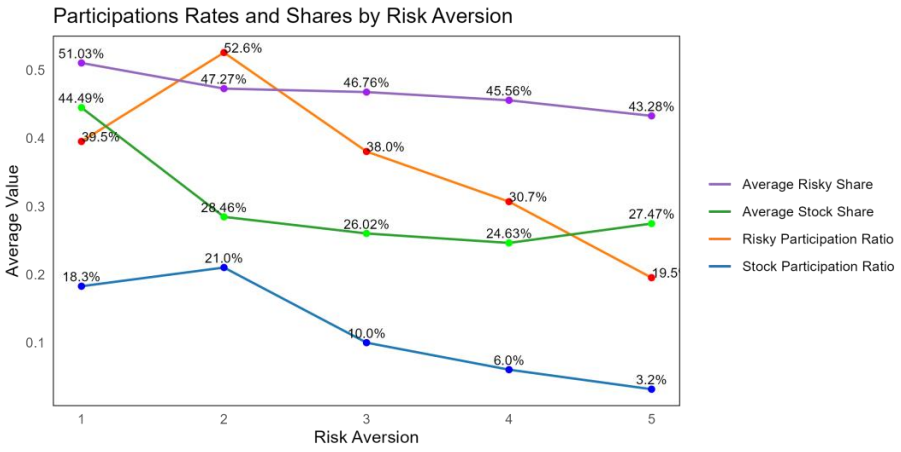
The figure exhibits the details of financial asset composition. The data shown in the figure is calculated based on the sum of values of each financial asset component. Plot (1) shows the composition of risky assets while Plot (2) shows that of financial assets including both risky and non-risky assets.



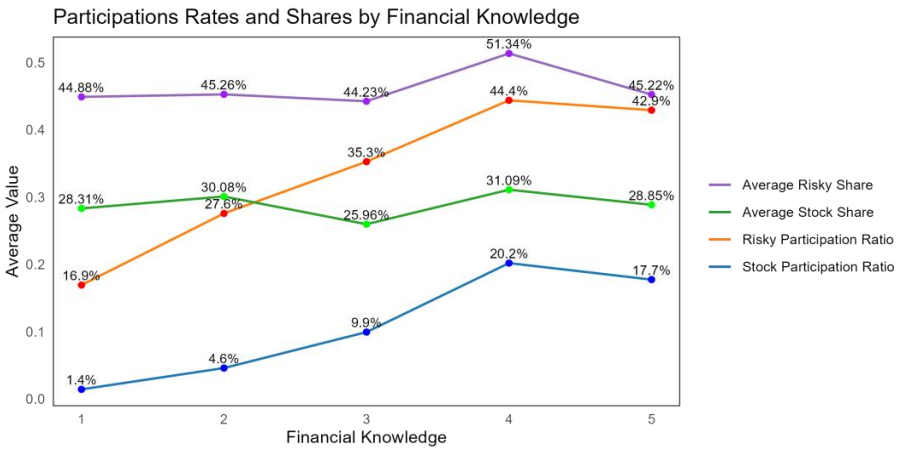
（1） （2）

Figure 7: Portfolio Choice by Risk Aversion and Financial Knowledge

The figure shows how shares and participation ratios change with risk aversion and financial knowledge level. Average stock and risky share are both conditional, calculated among households that participate in stock or risky financial asset investment. Participation ratio is calculated by the number of household owning stock or risky financial assets dividing sample size. Plot (1) demonstrates portfolio choice grouped by risk aversion while plot (2) shows portfolio choice groupsed by financial knowledge.



（1）



（2）

Appendix C: Heterogeneity Test and Robustness Check

Table 17: Heterogeneity Test of Rescaled Income Values on Financial Market Participation

This table reports probit estimates of rescaled income values on stock and risky paticipation in developed and underdeveloped regions. Standard errors are reported underneath the coefficients in parentheses. Column (1) and (2) present results of rescaled income values on stock participation. Column (3) and (4) present results of rescaled income values on risky participation. The regressions use samples of urban households with valid data and with household head between 18 and 90 years old. Nominal values are winsorized at 1st and 99th percentile and adjusted with CPI before regression. Asset and consumption are divided by 100 before logged. The average marginal effects of the variables are not reported due to the constraints of space and will be mentioned in the main text.

	Stock Participation		Risky Participation	
	Developed Region	Underdeveloped Region	Developed Region	Underdeveloped Region
	(1)	(2)	(3)	(4)
r_wage	0.7854	4.2958***	0.4633*	0.4398**
	(0.5614)	(1.1384)	(0.1944)	(0.1652)
r_business	3.0236	-1.7292	2.6325***	0.4032
	(1.5574)	(2.4945)	(0.6805)	(0.3070)
r_transfer	0.0144	-0.0645	0.0224	-0.1045
	(0.2548)	(1.1022)	(0.1051)	(0.1577)
log_age	-0.0350*	-0.0363	-0.0279**	-0.0196**
	(0.0166)	(0.0205)	(0.0086)	(0.0061)
gender	-0.0254	0.1428	0.0116	0.0804
	(0.2307)	(0.2757)	(0.1275)	(0.1045)
edu	-0.1464	-0.0171	-0.0590	-0.0153
	(0.1173)	(0.1162)	(0.0609)	(0.0473)
marry	0.5046	0.7904	-0.3206	0.2339
	(0.4290)	(0.4961)	(0.2084)	(0.1534)
famsize	-0.2175	0.0173	0.0570	-0.0265
	(0.1211)	(0.1532)	(0.0616)	(0.0443)
child_dummy	0.7274*	-0.5641	0.0692	-0.0695
	(0.3066)	(0.3278)	(0.1552)	(0.1222)
retire_dummy	0.2914	0.5984	-0.0559	0.1715
	(0.2477)	(0.4449)	(0.1405)	(0.1391)
unemp_dummy	0.1512	0.4107	-0.4941*	-0.2051
	(0.4285)	(0.4234)	(0.1918)	(0.1394)
log_asset	0.7080***	1.0245***	0.3180***	0.5012***
	(0.1463)	(0.2210)	(0.0624)	(0.0632)
fknow	0.2604**	0.0820	0.1442**	0.0931*
	(0.0850)	(0.1097)	(0.0479)	(0.0415)
ra	-0.2025**	-0.1425	-0.1350**	-0.0658
	(0.0713)	(0.0916)	(0.0431)	(0.0367)
lev	0.3450	-0.5639	0.0112	0.0569
	(0.7869)	(0.6557)	(0.1300)	(0.0461)
log_consump	0.1693	0.5197*	0.3095***	0.2432***
	(0.1511)	(0.2073)	(0.0781)	(0.0661)
estate_dummy	-0.3190	-0.1328	-0.1055	0.1356
	(0.3125)	(0.5039)	(0.1532)	(0.1326)
mortg_dummy	-0.0853	-0.3991	0.0451	-0.3000*
	(0.2807)	(0.3073)	(0.1644)	(0.1192)
Num. obs.	692	460	1960	2904

