Personal Finance and Social Factors: Predictive Analysis for Effective Public Policies

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Contents

1 Introduction

Financial literacy is a fundamental skill for the economic well-being of individuals and households. A sound understanding of basic financial principles enables more informed decision-making in key areas such as saving, investing, credit use, and retirement planning, ultimately contributing to greater economic stability and the reduction of social inequalities. Unfortunately, Italy consistently ranks among the countries with the lowest levels of financial literacy in Europe and across OECD nations[8;2]. This knowledge gap not only affects people's ability to make sound economic choices, but also limits their capacity to manage risk, plan for the future, and benefit from financial growth opportunities.

According to the OECD/INFE 2020 International Survey of Adult Financial Literacy, Italy lags behind countries such as Germany, France and the UK in terms of core financial understanding[8]. Similarly, the Consob Report 2021 reveals that large segments of the population struggle with basic concepts such as compound interest or risk diversification[4]. In a rapidly evolving financial landscape, this lack of competence leads to suboptimal choices, over-indebtedness, and insecurity about long-term financial wellbeing.

However, financial literacy represents only one facet of economic behaviour. In this study, we broaden the scope of analysis by examining how socio-demographic characteristics influence not only individuals' financial knowledge, but also other critical behavioural aspects such as their attitude toward risk, openness to financial products and long-term investment strategies, preparedness for retirement, and the ability to manage day-to-day finances effectively, including budgeting, paying bills, and saving regularly.

Using the Financial Literacy dataset, we will construct and compare statistical models to

identify the socio-demographic variables that most significantly shape these financial behaviours and attitudes. This will allow us to pinpoint both the most vulnerable population segments and the key drivers of sound financial decision-making.
The ultimate goal is to generate policy recommendations grounded in empirical evidence, moving beyond general awareness campaigns. We aim to support the design of targeted, intelligent interventions—such as age- and context-sensitive financial education in schools, personalized training programs for adults, and incentive schemes that encourage long-term planning and raise awareness of individual risk profiles, whether overly cautious or excessively confident.
Through this approach, the study seeks to answer fundamental questions: to what extent do socio-demographic factors influence people's financial choices and attitudes? Which of these factors are most predictive? And how can public institutions develop effective policies to address disparities and foster more resilient financial behaviours across the population?

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2 The Financial Literacy dataset

The dataset chosen for this analysis focuses on Financial Literacy, with the aim of identifying population groups that exhibit lower levels of financial knowledge. By examining key variables such as age, gender, education, income, and geographic location, we aim to uncover patterns and trends that could help tailor public policies.

2.1 Dataset description

The dataset is divided into two main sections, a first where information on the demographic and social characteristics of the respondents are collected, while the second part is dedicated to assessing the financial skills of the respondents with questions geared towards measuring the ability of individuals to understand and apply basic financial concepts. In our study, socio-demographic variables were used as explanatory variables to develop a model to identify factors influencing financial literacy in Italy. The variables were selected as we assumed that they could provide an explanation of financial knowledge:

- ID, the Individual identifier;
- SM, the mode of interview (0 tablet, 1 CAPI);
- PESOFITC, the sample weight;
- Gender (0 Female, 1 Male);
- AREA5, the geographical area:
  1. North-West;
  2. North-East;
  3. Centre;
  4. South;
  5. Islands;
- Number of household members (from 0 to "6 or more");
- Age;
- Educational qualification:
  1. University-level education;
  3. Complete secondary school;
  4. Some secondary school;
  5. Complete primary school;
  6. Some primary school;
  7. No formal education;
- Employment status:
  1. Self-employed;
  2. In paid employment;
  4. Looking after the home;

5. Looking for work;
6. Retired;
9. Student;
10. Other;

- Country, the country of birth (1 for Italy and 0 abroad).

For the second part, the proposed questionnaire consists of questions designed to measure the respondents' ability to understand and apply financial concepts in everyday contexts. There are therefore several questions covering different subject areas, such as money management (decisions on spending, savings and budgeting), risk and return (evaluating investments and understanding insurance) and financial planning (long-term goals and planning for the financial future).

