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FINANCIAL KNOWLEDGE AND CAREER ASPIRATIONS AMONG THE YOUNG: A ROUTE TO ENTREPRENEURSHIP

by Sara Lamboglia*, Noemi Oggero**, Mariacristina Rossi*** e Massimiliano Stacchini*

Abstract

In this study, we explore whether financial literacy plays a role in shaping career aspirations of young people. Using data collected in 2023 by the Bank of Italy on a representative sample of individuals aged 18-34, we find that financial knowledge increases the intention to become entrepreneurs. Our results are confirmed using instrumental variable estimations. We also show that financial knowledge helps reducing indecisiveness regarding future professional choices, making young people more focused on their aspirations.

JEL Classification: G53, L26.

Keywords: financial literacy, entrepreneurial intention.

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* Bank of Italy, Directorate General for Consumer Protection and Financial Education.

** University of Turin and CERP

*** COVIP and University of Turin

1 Introduction¹

The importance of financial literacy in shaping economic behavior has been studied in several domains of household economics and finance (Lusardi & Mitchell (2014), Kaiser et al. (2022)).

A good level of financial literacy determines positive economic outcomes in terms of retirement planning (Lusardi & Mitchell (2011), Choinière-Crèvecoeur & Michaud (2023)) and wealth accumulation (Lusardi et al. (2017)) along with more efficient portfolio allocation (Abreu & Mendes (2010), Bianchi (2018)). Financial knowledge is also positively related to higher stock market participation (Van Rooij et al. (2011), Jappelli & Padula (2015), Bucher-Koenen et al. (2021)) and better debt management (Lusardi & Tufano (2015), Lusardi et al. (2020), Thorp et al. (2023)). There are also studies showing links between financial knowledge, consumers' digital skills (Lo Prete (2022), Marconi et al. (2022)), and small businesses' digitalisation and engagement in sustainable activities (D'Ignazio et al. (2023)).

The literature on the effects of financial literacy on career aspirations and entrepreneurial spirits is less substantial. Few studies, Čumurović & Hyll (2019), Oggero et al. (2020) and Struckell et al. (2022), investigate the correlation between the fact of being an entrepreneur and the level of financial literacy. However, to the best of our knowledge, we are the first to assess whether knowing more of financial matters influences decisiveness about career aspirations including that of becoming entrepreneurs. To that extent, we use a dataset recently collected by the Bank of Italy on young people aged between 18 and 34, who are asked questions on their professional aspirations, such as their will to become entrepreneurs, along with questions on financial knowledge.

Through instrumental variable estimations, we are able to assess causal relationships showing that financial literacy can shape career aspirations towards entrepreneurship. Our analysis also shows that financial knowledge helps to reduce indecisiveness regarding future professional choices, making people more focused on their aspirations. Indeed, the estimates from a multinomial logit regression show

¹The views expressed in this study are those of the authors alone and do not necessarily represent those of the institutions with which they are affiliated. We are grateful to Magda Bianco, Guido de Blasio, Riccardo De Bonis, Daniela Marconi, Marco Marinucci, Angela Romagnoli and participants to the 64th Annual Conference of the Italian Economic Association for valuable discussions and comments. We also thank Fabio Travaglino for helpful advice. All remaining errors are ours.

that financially literate people are less likely to report they do not know whether they are interested in pursuing an entrepreneurial career.

The issue is particularly relevant from a policy standpoint, as we document that financial literacy can act as an important guidance tool for young people’s career aspirations and professional choices.

Finally, the paper also tests whether preferences play a role in ambitions and considers risk tolerance among the possible drivers. The literature has shown that risk aversion can be a deterrent against becoming an entrepreneur, as documented by De Blasio et al. (2021), and it is likely to act in the same direction also in terms of professional ambitions. Indeed, we show that risk tolerance is positively correlated with entrepreneurial intentions.

The remainder of the paper is organized as follows. Section 2 discusses the background literature and Section 3 introduces the data, provides descriptive statistics and illustrates the empirical strategy. Section 4 presents the main estimation results in three subsections: the OLS regression analysis, the instrumental variable approach and the multinomial logit estimates. Section 5 concludes the paper.

2 Literature review

A wide strand of empirical literature has shown that financial literacy is correlated with sound households’ financial decision-making, such as financial planning, saving and wealth accumulation (Bucher-Koenen & Lusardi (2011), Lusardi & Mitchell (2007, 2011), Van Rooij et al. (2012), Jappelli & Padula (2013), Lusardi et al. (2017), Bottazzi & Oggero (2023), Choinière-Crèvecoeur & Michaud (2023)). Higher financial literacy also generates better investment (Stango & Zinman (2009), Disney & Gathergood (2013)), more participation to the stock market (Bucher-Koenen et al. (2021), Van Rooij et al. (2011), Klapper et al. (2013)), higher resilience to shocks (D’Ignazio et al. (2022)).