***p < 0.001; **p < 0.01; *p < 0.05

Table 18: Heterogeneity Test of Rescaled Income Values on Financial Market Share

This table reports OLS estimates of rescaled income values on stock and risky share in developed and underdeveloped regions. Standard errors are reported underneath the coefficients in parentheses. Column (1) and (2) present results of rescaled income values on stock share. Column (3) and (4) present results of rescaled income values on stock share. The regressions use samples of urban households with valid data and with household head between 18 and 90 years old. Nominal values are winsorized at 1st and 99th percentile and adjusted with CPI before regression. Asset and consumption are divided by 100 before logged.

	Stock Share		Risky Share	
	Developed Region	Underdeveloped	Developed Region	Underdeveloped
	(1)	(2)	(3)	(4)
r_wage	-0.0008	0.0046	0.0267	0.0110
	(0.0089)	(0.0034)	(0.0222)	(0.0115)
r_business	0.0261	-0.0015	0.1748*	0.0048
	(0.0305)	(0.0087)	(0.0761)	(0.0296)
r_transfer	-0.0011	-0.0018	0.0040	0.0015
	(0.0046)	(0.0022)	(0.0115)	(0.0077)
log_age	-0.0002	-0.0003	-0.0017	-0.0005
	(0.0004)	(0.0002)	(0.0010)	(0.0006)
gender	-0.0075	0.0004	-0.0009	0.0220*
	(0.0065)	(0.0029)	(0.0163)	(0.0100)
edu	-0.0014	0.0015	-0.0007	-0.0031
	(0.0031)	(0.0014)	(0.0077)	(0.0048)
marry	0.0019	-0.0009	-0.0376	0.0224
	(0.0096)	(0.0043)	(0.0240)	(0.0146)
famsize	-0.0035	0.0009	-0.0075	-0.0015
	(0.0030)	(0.0012)	(0.0075)	(0.0042)
child_dummy	0.0077	-0.0057	0.0336	0.0010
	(0.0080)	(0.0034)	(0.0199)	(0.0117)
retire_dummy	-0.0066	0.0033	-0.0037	0.0010
	(0.0066)	(0.0033)	(0.0165)	(0.0114)
unemp_dummy	-0.0049	0.0052	-0.0053	-0.0045
	(0.0087)	(0.0035)	(0.0216)	(0.0120)
log_asset	0.0022	0.0015	0.0171*	0.0227***
	(0.0028)	(0.0014)	(0.0070)	(0.0049)
fknow	0.0030	0.0015	0.0129*	0.0023
	(0.0024)	(0.0011)	(0.0060)	(0.0038)
ra	-0.0082***	-0.0016	-0.0264***	-0.0028
	(0.0022)	(0.0010)	(0.0055)	(0.0036)
lev	0.0001	-0.0001	-0.0004	0.0010
	(0.0007)	(0.0004)	(0.0016)	(0.0013)
log_consump	0.0048	0.0019	0.0176	0.0054
	(0.0037)	(0.0018)	(0.0093)	(0.0061)
estate_dummy	-0.0086	0.0003	0.0014	-0.0032
	(0.0077)	(0.0035)	(0.0192)	(0.0121)
mortg_dummy	-0.0001	0.0011	0.0356	-0.0109
	(0.0091)	(0.0038)	(0.0226)	(0.0129)
Num. obs.	3620	6220	3620	6220
R^2	0.5764	0.4434	0.5111	0.4476
Adj. R^2	0.4309	0.2546	0.3433	0.2603

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

Table 19: Robustness Check of Income Composition and Shares (Sample of Participants)
This table reports OLS estimates of income composition on stock and risky share of only stock (risky financial) market participants. Standard errors are reported underneath the coefficients in parentheses. Column (1) to (3) present relationship between income composition and stock share. Column (4) to (6) present relationship between rescaled income composition and risky share. The regressions use sub-samples of only households holding stock (risky financial) asset with valid data and with household head between 18 and 90 years old. Nominal values are winsorized at 1st and 99th percentile and adjusted with CPI before regression. Asset and consumption are divided by 100 before logged.