3 Data preprocessing

Before performing our analysis, a number of pre-processing techniques had to be applied to ensure the quality and reliability of the data. The original dataset had some critical issues, including the presence of missing values, variables with unbalanced distributions and formats unsuitable for statistical analysis and the application of predictive models.
To solve these problems, several operations were applied to the dataset, such as:

- Grouping and discretisation of some variables, to reduce the imbalance between classes and improve the interpretability of the model.
- Creation of new variables, such as the knowledge score, to summarise key information and facilitate its use in statistical models.

3.1 Discretisation of 'Age'

In the dataset, age is originally represented as a continuous numeric variable; in order to improve interpretability and better manage variability, the decision was made to discretize the variable *age*. In particular, it was divided into four different classes:

- Young people (≤ 34 years) may have less experience in financial management;
- Middle-aged individuals (35-50 years) might be in a phase of economic stabilisation;
- Individuals close to retirement (50-65 years) might have different financial needs;
- Older people (≥ 66 years) might be more dependent on pensions and savings.

3.2 Grouping of Variables

During an initial exploratory phase, it became apparent that some variables had unbalanced classes, i.e. with a strongly asymmetric distribution between categories. This may pose a problem for training models, as categories with little data can introduce bias into the results.
The *Education* variable in the dataset represents the individual's level of education, inconsistencies and imbalances are present in the distribution of classes, thus necessitating a cleaning and transformation phase to ensure a more reliable analysis.
An anomalous case concerns the only individual classified in the 'No Formal Education' category (level 7), who is 23 years old. Since education has been compulsory in Italy until at least the age of 16 since 2006, it is highly unlikely that this person has not received any form of formal education.
In order to balance the classes and eliminate anomalies, we decided to merge the least represented categories, categories 4 (Some secondary school), 5 (Some primary school), 6

(Complete primary school) and 7 (No formal education).
To make the variable more suitable for statistical analysis and modelling, we have assigned ordinal values according to the level of education, in ascending order:

1. Low level of education: Some secondary school, Complete primary school, Some primary school, No formal education;
2. Complete secondary education;
3. University education.

Analysing the *Household* variable, which represents the size of the household, there was an imbalance in the distribution of categories. In particular, households with four or more members were under-represented, necessitating an amalgamation to ensure greater stability.
It was therefore decided to group individuals with a number of people in the household of 4 and above into a single class, thus achieving a more balanced distribution.
The *Country* variable represents the individual's country of origin. Analysis of the distribution of this variable showed a significant imbalance, as almost all individuals were born in Italy, with only a few cases of people born abroad. The variable *Area5* represents the individual's geographical area, divided into five categories. Analysis of the distribution revealed that, apart from a slight difference, the categories are fairly balanced. The only category with a significantly lower frequency is category 5, which corresponds to the Islands. In the context of the analysis, these variables should not present any significant problems, but could be monitored if models that are used require a balance between the categories.

3.3 Variable selection

In order to ensure a more efficient analysis and to reduce noise in the data, we made a preliminary selection of socio-demographic variables. In particular, we removed some variables that, based on theoretical assumptions and our own considerations, would not be significant for our study.
The excluded variables are:

- ID: unique identifier of the respondent, irrelevant for the analysis;
- Sample weight: used to correct for sample representativeness, but not useful as an explanatory variable in predictive models;
- Interview method: does not directly affect the financial knowledge of individuals;
- Country of birth: although potentially relevant in other contexts, in our case the vast majority of respondents were born in Italy, making the variable uninformative.

4 Explaining the Financial Knowledge

In the modern world, most of the decisions and choices we make have an economic impact, having sufficient financial knowledge has become a tool of autonomy. It is not a matter of aspiring to become an expert in investments or markets, but of developing the awareness necessary to navigate small and big decisions involving money. Understanding how money works, how it is spent, earned and invested is important to have control and awareness of its existence, it means making decisions with clarity, knowing how to assess opportunities and avoid mistakes that can be costly. Having a good financial knowledge is not only useful in times of emergency but is an ally that allows us to have better stability and economic freedom. In this chapter, no investment advice or strategies will be proposed, but the financial knowledge of Italians will be analysed in relation to their socio-demographic charac-

teristics, in order to detect which of them are most discriminating in having a good level of financial education.

