
Shaping Young Entrepreneurship: The Role of Financial Literacy and Digital Attitudes*

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ABSTRACT

This paper investigates the role of financial literacy and digitalization in shaping entrepreneurial attitudes among young individuals. Using nationally representative data from the 2023 Bank of Italy survey on financial literacy and digital skills for individuals aged 18–34, we estimate logit regression models to assess whether higher financial and digital competences are associated with a greater propensity to engage in entrepreneurship. To address potential selection bias and endogeneity concerns, baseline results are complemented by a propensity score matching approach. The findings reveal a strong and positive association between both financial literacy and digitalization and entrepreneurial attitude, with a wide set of socio-demographic control variables included. These results are also confirmed across multiple robustness checks. This study contributes to the literature on entrepreneurship and provides policy-relevant evidence supporting the role of financial and digital education in fostering entrepreneurial potential among younger generations.

Keywords: Financial literacy, Digitalization, Entrepreneurship, Business

I. Introduction

Entrepreneurship plays a central role in fostering economic growth, innovation, and job creation, particularly in periods of structural transformation and technological change. In contemporary economies, the ability to successfully start and manage a business increasingly depends not only on traditional entrepreneurial traits, but also on individuals' financial competences and their capacity to operate in a rapidly digitalizing financial environment. In this context, financial literacy and financial digitalization emerge as key individual characteristics shaping entrepreneurial attitudes and decisions, especially among young people who face complex financial markets and evolving forms of access to capital. Financial literacy, commonly defined as the ability to understand and apply basic financial concepts, has been widely recognized as a crucial component of human capital (Hung et al., 2009; Lusardi & Mitchell, 2014). A growing body of research suggests that financially literate individuals are better equipped to evaluate investment opportunities, manage financial risks, and access external financing, all of which are critical at both the entry and operational stages of entrepreneurship (Li & Qian, 2020). Despite this recognition, empirical evidence on the relationship between financial literacy and entrepreneurial propensity remains relatively limited and fragmented, particularly for young individuals (Alshebami & Al Marri, 2022).

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Alongside financial literacy, digital financial skills have become increasingly important for entrepreneurial activity. The digitalization of financial services, ranging from online banking and digital payments to fintech platforms and digital credit access, has profoundly transformed the way individuals interact with financial markets. Digital literacy and financial digitalization refer to the ability to confidently use digital tools and technologies to perform financial and economic operations, retrieve information, protect data, and manage transactions (Peng & Mao, 2023; Raharjo et al., 2024). For potential entrepreneurs, these skills can lower entry barriers, reduce transaction costs, and expand access to information and funding opportunities, thereby stimulating entrepreneurial intentions in a digital economy. However, empirical studies jointly analyzing financial literacy, digitalization, and entrepreneurial attitudes remain scarce.

This study aims to contribute to this emerging literature by examining the relationship between financial literacy, financial digitalization, and entrepreneurial attitude among young individuals. Specifically, we investigate whether higher levels of financial literacy and digital financial skills are associated with a greater propensity to engage in entrepreneurship or to consider starting a business in the future. To address this research question, we use data from the 2023 Bank of Italy survey on financial literacy and digital skills, which provides rich and nationally representative information on individuals aged 18–34. By estimating logit regression models, we find a strong and positive association between both financial literacy and financial digitalization and entrepreneurial attitude. Individuals with higher levels of financial literacy and greater confidence in using digital financial tools are significantly more likely to display entrepreneurial intentions, even after controlling for a wide set of socio-demographic characteristics. We additionally complement baseline estimates with a propensity score matching approach to mitigate potential endogeneity concerns and selection bias. Findings are consistent across multiple robustness checks employing alternative measures of financial literacy and digitalization.