	Stock Share			Risky Share		
	(1)	(2)	(3)	(4)	(5)	(6)
p_wage	0.1631**			-0.0027		
	(0.0589)			(0.0309)		
p_business		0.0120			-0.0133	
		(0.1485)			(0.0421)	
p_transfer			-0.1867**			0.0111
			(0.0625)			(0.0327)
age	0.0037	0.0028	0.0041	-0.0003	-0.0003	-0.0003
	(0.0036)	(0.0036)	(0.0036)	(0.0017)	(0.0017)	(0.0017)
gender	-0.0192	-0.0195	-0.0241	0.0545*	0.0550*	0.0545*
	(0.0499)	(0.0507)	(0.0498)	(0.0254)	(0.0254)	(0.0253)
edu	0.0244	0.0320	0.0262	0.0011	0.0009	0.0012
	(0.0217)	(0.0220)	(0.0216)	(0.0119)	(0.0119)	(0.0119)
marry	-0.0225	-0.0174	-0.0196	0.0148	0.0142	0.0140
	(0.0726)	(0.0736)	(0.0725)	(0.0415)	(0.0416)	(0.0416)
famsize	-0.0127	-0.0020	-0.0140	0.0004	0.0002	0.0009
	(0.0319)	(0.0321)	(0.0319)	(0.0129)	(0.0128)	(0.0129)
child_dummy	0.0133	0.0093	-0.0012	0.0037	0.0046	0.0040
	(0.0574)	(0.0594)	(0.0574)	(0.0304)	(0.0305)	(0.0304)
retire_dummy	0.0143	0.0061	0.0170	0.0186	0.0185	0.0179
	(0.0601)	(0.0609)	(0.0601)	(0.0322)	(0.0322)	(0.0323)
unemp_dummy	0.0787	0.0923	0.0898	0.0631	0.0615	0.0617
	(0.0891)	(0.0908)	(0.0888)	(0.0425)	(0.0428)	(0.0427)
log_asset	-0.0807***	-0.0791**	-0.0854***	-0.0250*	-0.0243	-0.0246
	(0.0239)	(0.0245)	(0.0240)	(0.0127)	(0.0128)	(0.0127)
fknow	-0.0200	-0.0209	-0.0212	0.0004	0.0004	0.0003
	(0.0176)	(0.0178)	(0.0175)	(0.0100)	(0.0100)	(0.0100)
ra	-0.0208	-0.0235	-0.0203	-0.0264**	-0.0265**	-0.0265**
	(0.0146)	(0.0148)	(0.0146)	(0.0088)	(0.0088)	(0.0088)
lev	-0.0063	-0.0143	-0.0095	-0.0436	-0.0433	-0.0439
	(0.1030)	(0.1044)	(0.1028)	(0.0640)	(0.0640)	(0.0640)
log_consump	0.0033	0.0009	0.0034	-0.0005	-0.0004	-0.0005
	(0.0299)	(0.0302)	(0.0298)	(0.0162)	(0.0162)	(0.0162)
estate_dummy	0.0576	0.0615	0.0599	-0.0060	-0.0062	-0.0064
	(0.0631)	(0.0640)	(0.0629)	(0.0325)	(0.0325)	(0.0325)
mortg_dummy	0.1275*	0.1259*	0.1326*	0.0514	0.0510	0.0511
	(0.0557)	(0.0566)	(0.0557)	(0.0306)	(0.0306)	(0.0306)
Num. obs.	626	626	626	2720	2720	2720
R^2	0.6683	0.6593	0.6696	0.6273	0.6273	0.6273
Adj. R^2	0.2725	0.2529	0.2755	0.2380	0.2381	0.2381

***p < 0.001; **p < 0.01; *p < 0.05

Table 20: Robustness Check of Rescaled Income Values and Shares (Sample of Participants)

This table reports OLS estimates of rescaled income values on stock and risky share of only stock (risky financial) market participants. Standard errors are reported underneath the coefficients in parentheses. Column (1) to (3) present relationship between income values and stock share. Column (4) to (6) present relationship between rescaled income values and risky share. The regressions use sub-samples of only households holding stock (risky financial) asset with valid data and with household head between 18 and 90 years old. Nominal values are winsorized at 1st and 99th percentile and adjusted with CPI before logged. Asset and consumption are divided by 100 before regression.

	Stock Share		Risky Share	
	(1)	(2)	(1)	(2)
r_wage	0.2124	0.0300	-0.0143	-0.0342
	(0.1640)	(0.2147)	(0.0549)	(0.0624)
r_business	-0.3844	-0.2023	-0.0551	-0.0543
	(0.5356)	(0.5474)	(0.0985)	(0.1000)
r_transfer	0.0665	-0.0133	0.0480	0.0324
	(0.0651)	(0.0780)	(0.0385)	(0.0419)
age		0.0028		-0.0003
		(0.0036)		(0.0017)
gender		-0.0195		0.0551*
		(0.0508)		(0.0254)
edu		0.0315		0.0010
		(0.0220)		(0.0119)
marry		-0.0182		0.0137
		(0.0738)		(0.0416)
famsize		-0.0010		0.0011
		(0.0327)		(0.0128)
child_dummy		0.0131		0.0045
		(0.0592)		(0.0304)
retire_dummy		0.0055		0.0177
		(0.0611)		(0.0322)
unemp_dummy		0.0897		0.0631
		(0.0907)		(0.0427)
log_tasset		-0.0787*		-0.0242
		(0.0330)		(0.0156)
fknow		-0.0208		-0.0001
		(0.0179)		(0.0100)
ra		-0.0234		-0.0263**
		(0.0148)		(0.0088)
tlev		-0.0188		-0.0385
		(0.1131)		(0.0649)
log_consump		0.0010		-0.0005
		(0.0306)		(0.0162)
estate_dummy		0.0603		-0.0092
		(0.0645)		(0.0327)
mortg_dummy		0.1260*		0.0480
		(0.0577)		(0.0308)
Num. obs.	626	626	2720	2720
R^2	0.6402	0.6596	0.6220	0.6276
Adj. R^2	0.2454	0.2482	0.2347	0.2375

***p < 0.001; **p < 0.01; *p < 0.05

Table 21: Robustness Check of Income Composition and Participation (Working Sample)

This table reports probit estimates of income composition on stock and risky participation of households at working ages. Standard errors are reported underneath the coefficients in parentheses. Column (1) to (3) present relationship between income composition and stock participation. Column (4) to (6) present relationship between rescaled income composition and risky participation. The regressions use sub-samples of only households with valid data and with household head that is under 60. Nominal values are winsorized at 1st and 99th percentile and adjusted with CPI before regression. Asset and consumption are divided by 100 before logged.