Turning to the effect of financial literacy on career aspirations and entrepreneurial activity, the evidence is scant, mainly because there are few data that contain relevant information on these dimensions. An exception is represented by Oggero et al. (2020) who looks at the probability of being an entrepreneur and whether this is correlated with financial literacy. Using Italian data collected by the Bank of Italy

in the years 2008 and 2010, the authors find a positive correlation between financial knowledge and the status of entrepreneur, albeit they cannot establish causality. Indeed, the survey did not provide information on the intention to become an entrepreneur. Focusing instead on a developing country, Melesse et al. (2023) tracks the role of financial literacy in shaping aspirations of poor individuals in rural Tanzania, suggesting that aspirations could be influenced to improve poor individuals' forward-looking behaviour and future investments.

A couple of studies have investigated the relationship between financial literacy and self-employment status. Ćumurović & Hyll (2019) used German survey data to show a highly significant and positive correlation between financial literacy and self-employment. Similarly, Struckell et al. (2022) found a positive link between financial literacy and self-employment in the US, stronger for women compared to men. Preston & Wright (2023) find a similar result for Australia. The authors suggest that the likely direction is from financial literacy to self-employment and, in general, higher employment probability. They conclude that financial literacy can be seen as a form of “general human capital” as it has an impact on employment overall.

To the best of our knowledge, our paper is the first attempt to establish the importance of financial literacy in shaping career aspirations of young people and to establish causality.

3 Data and empirical strategy

Our aim is to detect whether financial knowledge shapes professional aspirations of individuals by making them more willing to become entrepreneurs. To investigate this relationship, it is necessary to focus on young individuals for whom professional aspirations have not been realised yet or those who have just recently started to work.

We focus on the earlier stages of the life cycle using a dataset representative of young adults aged between 18 and 34 years old in Italy collected by the Bank of Italy in 2023². The dataset offers a unique opportunity to answer this research question. It surveys professional ambitions like the will to become an entrepreneur along with

²The characteristics of the sample are described in Bank of Italy (2023a).

the financial knowledge of respondents. Preferences of individuals are also investigated, in particular with regard to risk aversion. The dataset includes demographic and socio-economic information. The survey was administered to 5,372 individuals representative of the young adults aged 18-34 in Italy through web interviewing.

Figure A.1 in the Appendix illustrates the representativeness of the sample by comparing its characteristics to those of the population. The comparison is based on age and geographical localization, the variables considered in the sample design³. Since we are interested in the entrepreneurial intentions, we drop from the sample those who reported they were already entrepreneurs at the time of the survey.

Our final sample includes 5,188 individuals roughly split 50-50 between men and women and aged, on average, around 26 years old (Table 1). Only one in five (20%) completed tertiary education, i.e., have at least a college degree. As far as occupational status is concerned, 47% are employed while 33% are still students and 16% are looking for a job; finally 4% do not feel represented by any of these definitions. We classify as risk tolerant those who reported a score higher than 6 on a scale from 1 to 10 measuring the propensity to take up risk, i.e. those in the fourth quartile of the distribution⁴; according to that definition, 26% of respondents are risk tolerant.

To measure respondents' financial knowledge, the survey asked five financial literacy questions. Besides the basic concepts of simple interest rate, inflation, and risk diversification that are the topics of the well-known "Big Three" questions (Lusardi & Mitchell (2014)), the survey tested the knowledge of mortgages and interest compounding. The average number of correct answers was 3 out of 5; only 17% of the sample correctly answered all the five questions on financial literacy⁵.

Focusing on career aspirations, 38% of young adults would like to start an entrepreneurial activity in the future, while 11% report they do not know (Figure

³Respondents were selected through quota sampling, which maintained proportions of the target population with respect to age and geographic location. Post-stratification (raking) techniques were applied to get representativeness also in terms of educational attainment and gender. Further methodological details are available in Bank of Italy (2023b).

⁴Specifically, risk propensity is recorded through a scale from 1 to 10, according to the answer to the following question: "When you think about your financial decisions, including financial investments, to which degree have you a propensity for risk?" We imputed the median risk score to the respondents who answered "Do not know" to the risk propensity question to keep the same sample size. To take into account the imputation, regressions include a dummy equal to 1 for those who answered "Do not know" to the risk propensity question.

⁵The questions on financial literacy and entrepreneurial intentions are reported in Table A.1 in the Appendix. All the survey questions were asked in Italian.

Table 1: Descriptive statistics

	Mean	Std. Dev.	N
finlit (0-5)	2.99	1.42	5188
female	0.49	0.50	5188
age	26.21	4.95	5188
degree	0.20	0.40	5188
student	0.33	0.47	5188
employed	0.47	0.50	5188
jobseeker	0.16	0.36	5188
none of these conditions	0.04	0.19	5188
risktolerant	0.26	0.44	5188

Note: All figures are weighted. Students include trainees and individuals attending internships. Authors' elaboration on Bank of Italy data.