4.1 Creation of the "knowledge score" variable

In order to achieve the objective of this analysis, the questions that were taken into consideration as an indicator of an individual's general financial knowledge are QK3 to QK7_3 from the dataset described in the Section 2.1; these questions include topics such as inflation, simple and compound interest rate and risk in a fairly basic manner.
Based on the correctness with which the respondent answered the questions, a new variable **knowledge score** was created, calculated by summing the total number of correct answers; the score will then be in a ranger from 0, in the case of no correct answers, to 7, if the respondent answered all questions correctly. This new variable will be used as the dependent variable for this analysis.
Given that some individuals did not provide responses to certain questions, we opted to exclude these incomplete observations. To avoid removing entire records of participants who answered some but not all questions, we created a subset for each model that includes only those individuals who answered the specific question used as the dependent variable for that particular model.
The Figure 1 shows the frequency distribution of the variable divided into 8 categories (based on the correct answers), however, for our analysis, we thought it appropriate to reduce the number of categories to 3 by grouping the scores into three categories — low (0–2), medium (3–4) and high (5–7) — this simplifies the data structure without compromising the substance of the information.

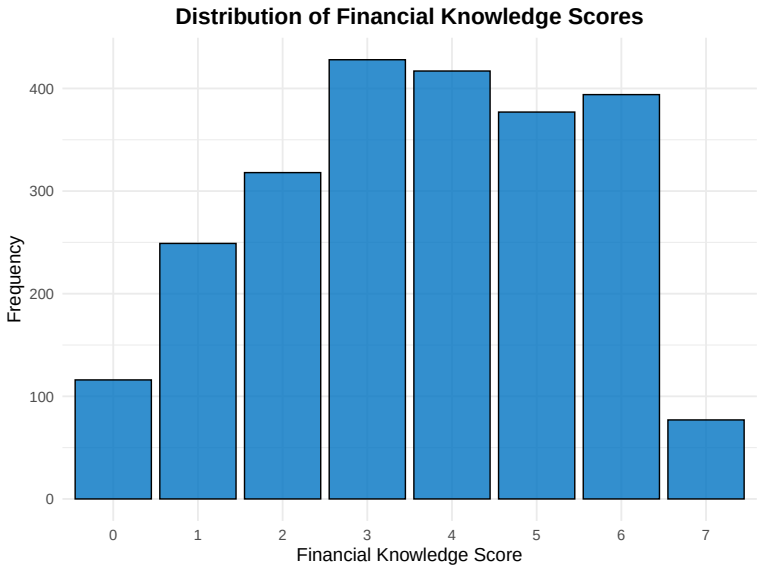

Figure 1: The histogram shows a relatively balanced distribution of financial knowledge scores, with the majority of individuals distributed between the intermediate values, there is a gap in the extreme scores, scores 0 and 7 being the least frequent, especially the latter, suggesting that very few individuals have reached the highest level of financial knowledge.

4.2 The Ordinal Regression Model

In this subchapter, we will explore the ordinal regression model as a statistical tool to exam-

ine the levels of financial knowledge in relation to various socio-demographic variables of the participants. The analysis was conducted in several stages to ensure a comprehensive understanding of the factors at play, focusing on the selection and testing of different variables to identify those that have the most significant impact on financial knowledge.
Initially, the full ordinal regression model was applied, incorporating all the socio-demographic variables listed above. This broad approach allowed us to analyze the relationship between financial knowledge and various factors such as gender, age, education, country of residence, occupation, and geographical area. After running the initial model, a more refined variable selection process was performed using stepwise regression. This technique helped us systematically remove variables that were less significant, thus simplifying the model and improving its predictive power.
Through this process, variables like country of residence, occupation, and geographical area were excluded from the model, as they demonstrated low statistical significance in explaining the differences in financial knowledge. On the other hand, the variables that emerged as the most influential and significant were gender, age, and education. These three factors were found to play a crucial role in determining the level of financial knowledge among participants, with the others being deemed less relevant.
The final model, therefore, highlights gender, age, and education as the key socio-demographic variables that significantly contribute to financial literacy. The exclusion of the less significant variables ensures that the analysis is more focused and reflects the most important determinants of financial knowledge. These findings underscore the importance of these socio-demographic factors in shaping individuals' understanding of financial concepts and behaviors, with implications for policy and educational programs aimed at improving financial literacy.