	Stock Participation			Risky Participation		
	(1)	(2)	(3)	(4)	(5)	(6)
p_wage	0.1668			0.1050		
	(0.2234)			(0.0958)		
p_business		0.7247			0.0444	
		(0.3827)			(0.1237)	
p_transfer			-0.4702*			-0.1619
			(0.2371)			(0.1069)
age	-0.0158	-0.0160	-0.0153	-0.0195**	-0.0197**	-0.0193**
	(0.0147)	(0.0148)	(0.0147)	(0.0065)	(0.0065)	(0.0065)
gender	-0.0652	-0.0888	-0.0655	0.0254	0.0245	0.0229
	(0.1871)	(0.1869)	(0.1873)	(0.0887)	(0.0887)	(0.0887)
edu	-0.0677	-0.0531	-0.0681	-0.0373	-0.0347	-0.0359
	(0.0944)	(0.0948)	(0.0948)	(0.0440)	(0.0440)	(0.0439)
marry	0.5665	0.6199	0.5875	0.0403	0.0369	0.0408
	(0.3780)	(0.3806)	(0.3775)	(0.1449)	(0.1449)	(0.1450)
famsize	-0.0957	-0.0718	-0.1222	0.0197	0.0243	0.0181
	(0.1022)	(0.0996)	(0.1023)	(0.0387)	(0.0385)	(0.0387)
child_dummy	0.0470	-0.0111	0.0486	0.0090	0.0038	0.0092
	(0.2208)	(0.2215)	(0.2201)	(0.1005)	(0.1004)	(0.1005)
unemp_dummy	0.2065	0.2144	0.2451	-0.0725	-0.0819	-0.0612
	(0.2168)	(0.2163)	(0.2187)	(0.1098)	(0.1095)	(0.1103)
retire_dummy	0.2065	0.2144	0.2451	-0.0725	-0.0819	-0.0612
	(0.2168)	(0.2163)	(0.2187)	(0.1098)	(0.1095)	(0.1103)
log_asset	0.4935***	0.4686***	0.4835***	0.3167***	0.3136***	0.3112***
	(0.0956)	(0.0953)	(0.0959)	(0.0374)	(0.0376)	(0.0374)
fknow	0.2184**	0.2181**	0.2174**	0.1148***	0.1146***	0.1154***
	(0.0719)	(0.0721)	(0.0722)	(0.0338)	(0.0338)	(0.0338)
ra	-0.2333***	-0.2292***	-0.2326***	-0.0928**	-0.0922**	-0.0925**
	(0.0584)	(0.0585)	(0.0585)	(0.0295)	(0.0295)	(0.0295)
lev	-0.2284	-0.2544	-0.2189	0.0611	0.0594	0.0603
	(0.3156)	(0.3262)	(0.3121)	(0.0470)	(0.0465)	(0.0468)
log_consump	0.3060*	0.2839*	0.3031*	0.3346***	0.3319***	0.3341***
	(0.1258)	(0.1260)	(0.1260)	(0.0540)	(0.0540)	(0.0541)
estate_dummy	-0.3576	-0.3109	-0.3567	-0.0472	-0.0460	-0.0423
	(0.2604)	(0.2606)	(0.2594)	(0.1046)	(0.1046)	(0.1047)
mortg_dummy	-0.1288	-0.1422	-0.1210	-0.1488	-0.1481	-0.1450
	(0.2025)	(0.2030)	(0.2022)	(0.0994)	(0.0994)	(0.0995)
Num. obs.	1008	1008	1008	4260	4260	4260

***p < 0.001; **p < 0.01; *p < 0.05

Table 22: Robustness Check of Income Composition and Share (Working Sample)

This table reports OLS estimates of income composition on stock and risky participation of households at working ages. Standard errors are reported underneath the coefficients in parentheses. Column (1) to (3) present relationship between income composition and stock share. Column (4) to (6) present relationship between rescaled income composition and risky share. The regressions use sub-samples of only households with valid data and with household head that is under 60. Nominal values are winsorized at 1st and 99th percentile and adjusted with CPI before regression. Asset and consumption are divided by 100 before logged.