The contribution of this study is threefold. First, it provides novel empirical evidence on the joint role of financial literacy and financial digitalization in shaping entrepreneurial attitudes, addressing a relevant gap in the literature. Second, by focusing on young individuals, it sheds light on early-stage entrepreneurial intentions rather than realized entrepreneurship alone, capturing an important phase of entrepreneurial dynamics. Third, the Italian context represents a particularly relevant case for international readers. Italy is characterized by persistently low levels of financial literacy compared to other advanced economies, and a strong presence of small and medium-sized enterprises. Understanding the determinants of entrepreneurial attitudes in this setting offers insights that are applicable to other countries facing similar structural challenges.

From a policy perspective, the findings highlight the importance of investing in financial education and digital skills as useful tools to foster entrepreneurship among younger generations. Enhancing these competences may not only improve individual economic outcomes but also contribute to broader economic resilience and innovation in increasingly complex and digitalized economies.

The paper proceeds with the following sections: section II presents a review of the literature on these topics, section III presents the data and methods used, sections IV and V describe the results and robustness tests respectively, and finally, section VI discusses the main implications and provides conclusions.

II. Literature Review

The literature on entrepreneurship increasingly emphasizes the role of individual financial competences and digital skills in shaping entrepreneurial attitudes and outcomes. Financial literacy enhances individuals' awareness of business opportunities, risk management capabilities, and market knowledge, which are crucial for both entrepreneurial entry and performance. The perception and

exploitation of profit opportunities depend on awareness, imagination, education, and experience, as well as on the ability to manage risk and build business relationships (Kirzner, 2015). Empirical evidence confirms that financial knowledge promotes entrepreneurial activity, particularly among individuals motivated by independence and self-employment (Yin et al., 2015).

Several studies document a positive relationship between financial literacy and entrepreneurship across different institutional contexts. Using U.S. data from the National Financial Capability Study, Struckell et al. (2022) find a positive correlation between financial literacy and self-employment, highlighting important heterogeneities in gender and ethnicity. Similarly, Oggero et al. (2019), focusing on Italian households, show that financial literacy and digital skills significantly increase the likelihood of being an entrepreneur, although their effects differ markedly by gender, with stronger associations observed among men. Evidence from France further suggests that specific domains of financial literacy, particularly risk and diversification, play a key role in fostering entrepreneurial intentions among university students, alongside subjective financial knowledge, which enhances self-confidence (Thevenet & Hamelin, 2025). Comparable results are found in China, where financial literacy is shown to enhance entrepreneurial motivation and entrepreneurial activity (Guo et al., 2024; Li & Qian, 2020). Further recent evidence from Germany shows that attending economic classes at school positively affects students' entrepreneurial activities in adulthood (Tumasjan et al., 2025).

A related strand of literature highlights the importance of saving behavior as a transmission channel between financial literacy and entrepreneurial intentions. Financial awareness contributes to the development of saving habits, which provide the necessary capital to overcome liquidity constraints and finance new business ventures (Hilgert et al., 2003; Rikwentishe et al., 2015). Empirical studies show that saving behavior positively influences entrepreneurial development and may mediate the relationship between financial literacy and entrepreneurial intent (Erskine et al., 2006; Okeke et al., 2015). In this regard, Alshebami et al. (2022), focusing on potential entrepreneurs in Saudi Arabia, find no direct effect of financial literacy on entrepreneurial intentions, but identify saving behavior as a key mediating mechanism linking financial awareness to entrepreneurial intent.

More recently, scholars have turned their attention to the role of digitalization and digital skills in entrepreneurship. Literature on digitalization in entrepreneurship is certainly more comprehensive compared to financial literacy. Digitalization is becoming an increasingly relevant aspect for entrepreneurship by transforming entrepreneurial processes, by bringing innovations in business model design, and by providing new financing channels (Bertoni et al., 2021; Nambisan, 2017; Wang et al., 2025). Digital competences thus appear to be increasingly essential for competing in technologically advanced and globalized markets (Abdurakhmanova et al., 2020). Digital literacy, together with other factors such as mentorship, storytelling, or peer learning, is a relevant topic to include in entrepreneurial training programs for leading entrepreneurial potential into action (Fañanás-Biescas et al., 2025) or for reducing gender gaps in entrepreneurship (Ali et al., 2025). Evidence from Italy shows that digital skills, together with financial literacy, can significantly influence entrepreneurial choices, particularly among men (Oggero et al., 2019). Studies focusing on university students confirm that digital capability positively affects both entrepreneurship and entrepreneurial intention (Kang et al., 2024). These findings are consistent with broader evidence suggesting that digital literacy enhances entrepreneurial creativity and the effective use of information in business activities (Susanti et al., 2023; Coco et al., 2024).