4.3 Interpretation of the results

As mentioned in the previous subsection, the socio-demographic variables that most contribute to Italians' financial knowledge are *education*, *gender* and *age*; let us now go into more detail by going to see how much each of these variables weighs and why.
The table 4.3 reports the estimated coefficients for the reduced model, which, as previously mentioned, includes age, gender and education as discriminant variables. Each coefficient represents the effect of the variables on the change in the probability of belonging to a higher financial knowledge category. In other words, the coefficients indicate how the financial knowledge score (variable tot1) changes in relation to changes in the explanatory variables.

Variable	**Est.**	$Pr(>\|z\|)$
Gender (Male)	0.27	$p < 0.001$
Age	0.01	0.02
Education (Linear)	0.70	$p < 0.001$
Education (Quadratic)	-0.14	0.01
1|2	-0.64	$p < 0.001$
2|3	0.90	$p < 0.001$

Among the factors analysed, gender appears to be a relevant variable in understanding differences in levels of financial knowledge. All things being equal, men tend to have higher scores than women. This finding suggests that gender may influence financial literacy, perhaps due to differences in economic behaviour, access to financial education tools or even perceived confidence with respect to money management.
Age also has a positive effect, albeit smaller. Those in older age groups tend to have slightly more financial knowledge. It is plausible that this depends on the experience accumulated over time: with age comes more opportunities to deal with economic decisions - mortgages, pensions, investments - which help to build familiarity with financial concepts and instru-

ments.
Education, however, remains the most influential factor. People with a higher level of education show significantly greater financial understanding. This link is understandable: education not only promotes the development of analytical and logical skills, but also exposes people more easily to information and content related to money, markets and personal financial management. However, the effect of education seems to diminish slightly at higher levels, suggesting that, above a certain threshold, the accumulation of educational qualifications does not necessarily correspond to a proportional increase in financial competence. This could mean that, beyond a certain educational base, other factors - such as practical experience or personal interest - come into play in determining how well a person really knows how to handle and understand financial matters.
The results we obtained from this analysis are consistent with what we expected before we started it and with other studies such as *'The Economic Importance of Financial Literacy: Theory and Evidence', conducted by Lusardi, A., & Mitchell, O. S.*[7], explores how educational level and financial knowledge are closely linked, people with higher educational backgrounds tend to have greater knowledge of finances, such as savings management and investments. Or *"Household Financial Management: The Connection Between Knowledge and Behaviour", by Hilgert, M. A., Hogarth, J. M., & Beverly, S. G.*[5], where the importance of age in financial skills is observed, indicating that older people tend to have more financial experience, although they often lack the most up-to-date skills on modern financial products.

5 Understanding Clients' Attitudes

Understanding clients' attitudes is a crucial aspect for financial advisors, as it allows them to tailor investment strategies and provide more effective guidance. Specifically, financial attitude encompasses an individual's overall approach to managing money, including their propensity to save, invest, and take financial risks. It influences key decisions such as asset allocation, long-term financial planning, and the selection of investment instruments.

Within this framework, we can distinguish two closely related but distinct dimensions:

- **Investment attitude**, which refers to an individual's inclination to save and invest, shaping their choices regarding capital preservation and future financial security.
- **Risk attitude**, which defines how an individual perceives and responds to financial uncertainty, determining their willingness to take on investments with potential volatility in pursuit of higher returns.

Several studies have shown that financial attitude is shaped by a combination of external and personal factors (see Economia per tutti, molecularlab). Elements such as financial education, family environment, and economic conditions play a crucial role in shaping an individual's financial behavior. On the other hand, psychological and biological factors, such as personality traits and genetic predisposition, can influence the tendency to take on more or less financial risk.

5.1 Investment Attitude

In this subchapter, the goal is to find an association between individuals' propensity to save and invest and the socio-demographic characteristics available to us. This analysis stems from the need to understand which groups of people may require greater financial education or targeted interventions to develop a stronger saving mindset. Identifying these

patterns can help finance institutions, policymakers, and educators design more effective strategies to promote responsible financial behavior.

To quantify individuals' investment and saving habits, we develop a ordinal classification score based on their responses to the following statements:

- I tend to live for today and let tomorrow take care of itself.
- I find it more satisfying to spend money than to save it for the long term.
- I set long-term financial goals and strive to achieve them.
- Money is there to be spent.