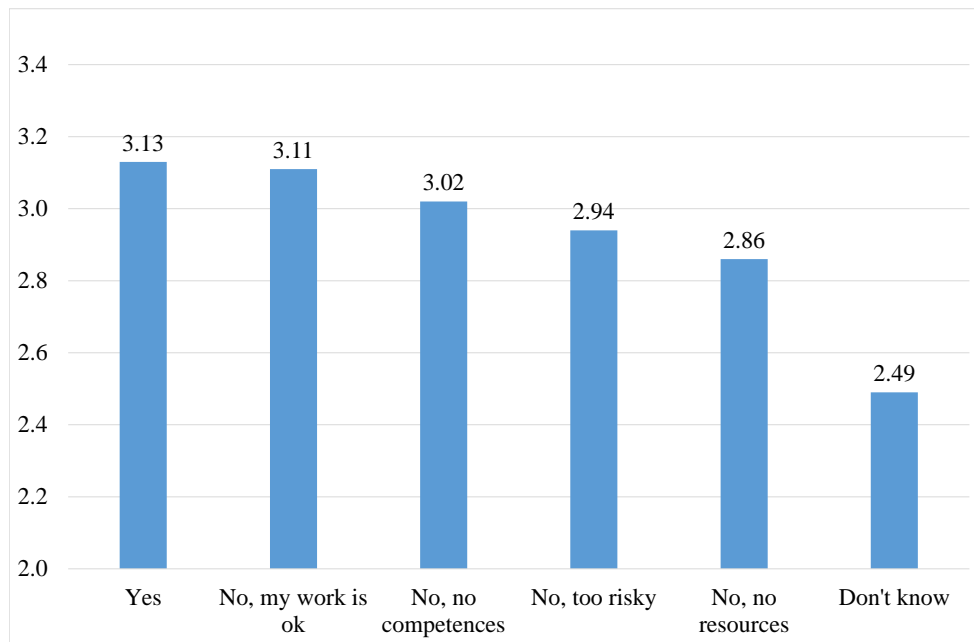
A.2)⁶. The distribution is almost evenly split among the remaining negative answers: some individuals report it would be too risky (15%), they do not have the right skills/competences (14%) or financial resources (10%), while 11% of the sample are satisfied with their work. Cross tabulating financial knowledge and entrepreneurial intentions (Figure 1), data show that those who aspire to become entrepreneurs exhibit a higher level of financial knowledge, with a financial literacy score of 3.13 against that of 2.99 of the average respondent. Interestingly, a negative correlation appears to exist between uncertain professional ambitions and financial knowledge. Indeed, those who report they do not know whether they would like to start an entrepreneurial activity are those with the lowest score (2.49).

To investigate whether financial literacy can shape professional ambitions, we perform a multivariate analysis controlling for several variables. Using a linear probability model, we estimate the following equation:

$$entrepreneurial_intention_i = \beta_0 + \beta_1 X_i + \beta_2 finlit_i + \epsilon_i$$

⁶The interest of youth in entrepreneurship has also been surveyed recently by The European Union (European Commission (2023)). As for Italy, given a choice between different types of jobs, close to 1 in two respondents aged 18-30 would prefer self-employment to working as an employee; a similar percentage would consider setting up their own business although they have not yet taken steps to do so.

Figure 1: Entrepreneurial intentions and financial literacy



Note: The y-axis illustrates the average score in financial literacy for the specific group. The x-axis indicates the response provided to the question “In the future, would you like to become an entrepreneur?” Authors’ elaboration on Bank of Italy data.

where the dependent variable *entrepreneurial_intention* is a dummy equal to one if the respondent states s/he would like to become an entrepreneur. The variable of interest we want to focus on is financial knowledge. We use a score computed as the number of correct answers to the five financial literacy questions (the *finlit* variable)⁷. Covariates in X_i include respondent’s age, a gender dummy variable, a dummy equal to 1 if the respondent holds a university degree, the respondents’ occupational status and risk tolerance⁸. The set of controls includes the duration of the interview as well as whether the interview was carried out on a mobile phone⁹.

4 Results

4.1 OLS regression analysis

The results based on OLS regressions are illustrated in Table 2. From columns 1 to 5, we progressively include control variables to see whether and how the coefficient on our variable of interest is affected, and in the last column we also include province dummies to control for differences in the entrepreneurial environment and geographical disparities. The estimates reported in Table 2 show a positive relation between financial knowledge and the will to become an entrepreneur. In particular, a one standard deviation increase in the financial knowledge score leads to an increase up to 4 percentage points in entrepreneurial intentions.

Looking at the covariates, we notice that the ambition to become an entrepreneur is lower among those holding a university degree. This finding is in line with several studies that found that tertiary education is negatively related to the probability of being an entrepreneur in Italy (Schivardi (2018), Baltrunaite et al. (2023)¹⁰, Oggero

⁷As a robustness check, we also verified our estimates using as a measure of financial literacy the number of correct answers to the three questions on simple interest rate, inflation and risk diversification. Tables are available upon requests.

⁸The main results do not change if we use other thresholds to classify risk tolerance. Indeed, they are confirmed if we use a dummy taking value 1 if the respondent reported a score higher than 4 out of 10, which represents both the mean and median values.

⁹Peoples’ answers to survey questions may potentially differ depending on the way the survey is administered (three common methodologies are Computer assisted personal interviewing/CAPI, Computer assisted telephone interviewing/CATI, and Computer assisted web interviewing/CAWI). Our data are not exposed to ‘survey mode’ effects as all information was collected through CAWI interviews. Nevertheless, to fully absorb any potential effect associated with the use of different devices, the model controls for the device used by the respondents (e.g., regular desktop PCs, tablet, mobile phone) as well as the time taken to conclude the interview.