	Stock Share			Risky Share		
	(1)	(2)	(3)	(4)	(5)	(6)
p_wage	0.0084*			0.0034		
	(0.0036)			(0.0104)		
p_business		0.0050			-0.0119	
		(0.0049)			(0.0143)	
p_transfer			-0.0127***			0.0033
			(0.0038)			(0.0112)
age	-0.0001	-0.0001	-0.0000	-0.0013	-0.0014	-0.0014
	(0.0002)	(0.0002)	(0.0002)	(0.0007)	(0.0007)	(0.0007)
gender	-0.0023	-0.0026	-0.0025	0.0162	0.0164	0.0162
	(0.0034)	(0.0034)	(0.0034)	(0.0099)	(0.0099)	(0.0099)
edu	0.0000	0.0002	0.0001	-0.0023	-0.0023	-0.0022
	(0.0017)	(0.0017)	(0.0017)	(0.0050)	(0.0050)	(0.0050)
marry	0.0027	0.0021	0.0025	0.0221	0.0224	0.0219
	(0.0055)	(0.0055)	(0.0055)	(0.0161)	(0.0161)	(0.0160)
famsize	-0.0006	-0.0000	-0.0008	-0.0034	-0.0033	-0.0030
	(0.0015)	(0.0015)	(0.0015)	(0.0043)	(0.0042)	(0.0043)
child_dummy	-0.0006	-0.0012	-0.0007	0.0129	0.0130	0.0126
	(0.0039)	(0.0039)	(0.0039)	(0.0112)	(0.0112)	(0.0112)
retire_dummy	0.0024	0.0019	0.0033	-0.0048	-0.0056	-0.0055
	(0.0040)	(0.0040)	(0.0040)	(0.0116)	(0.0116)	(0.0116)
unemp_dummy	0.0004	-0.0002	0.0008	-0.0114	-0.0117	-0.0120
	(0.0038)	(0.0038)	(0.0038)	(0.0111)	(0.0111)	(0.0111)
log_asset	0.0017	0.0015	0.0015	0.0184***	0.0187***	0.0184***
	(0.0012)	(0.0012)	(0.0012)	(0.0035)	(0.0036)	(0.0035)
fknow	0.0024	0.0024	0.0024	0.0059	0.0059	0.0059
	(0.0013)	(0.0013)	(0.0013)	(0.0037)	(0.0037)	(0.0037)
ra	-0.0046***	-0.0045***	-0.0045***	-0.0127***	-0.0127***	-0.0127***
	(0.0012)	(0.0012)	(0.0012)	(0.0034)	(0.0034)	(0.0034)
lev	0.0001	0.0000	0.0001	0.0007	0.0007	0.0007
	(0.0004)	(0.0004)	(0.0004)	(0.0011)	(0.0011)	(0.0011)
log_consump	0.0028	0.0025	0.0028	0.0141*	0.0142*	0.0139*
	(0.0020)	(0.0020)	(0.0020)	(0.0058)	(0.0058)	(0.0058)
estate_dummy	-0.0038	-0.0038	-0.0037	-0.0024	-0.0025	-0.0024
	(0.0040)	(0.0040)	(0.0040)	(0.0116)	(0.0116)	(0.0116)
mortg_dummy	0.0008	0.0007	0.0011	0.0032	0.0029	0.0030
	(0.0042)	(0.0042)	(0.0042)	(0.0122)	(0.0122)	(0.0122)
Num. obs.	8313	8313	8313	8313	8313	8313
R^2	0.5470	0.5467	0.5474	0.4902	0.4902	0.4902
Adj. R^2	0.3767	0.3762	0.3773	0.2985	0.2985	0.2985

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

Table 23: Robustness Check of Rescaled Income Values, Participation & Share (Working Sample)

This table reports estimates of rescaled income values on participation and share with interaction terms of of households at working ages. Standard errors are reported underneath the coefficients in parentheses. Column (1) and (2) present relationship between income values and stock and risky participation. Column (3) and (4) present relationship between income values and stock and risky share. The regressions use sub-samples of only households with valid data and with household head that is under 60. Nominal values are winsorized at 1st and 99th percentile and adjusted with CPI before regression. Asset and consumption are divided by 100 before logged.

	Stock Participation	Risky Participation	Stock Share	Risky Share
	(1)	(2)	(3)	(4)
r_wage	1.4130**	0.3109*	0.0032	0.0133
	(0.5122)	(0.1307)	(0.0039)	(0.0114)
r_business	1.3565	0.6862*	0.0076	0.0217
	(1.2465)	(0.2784)	(0.0107)	(0.0310)
r_transfer	-0.1286	-0.0022	-0.0030	0.0034
	(0.2473)	(0.1018)	(0.0027)	(0.0080)
age	-0.0162	-0.0197**	-0.0001	-0.0013
	(0.0149)	(0.0065)	(0.0002)	(0.0007)
gender	-0.0432	0.0261	-0.0024	0.0164
	(0.1875)	(0.0889)	(0.0034)	(0.0099)
edu	-0.0757	-0.0366	0.0001	-0.0024
	(0.0959)	(0.0440)	(0.0017)	(0.0050)
marry	0.5987	0.0200	0.0023	0.0212
	(0.3773)	(0.1447)	(0.0055)	(0.0161)
famsize	-0.1105	0.0146	-0.0002	-0.0038
	(0.1010)	(0.0387)	(0.0015)	(0.0043)
child_dummy	0.0247	-0.0002	-0.0011	0.0127
	(0.2215)	(0.1006)	(0.0039)	(0.0112)
retire_dummy	0.2241	-0.0612	-0.0001	-0.0113
	(0.2195)	(0.1097)	(0.0038)	(0.0111)
unemp_dummy	0.2543	-0.3187**	0.0021	-0.0037
	(0.2955)	(0.1162)	(0.0040)	(0.0116)
log_tasset	0.6459***	0.3744***	0.0016	0.0218***
	(0.1172)	(0.0471)	(0.0016)	(0.0046)
fknow	0.2167**	0.1141***	0.0024	0.0058
	(0.0722)	(0.0339)	(0.0013)	(0.0037)
ra	-0.2331***	-0.0915**	-0.0045***	-0.0126***
	(0.0589)	(0.0296)	(0.0012)	(0.0034)
tlev	-0.2603	0.0575	0.0001	0.0007
	(0.4127)	(0.0475)	(0.0004)	(0.0011)
log_consump	0.2853*	0.3199***	0.0027	0.0135*
	(0.1271)	(0.0543)	(0.0020)	(0.0058)
estate_dummy	-0.3677	-0.0162	-0.0034	-0.0016
	(0.2627)	(0.1053)	(0.0040)	(0.0117)
mortg_dummy	-0.1252	-0.1526	0.0008	0.0027
	(0.2074)	(0.0996)	(0.0042)	(0.0122)
Num. obs.	967	4156	8313	8313
R^2			0.5468	0.4903
Adj. R^2			0.3762	0.2985

***p < 0.001; **p < 0.01; *p < 0.05

Table 24: Robustness Check of Income Composition and Participation (Interaction Term)

This table reports probit estimates of income composition on stock and risky participation with interaction terms of income composition and risk aversion level. Standard errors are reported underneath the coefficients in parentheses. Column (1) to (3) present relationship between income composition and stock participation. Column (4) to (6) present relationship between income composition and stock participation. p × ra_2, p × ra_3, p × ra_4, p × ra_5 are the interaction terms of income composition and different risk aversion levels. Nominal values are winsorized at 1st and 99th percentile and adjusted with CPI before regression. Asset and consumption are divided by 100 before logged.