Each response was evaluated to determine whether an individual exhibits a greater tendency toward financial prudence (saving and investment mindset) or a more short-term, consumption-oriented approach. Individuals who expressed strong agreement with statements emphasizing spending and living for the present were categorized as having low saving and investment propensity, while those who prioritized long-term financial planning were classified as having high saving and investment propensity.

After an extensive analysis, we arrived at the following conclusion 5.1: the most significant variables influencing financial behavior are *Gender* and *Age*. These findings are consistent with previous studies in financial decision-making and consumer behavior, offering important insights into the distinct ways demographic groups manage their savings and expenditures.

Variable	**Est.**	**Pr**$(>\|\mathbf{z}\|)$
Gender (Male)	-0.24	$(p < 0.01)$
Age (Linear)	0.77	$(p < 0.001)$
Age (Quadratic)	-0.05	$(p < 0.602)$
Age (Cubic)	0.12	$(p < 0.163)$
1|2	-2.04	$(p < 0.001)$
2|3	-0.78	$(p < 0.001)$

Our results indicate that women tend to exhibit a more consumption-oriented mindset compared to men. This trend may be influenced by several factors, including social norms, spending priorities, and financial knowledge levels, as demonstrated in the previous chapter. Studying these factors represents an interesting avenue for future research, as it could offer deeper insights into how gender shapes financial behavior or decision-making processes.

Another key finding is that as individuals grow older, they tend to save more and spend less. This pattern can be attributed to multiple factors such as increased financial responsibilities, changing consumption habits, and greater financial knowledge, as highlighted in the previous chapter.

5.2 Risk Attitude

In this section, we aim to explore the relationship between risk attitude and the socio-demographic information available to us. The central question of our study is: To what extent do socio-demographic factors influence financial risk propensity? Is there a relation between these variables and individuals' investment choices?

To assess financial risk propensity, we calculated a risk score based on individuals' responses to the following statement: "I am prepared to risk some of my own money rather than save it for the long term."

Based on their agreement or disagreement with this statement, we categorized individuals into two groups: *risk-averse* and *risk-*

seeking. Using this score and applying various analytical techniques, we obtained the results presented in 5.2.

Variable	**Est.**	**Pr**$(>\|\mathbf{z}\|)$
(Intercept)	-0.96	$(p < 0.001)$
Gender (Male)	0.30	$(p < 0.01)$
Age (Linear)	-0.57	$(p < 0.001)$
Age (Quadratic)	0.01	$(p < 0.910)$
Age (Cubic)	-0.13	$(p < 0.152)$

After a thorough analysis, the most important factors that characterize risk attitude were found to be *Age* and *Gender*.

This finding aligns with previous research suggesting that men, on average, tend to take more financial risks than women due to various factors. For instance, studies have shown that men often exhibit greater overconfidence in financial decision-making, leading them to engage in riskier investments. This pattern is further supported by the findings of Byrnes, Miller, and Schafer (2006) in their study *"Gender Differences in Risk Assessment: Why do women take fewer risks than men?"* [3]

Another, perhaps unsurprising, observation is that older individuals tend to be less risk-seeking. This pattern has been confirmed by existing studies, such as *"The Influence of Age on Risk-Taking Behavior: A Psychological Perspective"* by Sandra D. Lane and Jeffrey W. McGinnis[6], which explores the relationship between age and risk-taking behavior.

6 Retirement plan

Retirement planning is a critical aspect of financial security, yet many individuals in Italy face challenges in preparing for their post-work years. This chapter explores two key dimensions of retirement planning: confidence in having a good retirement plan and the tools used to fund retirement. Through statistical modeling, we uncover patterns and determinants that influence these aspects of retirement planning, offering actionable insights for financial institutions and policymakers.

6.1 Retirement Confidence Analysis

The first analysis investigates which demographic and financial literacy factors are associated with individuals' confidence in their retirement planning. Question QF8 asks respondents: "How confident are you that you have done a good job of making financial plans for your retirement?". Since the response variable contains ordered categorical levels (from "Not at all confident" to "Very confident"), we employed a Proportional Odds Logistic Regression model.