¹⁰Baltrunaite et al. (2023) show that the fraction of entrepreneurs with a college degree is below 10 percent, with respect to 21 percent among total workers. The association between education and entrepreneurship is reversed when

et al. (2023)).

Women show a lower interest in becoming entrepreneur even if we control for age, level of education, occupational status, risk tolerance and financial knowledge. This is consistent with the literature documenting a persistent gender gap in entrepreneurship (Gneezy et al. (2003), Gneezy et al. (2009), Shurchkov & Eckel (2018)). Also, risk propensity has an impact on entrepreneurial intentions: those with a higher risk tolerance, i.e., in the fourth quartile of the distribution, are around 7 percentage points more likely to want to become an entrepreneur. This is consistent with previous research showing that risk tolerant individuals are more likely to enter entrepreneurship (Cramer et al. (2002), Douglas & Shepherd (2002), Caliendo et al. (2009)).

Table 2: OLS regression analysis of entrepreneurial intentions

	1	2	3	4	5
finlit	0.028*** (0.006)	0.026*** (0.006)	0.029*** (0.006)	0.027*** (0.006)	0.027*** (0.006)
female		-0.053*** (0.016)	-0.050*** (0.016)	-0.035** (0.017)	-0.036** (0.018)
age		-0.007*** (0.001)	-0.005*** (0.002)	-0.005*** (0.002)	-0.005*** (0.002)
degree			-0.095*** (0.017)	-0.098*** (0.017)	-0.084*** (0.017)
student			0.018 (0.019)	0.025 (0.019)	0.020 (0.019)
jobseeker			0.056** (0.024)	0.068*** (0.024)	0.047** (0.023)
risktolerant				0.062*** (0.017)	0.073*** (0.018)
N	5188	5188	5188	5188	5188
R2-A	0.007	0.015	0.023	0.029	0.052
Province dummies					Yes

Note: The dependent variable is a dummy equal to 1 if the respondent states s/he would like to become an entrepreneur. Columns (3-5) include a dummy that identifies those who do not feel represented by any of the definitions about occupational status. Covariates include a dummy taking value one for those answering “Do not know” to the question assessing risk tolerance, a dummy variable for those who used a mobile to compile the questionnaire and a control for the time the individual spent to complete the questionnaire. Estimates use sample weights. Province clustered standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1.

they control for firm size and industry.

We extend our analysis to better understand who are the individuals interested in becoming entrepreneurs (Table A.3 in the Appendix). More specifically, we explore three additional dimensions: the type of education received, the income perceived as necessary to live a decent life, and the macro-region of residence. First, we dig more deeply into the relation between the educational attainment and the will to become an entrepreneur. To do so, we distinguish between scientific versus technical upper secondary school degrees and economics versus STEM (science, technology, engineering and math) university degrees. The results reported in the first column of Table A.3 show that individuals with a STEM degree are less likely to be willing to become entrepreneurs. Hence, the negative relation between tertiary education and entrepreneurial intentions observed in Table 2 seems to be driven by this type of graduates. This effect shows that STEM graduates might be looking for other types of jobs. On one hand, this is not surprising as jobs appealing to STEM graduates might be more related to research and not directly into business. On the another hand, an entrepreneurial class closer to the science world would certainly generate desirable social spillovers.

Being a jobseeker increases the possibility to desire entrepreneurship by 6 p.p more than an employed person, while students do not show differential effects (Column 1 Table A.3). An explanation could be that jobseekers are more active in the labor market with respect to the employed individuals and are closer than students to the professional path.

Moreover entrepreneurship is seen as a way to achieve a good standard of living. In fact we test whether those interested in the entrepreneurial profession are those who report an higher net monthly income when asked about how much they should get to live a decent life where they live, and compared to their living situation (Column 2 Table A.3). We distinguish between those who should have less than 1500 euros, between 1500 and 2500 euros, and more than 2500 euros per month¹¹. The estimates in the second column of Table A.3 show that more demanding individuals in terms of decent income are more likely to show entrepreneurial intentions, and this is especially true for those who feel they would need at least 2500 euros per month. Finally, this relation could be affected by macro-regional differences. For example,

¹¹The choice of these income brackets reflect the fact that some of the proposed income brackets are chosen by very few respondents, as reported in Table A.2.

one might think that in southern regions those who would like a higher income are pushed to open a business because of the historical lack of opportunities in the labor market. To rule out this possible effect, in the third column of Table A.3 we control for the macro-regions of residence and we interact them with the perceived decent income. The regression results show that the geographical dimension does not play a role in this case¹².

4.2 Instrumental variables

The issue of endogeneity can be of particular relevance in this context. Indeed, financial knowledge might embed some (unobservable) abilities that make individuals more likely to start a business. These abilities can positively correlate with both literacy and the aspiration to be an entrepreneur, giving rise to spurious correlations and an upward bias in the results. On the other hand, a downward bias can occur in the presence of measurement errors if the questions on basic financial concepts do not fully capture the “true” financial literacy (Lusardi & Mitchell (2014)). In all the studies reviewed by Lusardi & Mitchell (2014), the instrumented financial literacy estimates are larger than the OLS ones, and the authors conclude that the non-instrumented estimates may underestimate the “true” effect of financial literacy. Therefore, this section presents new results that address the endogeneity of our main variable of interest, financial literacy.