Overall, the literature suggests that financial literacy and digital skills jointly contribute to fostering entrepreneurial attitudes by improving individuals' abilities to make informed financial decisions, accumulate resources, and adapt to rapidly changing economic environments. However, existing evidence remains fragmented across countries, populations, and methodological approaches, underscoring the need for further research, particularly on young individuals and in institutional contexts such as Italy which are characterized by low average financial literacy and the strong presence

of small enterprises. A summary of the analyzed literature is provided in supplementary material (Appendix 1).

III. Method

For studying our relationships of interest, we consider data from the 2023 Bank of Italy survey on the financial literacy and digital skills of young people. The sample is composed of 5,372 survey respondents, aged between 18 and 34. Considering the goals of our study, we consider as dependent variable the entrepreneurial attitude of the respondents (*Entrepreneurship*), obtained from a survey question asking whether the respondent would like to start their own business in the future. Responses are recorded as a dummy variable where 1 represents two different answers: “Yes” or “I already run a business”. Otherwise, it is 0. This variable thus captures whether an individual has an entrepreneurial attitude by considering if they would potentially run a business in the future or are already an entrepreneur.

Our first independent variable of interest is a proxy of financial literacy (*Financial literacy*), which is based on the number of correct answers to sixteen financial literacy questions, divided into eight financial knowledge and eight financial behavior questions. These questions cover the Big Three topics - interest rate, inflation, risk diversification (Lusardi and Mitchell, 2008) - and other basic financial concepts such as the risk-return relationship, mortgages, savings, retirement planning, and budgeting. This proxy was proposed by the Bank of Italy for this specific survey. This score-based variable is computed as a continuous variable that assumes values between 0 and 1.

The second independent variable of interest is a proxy of digitalization, which is assessed through a survey question asking the respondents how comfortable they are with using digital devices to make several operations which are potentially relevant for individuals and entrepreneurs, such as making payments, managing a bank account, getting information for obtaining a loan, subscribing to an insurance policy, using payment cards, protecting confidential information, and purchasing financial instruments. This variable (*Digitalization*) is considered as a continuous variable with values between 0 and 1, where 1 represents the full score, meaning being comfortable (“Very” or “Fairly”) with all of these operations. The survey questions considered for our main variable of interest (*Entrepreneurship*, *Financial literacy*, *Digitalization*) are available in supplementary material (Appendix 2). Furthermore, we include in our estimates a set of control variables typically considered in studies with similar frameworks and goals, such as gender, age, living with parents, geographical residence (three geographical areas), municipal type (three sizes of municipality), education (three educational levels), profession (three profession groups), and wealth (three wealth levels). Statistics about sample composition are reported in Table 1.

In order to analyze the relationship between our variables, considering the binary nature of the dependent variable, we employ the logit regression model specified in equation (1):

$$Entrepreneurship_i = \beta_0 + \beta_1 Financial\ literacy_i + \beta_2 Digitalization_i + \sum \delta_i Controls + \varepsilon_i \quad (1)$$