Variable	**Est.**	**Pr**$(>\|\mathbf{z}\|)$
Age	0.02	$p < 0.001$
Education (Linear)	0.57	$p < 0.001$
Education (Cubic)	-0.01	0.95
Employment Status	1.60	$p < 0.001$
Area (North-East)	-0.33	$p < 0.05$
Area (Centre)	-0.52	$p < 0.01$
Area (South)	-0.56	$p < 0.001$
Area (Islands)	-0.71	$p < 0.001$
6|5	2.80	$p < 0.001$
5|4	3.00	$p < 0.001$
4|3	3.67	$p < 0.001$
3|2	5.04	$p < 0.001$
2|1	6.11	$p < 0.001$

The analysis reveals several critical patterns regarding retirement confidence among Italians: Age demonstrates a positive relationship with retirement confidence. This suggests that older individuals, having accumulated more experience with financial planning and being closer to retirement, report greater confidence in their preparations. Educational

attainment also exhibits a strong positive association with retirement confidence indicating that higher education levels correspond to greater confidence in retirement planning. This aligns with findings from the OECD report showing that financial literacy scores increase substantially with education levels in Italy[1]. Employment status emerges as the most influential factor in the model. Being employed dramatically increases retirement confidence. This substantial effect likely reflects the stability of income and potential access to employment-based retirement schemes that provide a foundation for retirement planning. Geographical location reveals significant regional disparities. Compared to the reference category (North-West Italy), all other regions show negative coefficients, with particularly strong effects in Southern Italy and the Islands. These regional differences may reflect underlying economic disparities, variations in financial service accessibility, or cultural differences in approaching retirement planning. Confidence in retirement planning is shaped by age, education, employment status, and regional factors, with financial literacy playing a pivotal role. Policymakers should focus on targeted interventions to improve financial literacy among vulnerable groups, particularly in Southern Italy and the Islands.

6.2 Retirement Planning Tools

The second dimension of our analysis examines the specific tools individuals use for retirement planning, based on question QF9: "How will you fund your retirement?" For analytical purposes, we classified retirement funding methods into two categories:

1. Secure/stable tools: Government pension plans, occupational/workplace pension plans, private pension plans, and financial/non-financial asset income

2. Precarious tools: Relying on partners or family members, and "other" unspecified methods

A binary logistic regression model was employed to identify predictors of using secure tools versus precarious ones.

Variable	**Est.**	**Pr**$(>\|\mathbf{z}\|)$
(Intercept)	0.25	0.50
Gender (Male)	1.04	$p < 0.001$
Household (Linear)	0.00	0.98
Household (Quadratic)	0.09	0.49
Household (Cubic)	-0.33	$p < 0.01$
Age (Linear)	0.45	$p < 0.01$
Age (Quadratic)	-0.06	0.64
Age (Cubic)	-0.13	0.27
Education (Linear)	0.75	$p < 0.001$
Education (Quadratic)	0.06	0.56
Employment Status	1.87	$p < 0.001$
Area (North-East)	-0.07	0.69
Area (Centre)	-0.04	0.81
Area (South)	-0.52	$p < 0.01$
Area (Islands)	-0.72	$p < 0.001$

Gender shows a strong effect, with men 2.84 times more likely to use secure retirement tools than women. This gender disparity in retirement planning aligns with research from the 2018 Banca d'Italia report[1] showing gender gaps in financial literacy, particularly among highly educated individuals. Employment status again emerges as the most influential factor, with employed individuals 6.47 times more likely to use secure retirement tools. This substantial difference highlights how employment not only provides income stability but also facilitates access to formal retirement planning mechanisms like pension plans. Similar to the confidence model, geographical disparities are evident, with Southern Italy and the Islands associated with lower probabilities of using secure retirement tools. This regional pattern is consistent across both aspects of retirement planning.

To further investigate the relationship between employment status and retirement tool selection, we created a visualization comparing employed versus unemployed individuals.

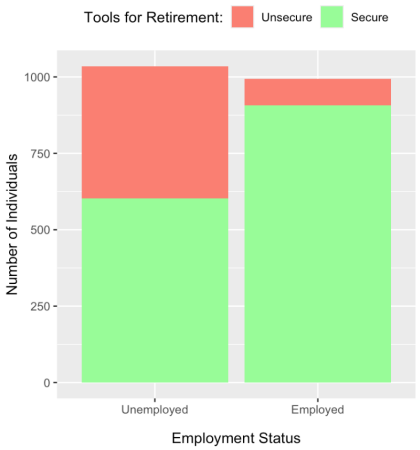

Figure 2: Retirement Confidence

This stacked bar plot reveals striking differences in retirement planning approaches between employed and unemployed individuals. Those in employment (self-employed and paid employees) demonstrate a much higher propensity to utilize secure retirement planning tools. This visualization confirms the statistical findings and provides an intuitive representation of the employment effect. This pattern likely stems from several factors:

1. Stable income facilitating regular contributions to retirement funds
2. Access to employer-sponsored retirement plans
3. Potential financial literacy advantages among the employed population
4. Immediate financial pressures facing unemployed individuals that may preclude long-term planning

The choice of tools for retirement planning is influenced by gender, age, education, employment status, and geography, highlighting areas where targeted interventions can improve outcomes.