	Stock Participation			Risky Participation		
	(1)	(2)	(3)	(4)	(5)	(6)
p_wage	2.0964***			0.6977*		
	(0.6171)			(0.3156)		
p_business		0.7475			0.0446	
		(0.6329)			(0.3838)	
p_transfer			-2.4936***			-0.7970*
			(0.6068)			(0.3322)
p × ra_2	-2.1306**	-0.7686	3.0341***	-0.5726	-0.0442	0.6444
	(0.7495)	(0.7797)	(0.8522)	(0.4197)	(0.5048)	(0.4697)
p × ra_3	-2.1020**	0.2688	2.1494**	-0.8412*	0.0758	0.8760*
	(0.6526)	(0.7191)	(0.6592)	(0.3445)	(0.4224)	(0.3640)
p × ra_4	-1.9499**	0.1645	2.0679**	-0.4391	-0.0818	0.5226
	(0.6573)	(0.7528)	(0.6508)	(0.3352)	(0.4069)	(0.3522)
p × ra_5	-2.1816***	-0.0539	2.3756***	-0.6161	0.1053	0.6097
	(0.6577)	(0.8099)	(0.6411)	(0.3281)	(0.4041)	(0.3423)
ra_2	0.7001	-0.0084	-1.2822**	0.3206	0.0672	-0.1862
	(0.4480)	(0.3164)	(0.4313)	(0.2780)	(0.1990)	(0.2357)
ra_3	0.2574	-0.5406*	-1.4898***	0.2715	-0.1383	-0.4488*
	(0.3602)	(0.2758)	(0.3917)	(0.2203)	(0.1634)	(0.2000)
ra_4	0.0871	-0.6489*	-1.5519***	-0.0115	-0.1855	-0.4063*
	(0.3680)	(0.2764)	(0.3878)	(0.2144)	(0.1626)	(0.1958)
ra_5	0.0516	-0.7523**	-1.8362***	-0.0123	-0.2976	-0.5204**
	(0.3566)	(0.2745)	(0.4004)	(0.2075)	(0.1590)	(0.1956)
age	-0.0365**	-0.0341**	-0.0364**	-0.0216***	-0.0218***	-0.0212***
	(0.0120)	(0.0119)	(0.0121)	(0.0049)	(0.0049)	(0.0049)
gender	-0.0026	-0.0026	0.0072	0.0561	0.0570	0.0572
	(0.1706)	(0.1707)	(0.1719)	(0.0797)	(0.0797)	(0.0797)
edu	-0.0778	-0.0584	-0.0803	-0.0260	-0.0236	-0.0274
	(0.0785)	(0.0786)	(0.0786)	(0.0367)	(0.0368)	(0.0367)
marry	0.5714	0.5174	0.6068	0.0413	0.0291	0.0493
	(0.3117)	(0.3117)	(0.3147)	(0.1214)	(0.1213)	(0.1216)
famsize	-0.0594	-0.0222	-0.0754	0.0116	0.0173	0.0111
	(0.0907)	(0.0871)	(0.0905)	(0.0355)	(0.0352)	(0.0355)
child_dummy	0.1334	0.0707	0.1096	-0.0143	-0.0194	-0.0158
	(0.2111)	(0.2117)	(0.2118)	(0.0943)	(0.0941)	(0.0942)
retire_dummy	0.3073	0.3263	0.4006	0.0302	0.0250	0.0423
	(0.2075)	(0.2063)	(0.2107)	(0.0971)	(0.0968)	(0.0974)
unemp_dummy	0.1494	0.1934	0.2510	-0.3322**	-0.3312**	-0.3128**
	(0.2940)	(0.2867)	(0.2978)	(0.1104)	(0.1104)	(0.1108)
log_tasset	0.5447***	0.5103***	0.5333***	0.3185***	0.3183***	0.3132***
	(0.0931)	(0.0892)	(0.0931)	(0.0339)	(0.0340)	(0.0340)
fknow	0.1855**	0.1835**	0.1854**	0.1113***	0.1109***	0.1103***
	(0.0653)	(0.0649)	(0.0657)	(0.0309)	(0.0309)	(0.0309)
tlev	-0.1569	-0.2117	-0.1234	0.0375	0.0347	0.0376
	(0.3481)	(0.3182)	(0.3423)	(0.0386)	(0.0384)	(0.0387)
log_consump	0.3146**	0.2718*	0.2922*	0.2978***	0.2918***	0.2932***
	(0.1171)	(0.1167)	(0.1173)	(0.0495)	(0.0495)	(0.0496)

estate_dummy	-0.3442	-0.2604	-0.2975	-0.0216	-0.0189	-0.0130
	(0.2537)	(0.2494)	(0.2531)	(0.0978)	(0.0976)	(0.0981)
mortg_dummy	-0.1706	-0.1849	-0.1203	-0.1284	-0.1331	-0.1275
	(0.1982)	(0.1971)	(0.1979)	(0.0950)	(0.0948)	(0.0950)
Num. obs.	1152	1152	1152	4864	4864	4864

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

Table 25: Robustness Check of Income Composition and Share (Including Interaction Term)

This table reports OLS estimates of income composition on stock and risky share with interaction terms of income composition and risk aversion level. Standard errors are reported underneath the coefficients in parentheses. Column (1) to (3) present relationship between income composition and stock share. Column (4) to (6) present relationship between income composition and stock share. p × ra_2, p × ra_3, p × ra_4, p × ra_5 are the interaction terms of income composition and different risk aversion levels. Nominal values are winsorized at 1st and 99th percentile and adjusted with CPI before regression. Asset and consumption are divided by 100 before logged.