We use as instrumental variables (IVs) the level of education of the respondent’s parents. In particular, we consider two dummies indicating whether the respondent’s mother and father hold at least an upper secondary school diploma. The rationale behind the choice relies on the fact that the intellectual and cultural environment can increase an attitude to learn other topics, including economic and financial ones, hence being more at ease also with money-related matters. Along this line, the literature documents that mothers and fathers’ education is strongly associated with children’s financial literacy (Lusardi et al. (2010)). Our assumption is that parental education contributes to fostering a cultural environment within the family that supports the development of various forms of knowledge, including financial literacy, without directly influencing the choice to pursue an entrepreneurial profession. A

¹²We notice that we did not include province fixed effects in the third column of Table A.3 because multicollinearity would arise otherwise.

placebo test is conducted to support our assumption.

Table 3: IV regression analysis of entrepreneurial intentions

	(1) First stage	(2) IV	(3) Placebo
educated_mother	0.101** (0.047)		0.052 (0.042)
educated_father	0.125** (0.049)		-0.005 (0.039)
female	-0.411*** (0.048)	0.029 (0.043)	0.039 (0.040)
age	0.025*** (0.006)	-0.008*** (0.003)	-0.002 (0.004)
degree	0.202*** (0.060)	-0.122*** (0.033)	-0.109*** (0.039)
student	0.311*** (0.063)	-0.033 (0.036)	0.055 (0.051)
jobseeker	-0.212*** (0.073)	0.087*** (0.033)	-0.072 (0.054)
risktolerant	-0.083* (0.046)	0.084*** (0.022)	0.021 (0.051)
fnlit		0.182** (0.089)	
N	5,188	5,188	810
F-Stat		10.27	
Province dummies	Yes	Yes	Yes

Note: Dependent variables are the financial literacy score (column 1) and a dummy equal to 1 if the respondent states s/he would like to become an entrepreneur (columns 2-3). Covariates include a dummy taking value one for those answering “Do not know” to the question assessing risk tolerance and a dummy that identifies those who do not feel represented by any of the definitions about occupational status. Controls for those who completed the questionnaire on their mobile phone and for the duration necessary to complete the questionnaire are also included. Estimates use sample weights. Province clustered standard errors in parentheses, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

The first stage regression results are reported in the first column of Table 3. The instruments are powerfully explaining the financial knowledge score of the respondents, similarly for both parents, with an F-statistic for all regressors over 10. The second column of Table 3 reports the IV estimates and it confirms that financial literacy has a positive effect on entrepreneurial intentions. Specifically, the estimate

shows that a one standard deviation increase in the financial knowledge score raises the will to become an entrepreneur by 25 percentage points.

In the third column we run a placebo test to support the exclusion restriction hypothesis. Specifically, the exclusion restriction would be violated if the instrument had an effect on the intention to become an entrepreneur when financial knowledge is absent. We consider a regression of our main dependent variable, i.e., entrepreneurial intentions, on the instruments and other controls, restricting the sample to respondents with zero or one correct answer to the financial literacy questions. If the coefficients of our instruments were not statistically significant, we would not have evidence of a direct influence of our instruments on entrepreneurial intentions, in the case when financial knowledge is absent. The results are in line with our working hypothesis as the coefficients of our instruments are not statistically significant.

The analysis presented so far excluded from the dataset those who declared themselves as already engaged in the profession of entrepreneur when asked whether they would like to become entrepreneurs in the future. In a robustness check, we further exclude those who, despite not identifying as entrepreneurs in the above-mentioned question, describe themselves as self-employed in a different question on occupational status. The results are unchanged and available upon requests.

4.3 Multinomial Logit

Finally, we move to the next step of exploring the professional intentions by looking at each possible answer given by the respondents to the question about future work intentions. As previously explained, the possible answers included different options. To take into account the (unordered) different possible answers we use a multinomial logit model. We illustrate the results in Tables 4 and 5, where coefficients and marginal effects, respectively, are illustrated.

The first column of Table 5 confirms that financial literacy is positively related to the will to become an entrepreneur. Conversely, financial knowledgeable individuals are less likely to report they do not know how to answer the question about career aspirations. A one standard deviation increase in the financial knowledge score lowers the likelihood of answering ‘do not know’ by 3 percentage points. The results suggest that financial literacy can help young people clarify their goals and professional ambitions.

Table 4: Multinomial regression of entrepreneurial intentions

	(1) No, my work is OK	(2) No,too risky	(3) No, no compe- tences	(4) No, no re- sources	(5) Do not know
finlit	-0.051 (0.041)	-0.106*** (0.041)	-0.076* (0.041)	-0.143*** (0.047)	-0.264*** (0.045)
female	-0.104 (0.128)	0.245* (0.142)	0.174* (0.100)	0.225 (0.137)	0.235** (0.110)
age	0.025 (0.017)	0.036*** (0.013)	0.007 (0.012)	0.036*** (0.014)	0.001 (0.016)
degree	0.731*** (0.099)	0.336*** (0.117)	0.373*** (0.125)	0.240* (0.136)	0.269* (0.153)
student	-0.583*** (0.171)	-0.449*** (0.139)	0.0434 (0.147)	0.275* (0.142)	0.508*** (0.161)
jobseeker	-1.934*** (0.306)	-0.248 (0.157)	-0.113 (0.134)	0.381** (0.181)	0.238 (0.202)
risktolerant	-0.043 (0.131)	-0.407*** (0.120)	-0.475*** (0.144)	-0.288** (0.136)	-0.416*** (0.139)
N	5,188	5,188	5,188	5,188	5,188
Province dummies	Yes	Yes	Yes	Yes	Yes