7 Personal Financial Management

Understanding how individuals manage their personal finances is crucial for economic well-being and effective financial decision-making. This chapter examines two critical dimensions of personal finance among Italians: savings behavior, and capability to handle unexpected expenses. By analyzing these aspects, we can identify which demographic groups might benefit most from targeted financial education or services, and understand how financial literacy impacts these important financial behaviors.

7.1 Savings Behavior Analysis

We begin by analyzing how Italians save money and what factors influence their saving methods. Our analysis centers on question QF3: "In the past 12 months have you been personally saving money in any of the following ways, whether or not you still have the money?"

To effectively analyze savings behavior, we classify saving methods into two categories:

1. Secure methods: Formal financial instruments offering greater security and potential returns
2. Non-secure methods: Informal approaches with potential risks or limited growth opportunity

Specifically, we classified options such as "Paying money into a savings account" (option b), "Buying financial investment products" (option d), and "Other ways including buying property" (option e) as secure methods (coded as 1). Conversely, options like "Saving cash at home," "Giving money to family to save," and "Has not been actively saving" were classified as non-secure methods (coded as 0). We then created a new variable "sum" that indicates whether an individual uses at least one secure saving method (1) or relies solely on non-secure methods (0). To identify factors associated with secure saving behavior, we developed a comprehensive logis-

tic regression model.

Variable	Est.	$Pr(>\|z\|)$
(Intercept)	-0.35	$p < 0.01$
Household (Linear)	0.07	0.56
Household (Quadratic)	-0.34	$p < 0.001$
Household (Cubic)	0.10	0.25
Age (Linear)	0.72	$p < 0.001$
Age (Quadratic)	0.28	$p < 0.01$
Age (Cubic)	0.21	$p < 0.05$
Education (Linear)	0.59	$p < 0.001$
Education (Quadratic)	0.05	0.55
Employment Status	0.81	$p < 0.001$
Area: North-East	-0.03	0.81
Area: Centre	-0.12	0.37
Area: South	-0.50	$p < 0.001$
Area: Islands	-0.88	$p < 0.001$

The analysis reveals several important patterns regarding who is more likely to use non-secure saving methods. A significant relationship exists between age and saving methods. Compared to younger individuals, middle-aged and older Italians show higher odds of using secure saving methods, with the linear component showing a strong positive association. Education level strongly predicts saving behavior. This indicates that formal financial education might influence one's approach to savings. Employed individuals have substantially higher odds of using secure methods compared to unemployed individuals. A notable geographic disparity emerged, with residents of Southern Italy and the Islands showing significantly lower odds of using secure saving methods compared to those in Northwest Italy. The quadratic term for household size shows a significant negative association, suggesting a complex non-linear relationship between household size and saving behavior.

These findings indicate that secure saving behavior is less common among younger individuals, those with lower education levels, the unemployed, and residents of Southern Italy and the Islands. These demographic groups might benefit most from targeted financial education about formal saving methods and their benefits.

7.2 Handling Unexpected Expenses

The ability to handle unexpected major expenses is a crucial indicator of financial resilience. We analyze responses to question QF4: "And if you, personally, faced a major expense today, equivalent to your own monthly income, would you be able to pay it without borrowing the money or asking family or friends to help?" We created a binary variable where 1 indicates ability to handle the expense ("Yes") and 0 indicates inability ("No" or "Don't know")

Variable	Est.	$Pr(>\|z\|)$
(Intercept)	-1.61	$p < 0.001$
Age1	0.03	$p < 0.001$
Education (Linear)	0.60	$p < 0.001$
Education (Quadratic)	-0.15	0.07
Employment Status	0.50	$p < 0.001$
Area: North-East	-0.05	0.73
Area: Centre	-0.20	0.15
Area: South	-0.41	$p < 0.01$
Area: Islands	-0.37	$p < 0.05$