	Stock Share			Risky Share		
	(1)	(2)	(3)	(4)	(5)	(6)
p_wage	0.0519***			0.0842*		
	(0.0122)			(0.0353)		
p_business		0.0071			0.0215	
		(0.0148)			(0.0430)	
p_transfer			-0.0583***			-0.1014**
			(0.0123)			(0.0358)
p × ra_2	-0.0148	-0.0430*	0.0409*	-0.0857	-0.0538	0.1314*
	(0.0167)	(0.0208)	(0.0180)	(0.0484)	(0.0604)	(0.0523)
p × ra_3	-0.0483***	0.0020	0.0479***	-0.1146**	-0.0207	0.1357***
	(0.0132)	(0.0163)	(0.0134)	(0.0382)	(0.0474)	(0.0389)
p × ra_4	-0.0434***	-0.0000	0.0450***	-0.0632	-0.0417	0.0901*
	(0.0128)	(0.0159)	(0.0129)	(0.0372)	(0.0461)	(0.0375)
p × ra_5	-0.0454***	-0.0040	0.0493***	-0.0789*	-0.0233	0.0974**
	(0.0126)	(0.0155)	(0.0126)	(0.0364)	(0.0450)	(0.0367)
ra_2	-0.0185	-0.0160*	-0.0386***	0.0298	0.0002	-0.0571*
	(0.0110)	(0.0079)	(0.0094)	(0.0319)	(0.0229)	(0.0272)
ra_3	-0.0101	-0.0315***	-0.0501***	0.0260	-0.0231	-0.0783***
	(0.0083)	(0.0064)	(0.0077)	(0.0239)	(0.0184)	(0.0224)
ra_4	-0.0128	-0.0312***	-0.0492***	-0.0096	-0.0296	-0.0718**
	(0.0080)	(0.0063)	(0.0076)	(0.0231)	(0.0182)	(0.0221)
ra_5	-0.0117	-0.0303***	-0.0508***	-0.0137	-0.0429*	-0.0856***
	(0.0077)	(0.0061)	(0.0075)	(0.0225)	(0.0177)	(0.0218)
age	-0.0003	-0.0003	-0.0002	-0.0010	-0.0010	-0.0009
	(0.0002)	(0.0002)	(0.0002)	(0.0005)	(0.0005)	(0.0005)
gender	-0.0023	-0.0023	-0.0025	0.0144	0.0146	0.0142
	(0.0030)	(0.0030)	(0.0030)	(0.0086)	(0.0086)	(0.0086)
edu	0.0005	0.0006	0.0004	-0.0015	-0.0015	-0.0017
	(0.0014)	(0.0014)	(0.0014)	(0.0041)	(0.0041)	(0.0041)
marry	0.0003	-0.0003	0.0004	0.0028	0.0023	0.0037
	(0.0044)	(0.0044)	(0.0044)	(0.0127)	(0.0127)	(0.0127)
famsize	-0.0009	-0.0002	-0.0010	-0.0025	-0.0020	-0.0021
	(0.0013)	(0.0013)	(0.0013)	(0.0038)	(0.0037)	(0.0038)
child_dummy	-0.0009	-0.0014	-0.0010	0.0121	0.0118	0.0119
	(0.0035)	(0.0035)	(0.0035)	(0.0102)	(0.0102)	(0.0102)
retire_dummy	-0.0003	-0.0010	-0.0002	-0.0014	-0.0018	-0.0021
	(0.0033)	(0.0033)	(0.0033)	(0.0095)	(0.0095)	(0.0095)
unemp_dummy	0.0023	0.0016	0.0028	-0.0069	-0.0074	-0.0072

	(0.0037)	(0.0037)	(0.0037)	(0.0107)	(0.0107)	(0.0108)
log_tasset	0.0016	0.0016	0.0013	0.0164***	0.0168***	0.0162***
	(0.0010)	(0.0010)	(0.0010)	(0.0030)	(0.0030)	(0.0030)
fknow	0.0020	0.0021	0.0020	0.0059	0.0061	0.0059
	(0.0011)	(0.0011)	(0.0011)	(0.0033)	(0.0033)	(0.0033)
tlev	0.0000	0.0000	0.0000	0.0004	0.0005	0.0004
	(0.0004)	(0.0004)	(0.0004)	(0.0010)	(0.0010)	(0.0010)
log_consump	0.0033	0.0029	0.0031	0.0114*	0.0108*	0.0111*
	(0.0018)	(0.0018)	(0.0018)	(0.0051)	(0.0051)	(0.0051)
estate_dummy	-0.0029	-0.0029	-0.0027	-0.0018	-0.0021	-0.0016
	(0.0036)	(0.0036)	(0.0036)	(0.0103)	(0.0103)	(0.0103)
mortg_dummy	0.0012	0.0008	0.0015	0.0046	0.0040	0.0044
	(0.0039)	(0.0039)	(0.0039)	(0.0114)	(0.0114)	(0.0114)
Num. obs.	9840	9840	9840	9840	9840	9840
R^2	0.5392	0.5380	0.5393	0.4845	0.4838	0.4846
Adj. R^2	0.3835	0.3819	0.3836	0.3103	0.3093	0.3105

***p < 0.001; **p < 0.01; *p < 0.05

Table 26: Robustness Check of Rescaled Income Values, Participation and Share (Interaction Term)

This table reports estimates of rescaled income values on participation and share with interaction terms of income composition and risk aversion level. Standard errors are reported underneath the coefficients in parentheses. Column (1) and (2) present relationship between income values and stock and risky participation. Column (3) and (4) present relationship between income values and stock and risky share. p × ra_2, p × ra_3, p × ra_4, p × ra_5 are the interaction terms of income composition and different risk aversion levels. Nominal values are winsorized at 1st and 99th percentile and adjusted with CPI before regression. Asset and consumption are divided by 100 before logged.