Note: The dependent variable is a categorical variable encoding the answers to the question “In the future, would you like to become an entrepreneur?”, “Yes” is the omitted option. Covariates include a dummy taking value 1 for those answering “Do not know” to the question assessing risk tolerance and a dummy that identifies those who do not feel represented by any of the definitions about occupational status. Controls for those who completed the questionnaire on their mobile phone and for the duration necessary to complete the questionnaire are also included. Estimates use sample weights. Province clustered standard errors in parentheses, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Looking at the gender dimension, we notice a gap that penalizes women in entrepreneurial intentions. We also notice that women are less likely to be satisfied with their job (second column of Table 5). Moreover, having a university degree negatively correlates with the will to become entrepreneurs. The estimates reported in the second column of Table 5 show that graduates are more likely to be satisfied with their current job, and therefore they are presumably less inclined to pursue an entrepreneurial career. This positive relation between tertiary education and job satisfaction could also indicate that individuals with a degree are satisfied with their salary.

5 Policy implications and concluding remarks

Our paper shows that financial knowledge can be a powerful tool to impress greater decisiveness in professional ambitions of the young. In particular, higher levels of financial literacy can be a driver of entrepreneurial ambitions. Using a representative sample of young individuals resident in Italy interviewed in 2023, we investigate professional ambitions by focusing on financial knowledge as a possible driver of entrepreneurial intentions.

Our estimates show that a one standard deviation increase in the financial knowledge score raises the will to become an entrepreneur by 25 percentage points. The effect can be assessed causally through an IV approach. Moreover, financial knowledge reduces the chance of not knowing what to do in the future profession. These results are particularly interesting from a policy perspective as they support the idea that financial literacy, along with related educational initiatives, can play an important role in guiding young people in planning their future careers by helping them achieve clarity about their professional future.

Our results also show that a higher general education associates with a lower propensity to become an entrepreneur - especially for individuals with a STEM (science, technology, engineering and math) degree - and that educated people are more likely to be satisfied with their job. These results are in line with studies showing a lower level of education for entrepreneurs compared to employees (see Schivardi (2018) and Baltrunaite et al. (2023)). This evidence should be better investigated from a policy standpoint as more knowledgeable entrepreneurs could be better equipped to be competitive in an increasingly digital and technological world.

Table 5: Multinomial regression of entrepreneurial intentions: marginal effects

	(1) Yes	(2) No, my work is OK	(3) No, too risky	(4) No, no comp.	(5) No, no re- sources	(6) Do not know
finlit	0.027*** (0.006)	0.002 (0.003)	-0.004 (0.004)	0.000 (0.004)	-0.007* (0.004)	-0.018*** (0.003)
female	-0.035** (0.018)	-0.021** (0.011)	0.021 (0.015)	0.010 (0.011)	0.013 (0.011)	0.013 (0.009)
age	-0.005*** (0.002)	0.001 (0.001)	0.003** (0.001)	-0.001 (0.001)	0.002* (0.001)	-0.001 (0.001)
degree	-0.084*** (0.018)	0.050*** (0.008)	0.012 (0.012)	0.018 (0.013)	0.001 (0.011)	0.003 (0.012)
student	0.018 (0.019)	-0.060*** (0.015)	-0.055*** (0.015)	0.013 (0.017)	0.031*** (0.012)	0.052*** (0.013)
jobseeker	0.051** (0.023)	-0.124*** (0.010)	-0.017 (0.019)	0.003 (0.016)	0.055*** (0.017)	0.032** (0.016)
risktolerant	0.073*** (0.017)	0.017 (0.012)	-0.028** (0.013)	-0.036** (0.015)	-0.008 (0.012)	-0.019 (0.013)
N	5,188	5,188	5,188	5,188	5,188	5,188
Provinces dummies	Yes	Yes	Yes	Yes	Yes	Yes

Note: The dependent variable is a categorical variable encoding the answers to the question “In the future, would you like to become an entrepreneur?”. Covariates include a dummy taking value 1 for those answering “Do not know” to the question assessing risk tolerance. Controls for those who completed the questionnaire on their mobile phone and for the duration necessary to complete the questionnaire are also included. Estimates use sample weights. Province clustered standard errors in parentheses, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