The analysis reveals several critical patterns regarding who is less capable of handling unexpected expenses. Age shows a strong positive association with the ability to handle unexpected expenses. Each additional year of age increases the odds of being able to handle an unexpected expense. This suggests that financial resilience builds over time, possibly due to accumulated savings and experience. Education level shows a significant positive relationship, with higher-educated individuals being more capable of handling unexpected expenses. This may reflect both higher income levels associated with education and potentially better financial management skills. Employment status has a substantial impact. Those with stable employment are significantly more likely to handle unexpected expenses compared to those in precarious employment situations. Residents of Southern

Italy and Islands show significantly lower capability to handle unexpected expenses compared to those in Northwest Italy, highlighting regional economic disparities.

These findings indicate that younger individuals, those with lower education levels, the unemployed, and residents of Southern Italy and the Islands are more financially vulnerable to unexpected expenses. These groups would benefit most from financial products and education focused on building emergency funds.

8 Conclusion

The aim of this study was to extract meaningful insights from the relationships between socio-demographic variables and various financial indicators. For this purpose, we employed a questionnaire modeled on the structure of a real bank survey. The questionnaire was adapted by the International Network for Financial Education (INFE) of the OECD and allowed us to extract which socio-demographic characteristics are discriminating in order to explain different dimensions: a financial knowledge score, investment attitude, risk attitude, retirement confidence, financial security, saving behaviour and the ability to cope with unexpected expenses.

This study demonstrates that financial literacy in Italy is shaped by socio-demographic factors, with education, age, and gender emerging as the most influential variables. Higher educational attainment is consistently associated with greater financial knowledge, confirming that formal education fosters not only analytical skills but also exposure to financial concepts. Age also plays a positive role, as older individuals tend to accumulate financial experience over time, although this effect plateaus at more advanced ages. Gender differences persist: men generally report higher financial knowledge and a greater propensity to take financial risks than women, a finding consistent with international literature.

Beyond knowledge, attitudes toward investment and risk are strongly influenced by socio-demographic factors. Women and older individuals generally show lower risk tolerance, while men and younger respondents are more likely to engage in consumption-driven financial behaviors. The motivation behind this analysis lies in the importance for financial advisors to understand their clients' financial attitudes. In fact, an individual's attitude plays a pivotal role in key decisions such as asset allocation, long-term financial planning, and the selection of appropriate investment tools. In the sixth section, we examined retirement plans in more depth. For a bank offering these services, it could be insightful to understand which socio-demographic factors better explain individuals' confidence in their retirement planning and their choice of safer financial instruments for building their funds. Our findings indicate that people from Southern Italy and the islands tend to have less confidence in their retirement plans and are more likely to use less secure retirement tools. Additionally, age and employment status emerged as key variables in explaining both the confidence individuals have in their plans and the financial instruments they choose. Lastly, gender seems to influence the choice of financial tools but not the level of confidence in retirement planning. For businesses marketing retirement services, these insights are valuable, as they identify the demographic groups that may struggle most with retirement planning and, therefore, are most in need of assistance.

Finally, the analysis explored the relationships between socio-demographic variables and a score based on the use of either secure or precarious saving instruments. The focus then shifted to another indicator aimed at assessing individuals' ability to cope with both expected

and unexpected expenses. The findings show that secure saving behaviors are less common among younger individuals, those with lower education levels, the unemployed, and residents of Southern Italy and the Islands. These demographic groups could particularly benefit from targeted financial education programs designed to encourage the use of more stable and informed saving methods. Similarly, these same groups appear to be more financially vulnerable when faced with unexpected expenses, showing a lower capacity to manage unforeseen economic events. For this reason, initiatives focused on building emergency funds and improving access to appropriate financial products could provide concrete and necessary support to strengthen their financial resilience.

The results highlight the need for targeted policy interventions. Improving financial literacy and resilience requires age and context-sensitive educational programs, with particular attention to women, the young, the less educated, and residents of economically disadvantaged regions. Policies should promote access to secure financial products, support employment, and address regional inequalities. Only through such focused strategies can Italy bridge its persistent financial knowledge gap and foster more robust, inclusive financial behaviors across its population.

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