	Stock Participation	Risky Participation	Stock Share	Risky Share
	(1)	(2)	(3)	(4)
r_wage	6.1928**	0.8177*	0.0058	0.0177
	(2.1840)	(0.4105)	(0.0133)	(0.0387)
r_business	2.2968	1.8436	-0.0234	0.0448
	(2.1637)	(1.0678)	(0.0420)	(0.1218)
r_transfer	-1.3595	0.2761	-0.0190*	-0.0108
	(1.5462)	(0.3265)	(0.0087)	(0.0251)
r_wage × ra_2	-6.5532**	-0.3476	-0.0055	-0.0403
	(2.4909)	(0.5759)	(0.0192)	(0.0556)
r_wage × ra_3	-4.8984*	-0.6980	-0.0062	-0.0357
	(2.2370)	(0.4534)	(0.0151)	(0.0438)
r_wage × ra_4	-2.9955	-0.1758	-0.0011	0.0039
	(2.5998)	(0.4281)	(0.0142)	(0.0412)
r_wage × ra_5	-4.4209*	-0.3593	-0.0025	0.0039
	(2.2185)	(0.4304)	(0.0138)	(0.0400)
r_business × ra_2	-5.5267	-2.3534	-0.0262	-0.1543
	(4.2172)	(1.8882)	(0.0665)	(0.1928)
r_business × ra_3	-0.9252	-1.1573	0.0293	-0.0040
	(3.5603)	(1.1713)	(0.0458)	(0.1329)
r_business × ra_4	-0.8889	-0.6725	0.0295	-0.0279
	(2.7108)	(1.1248)	(0.0448)	(0.1298)
r_business × ra_5	-1.1673	-1.2175	0.0300	-0.0044
	(6.1514)	(1.1348)	(0.0441)	(0.1279)
r_transfer × ra_2	-2.5253	-3.4218*	0.0085	-0.0005
	(6.5615)	(1.6983)	(0.0149)	(0.0433)
r_transfer × ra_3	2.1803	-0.0505	0.0270**	0.0221

	(1.6202)	(0.3761)	(0.0105)	(0.0304)
r_transfer × ra_4	0.2371	-0.2952	0.0185*	0.0055
	(2.0404)	(0.3431)	(0.0093)	(0.0269)
r_transfer × ra_5	0.7552	-0.4069	0.0160	0.0159
	(1.6051)	(0.3418)	(0.0088)	(0.0256)
ra_2	0.3274	0.3059	-0.0231**	0.0002
	(0.3675)	(0.2084)	(0.0080)	(0.0231)
ra_3	-0.3829	0.0052	-0.0353***	-0.0250
	(0.2926)	(0.1670)	(0.0064)	(0.0185)
ra_4	-0.5488	-0.1300	-0.0355***	-0.0369*
	(0.3090)	(0.1663)	(0.0063)	(0.0182)
ra_5	-0.5985*	-0.1689	-0.0345***	-0.0499**
	(0.2973)	(0.1626)	(0.0061)	(0.0177)
age	-0.0371**	-0.0221***	-0.0003	-0.0009
	(0.0123)	(0.0049)	(0.0002)	(0.0005)
gender	0.0887	0.0648	-0.0022	0.0149
	(0.1733)	(0.0801)	(0.0030)	(0.0086)
edu	-0.0972	-0.0299	0.0006	-0.0018
	(0.0806)	(0.0369)	(0.0014)	(0.0041)
marry	0.5119	0.0227	-0.0002	0.0025
	(0.3127)	(0.1218)	(0.0044)	(0.0127)
famsize	-0.0849	0.0064	-0.0004	-0.0029
	(0.0895)	(0.0355)	(0.0013)	(0.0037)
child_dummy	0.1074	-0.0222	-0.0011	0.0122
	(0.2124)	(0.0945)	(0.0035)	(0.0103)
retire_dummy	0.3679	0.0492	-0.0008	-0.0018
	(0.2120)	(0.0975)	(0.0033)	(0.0095)
unemp_dummy	0.2014	-0.2875**	0.0020	-0.0062
	(0.2929)	(0.1113)	(0.0037)	(0.0108)
log_tasset	0.7197***	0.3814***	0.0014	0.0195***
	(0.1199)	(0.0438)	(0.0014)	(0.0040)
fknow	0.1822**	0.1113***	0.0020	0.0060
	(0.0659)	(0.0310)	(0.0011)	(0.0033)
tlev	-0.2471	0.0392	-0.0000	0.0004
	(0.5877)	(0.0396)	(0.0004)	(0.0010)
log_consump	0.2554*	0.2725***	0.0030	0.0103*
	(0.1199)	(0.0501)	(0.0018)	(0.0052)
estate_dummy	-0.2866	0.0224	-0.0025	-0.0017
	(0.2734)	(0.0998)	(0.0036)	(0.0104)
mortg_dummy	-0.1602	-0.1385	0.0010	0.0038
	(0.2099)	(0.0953)	(0.0039)	(0.0114)
Num. obs.	1152	4864	9840	9840
R^2			0.5382	0.4843
Adj. R^2			0.3814	0.3091

***p < 0.001; **p < 0.01; *p < 0.05