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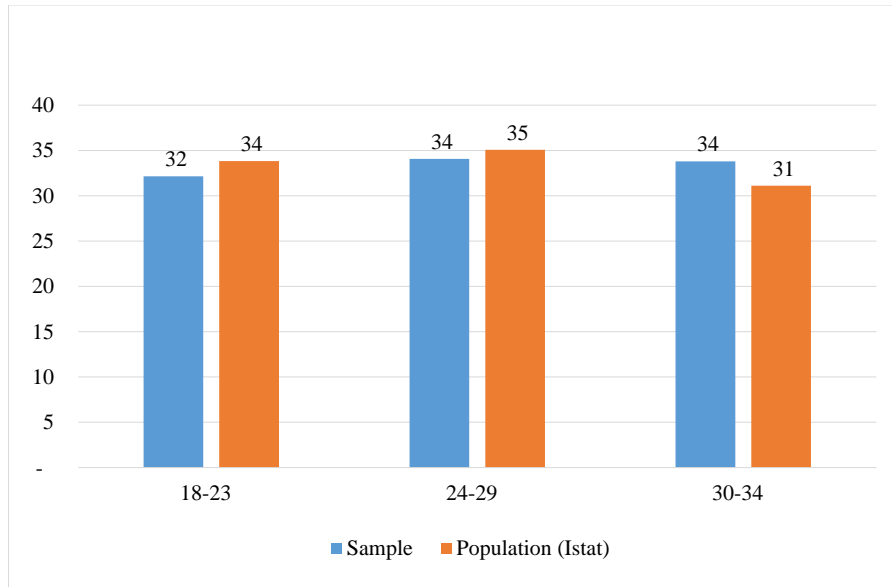
Appendix

Table A.1: Questions on financial literacy and entrepreneurial intentions

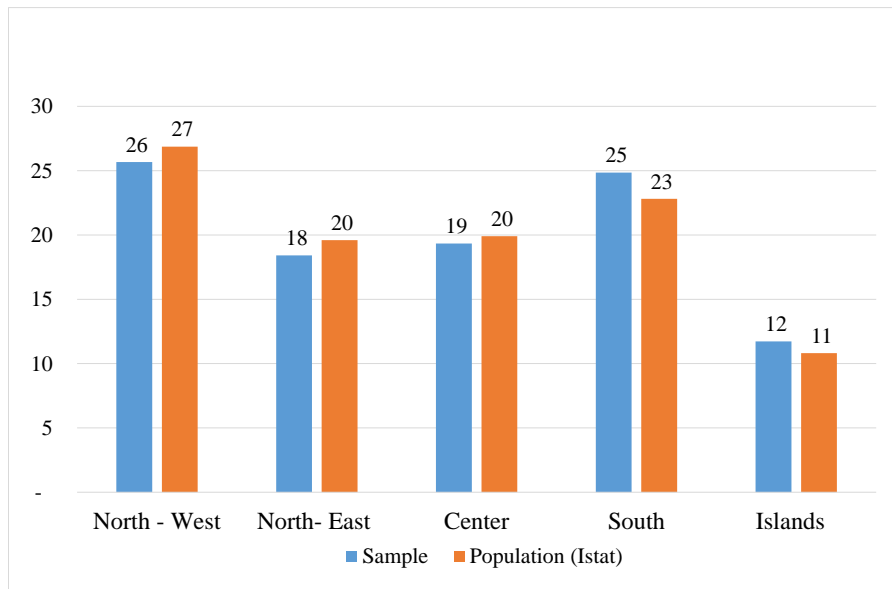
Question 1 - Inflation	Five siblings receive a total gift of 1,000 euros today, but they must wait for a year to dispose of their share. If the annual inflation rate is 8%, a year from now each sibling will be able to buy with their sum: 1. More than what they could buy today 2. The same things 3. Less than what they could buy today 4. I don't know
Question 2 - Interest rate	Suppose you deposit 100 euros in a new deposit account that guarantees a net annual interest rate of 2% and has no fees. No other transactions, either deposits or withdrawals, are made on this account. How much would you have in the account at the end of the first year after the interests are paid? 1. More than 102 euros 2. 102 euros 3. Less than 102 euros 4. It is impossible to answer with the available information 5. I don't know
Question 3 - Interest compounding	... and after 5 years, how much would you have in the account if no other transactions were made on this account, neither deposits nor withdrawals, and there are no fees, and it continues to earn a guaranteed annual interest rate of 2%? 1. More than 110 euros 2. 110 euros 3. Less than 110 euros 4. It is impossible to answer with the information available 5. I don't know
Question 4 - Risk diversification	Can investment risk usually be reduced by purchasing different types of bonds and stocks? 1. True 2. False
Question 5 - Mortgages	Usually, for the same amount, a fifteen-year mortgage has a higher monthly installment compared to a thirty-year mortgage, but the overall interest paid over the mortgage's duration is lower 1. True 2. False
Entrepreneurial intentions	In the future, would you like to become an entrepreneur? 1. Yes 2. No, I am satisfied with my job 3. No, it would be too risky 4. No, I do not think I have the right skills/competences 5. No, I do not think I have sufficient resources 6. I am already an entrepreneur 7. I don't know

Note: The table shows translations in english of the questions considered in this paper. For the original full questionnaire (in italian) see <https://www.bancaditalia.it/statistiche/tematiche/indagini-famiglie-imprese/alfabetizzazione-giovani/Questionario.pdf>.

Figure A.1: The representativeness of the sample (percentages)



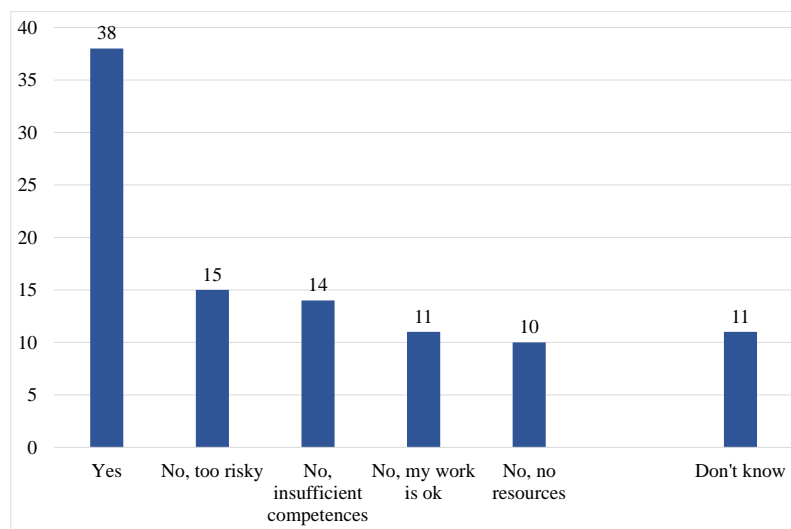
(a) Age of respondents



(b) Geographical localization of respondents

Note: Further methodological details are available in Bank of Italy (2023b).
Source: authors' elaboration on Bank of Italy and Istat data.

Figure A.2: Entrepreneurial intentions



Note: The figure illustrates the percentage of respondents who chose the different options for answering to the question "In the future, would you like to become an entrepreneur?". Authors' elaboration on Bank of Italy data.

Table A.2: Descriptive statistics-supplementary variables

	Mean	Std. Dev.	N
Education			
lowsec	0.25	0.43	4,648
upsec_technical	0.21	0.41	4,648
upsec_scientific_lyceum	0.11	0.31	4,648
upsec_other	0.24	0.42	4,648
degree: economics	0.03	0.17	4,648
degree: stem	0.06	0.24	4,648
degree: other	0.10	0.30	4,648
Area of residence			
North	0.45	0.50	4,648
Centre	0.19	0.39	4,648
South and islands	0.36	0.48	4,648
Decent income			
dc: less than 1.250 euro	0.05	0.22	4,648
dc: 1.251 - 1.500 euro	0.12	0.32	4,648
dc: 1.501 - 2.000 euro	0.28	0.45	4,648
dc: 2.001 - 2.500 euro	0.28	0.45	4,648
dc: 2.501 - 3.000 euro	0.15	0.36	4,648
dc: 3.001 - 4.000 euro	0.07	0.25	4,648
dc: 4.001 - 6.000 euro	0.03	0.17	4,648
dc: more than 6.000 euro	0.02	0.15	4,648

Note: All figures are weighted. The variable lowsec is a dummy equal to 1 for individuals whose highest educational level is equal or lower than ISCED level 2 (lower secondary school diploma). The variables upsec_technical, upsec_scientific_lyceum and upsec_other are dummy variables equal to 1 for those individuals whose highest educational level is an upper secondary school diploma (ISCED level 3) from respectively a technical school (istituto tecnico), a scientific school (liceo scientifico) and a type of school different from scientific and technical.

Table A.3: OLS regressions analysis of entrepreneurial intention: adding type of education, income expectations and area of residence.

	1	2	3
finlit	0.017** (0.007)	0.016** (0.006)	0.015** (0.007)
female	-0.039* (0.021)	-0.037* (0.019)	-0.038* (0.019)
age	-0.005** (0.002)	-0.004** (0.002)	-0.004** (0.002)
upsec_technical	-0.001 (0.033)		
upsec_scientific_lyceum	0.018 (0.041)		
upsec_other	0.018 (0.032)		
degree: economics	-0.065 (0.044)		
degree: stem	-0.114*** (0.036)		
degree: other	-0.059* (0.034)		
student	0.029 (0.022)	0.030 (0.021)	0.029 (0.021)
jobseeker	0.057** (0.026)	0.066** (0.027)	0.075*** (0.027)
risktolerant	0.081*** (0.019)	0.081*** (0.019)	0.075*** (0.019)
degree		-0.089*** (0.017)	-0.084*** (0.017)
dc: from 1500 to 2500 euro		0.051* (0.030)	-0.008 (0.037)
dc: more than 2500 euro		0.126*** (0.034)	0.112** (0.047)
centre			-0.006 (0.052)
south and islands			0.009 (0.052)
dc: from 1500 to 2500 euro x centre			0.067 (0.067)
dc: from 1500 to 2500 euro x south and islands			0.096 (0.059)
dc: more than 2500 x centre			0.028 (0.071)
dc: more than 2500 euro x south and islands			-0.002 (0.076)
N	4648	4648	4648
R2-A	0.044	0.051	0.043

Note: The dependent variable is a dummy equal to 1 if the respondent states s/he would like to become an entrepreneur. Covariates include a dummy taking value one for those answering “Do not know” to the question assessing risk tolerance and a dummy that identifies those who do not feel represented by any of the definitions about occupational status. Controls for those who completed the questionnaire on their mobile phone and for the duration necessary to complete the questionnaire are also included. Omitted variables are lowsec, employed, dc: up to 1500 euro, north. Estimates use sample weights. Province clustered standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1.