It is possible for our regression model to be affected by endogeneity issues arising from potential omitted variables, reverse causality, or measurement error. It would also be difficult to identify valid and exogenous instrumental variables, which should be strongly correlated with financial literacy and digitalization that have no direct effect on entrepreneurial attitudes other than through these channels (finding two distinct and strong instrumental variables would be even more difficult and problematic in terms of stability in the estimates). To combat these issues, we employ a Propensity Score Matching (PSM) by employing a 1:1 nearest-neighbor matching. We thus generate a treated group, in which our dependent variable takes value 1, and a control group, where it is 0. We matched treated and control

groups using our set of control variables. These groups are thus highly comparable in terms of individual observable characteristics (gender, age, living with parents, geographical residence, municipal type, education, profession and wealth). This process mitigates selection bias and differences between the two groups by balancing the observed covariates, reducing the probability that unobserved variables are driving the results, and strengthening the comparability between treated and control groups, enhancing a causal interpretation of the relationship between financial literacy, digitalization and entrepreneurship.

Table 1. Sample composition

Gender	Number	Percent
Men	2,625	48.86
Women	2,747	51.14
Age		
18–23	1,727	32.15
24–29	1,830	34.06
29–34	1,815	33.79
Live with Parents		
Yes	2,708	50.41
No	2,664	49.59
Geographical residence		
North	2,368	44.08
Centre	1,039	19.34
South and islands	1,965	36.58
Municipal size		
Large or medium city	1,387	25.82
Provincial or rural area	1,280	23.83
Village or small municipality	2,705	50.35
Education		
Graduated university	1,645	30.63
High school	3,145	58.54
Less than high school	582	10.83
Profession		
Student	1,538	28.63
Worker	3,319	61.78
Unemployed	515	9.59
Wealth		
High wealth	975	18.15
Medium wealth	3,177	59.14
Low wealth	1,220	22.71

Source: Authors' calculation from Bank of Italy survey (2023). Total sample size is 5,230.

IV. Results

A substantial subset of respondents (2,119 respondents, 39 percent of the sample) show entrepreneurial attitude by declaring that they would consider running a business in the future or are already an entrepreneur. Among these respondents, only 184 individuals declare themselves to be already an entrepreneur, while the remaining 1,935 declare considering the possibility of running a business in the future.

Table 2 reports descriptive statistics about the 2,119 respondents with entrepreneurial attitude (*Entrepreneurship*=1). The gender distribution is relatively balanced, with men accounting for 53.2%

and women for 46.8%. In terms of age composition, individuals aged 18–23 represent the largest group (36.2%), followed by those aged 24–29 (33%) and 29–34 (30.8%). Slightly more than half of the sample (52.4%) still live with their parents. From a geographical perspective, 41.2% live in the north, 39.1% in the south and islands, while the center accounts for 19.7%. Half of the sample (50.2%) lives in small municipalities or villages, compared to 25.4% in cities and 24.5% in provincial areas. In terms of education, the majority hold a high school diploma (63.4%), while the 25.4% have graduated university. Most of these individuals are workers (61.4%), while students account for 31.9%. Finally, the wealth distribution among those with entrepreneurial attitude is centered on medium-wealth households (60.2%), with high- and low-wealth groups representing 19% and 20.8%, respectively.

Table 2. Characteristics of respondents with entrepreneurial attitude

Gender	Number	Percent
Men	1,127	53.19
Women	992	46.81
Age		
18–23	766	36.15
24–29	700	33.03
29–34	653	30.82
Live with Parents		
Yes	1,110	52.38
No	1,009	47.62
Geographical residence		
North	873	41.20
Centre	418	19.73
South and islands	828	39.07
Municipal size		
Large or medium city	538	25.39
Provincial or rural area	518	24.45
Village or small municipality	1,063	50.16
Education		
Graduated university	539	25.44
High school	1,343	63.38
Less than high school	237	11.18
Profession		
Student	676	31.90
Worker	1,300	61.35
Unemployed	143	6.75
Wealth		
High wealth	403	19.02
Medium wealth	1,275	60.17
Low wealth	441	20.81

Source: Authors' calculation from Bank of Italy survey (2023). Total subsample size is 2,219.

Table 3 reports summary statistics for *Financial literacy* and *Digitalization*. The average level of financial literacy among the overall sample is 0.55, indicating that on average the respondents answer correctly 55% of the financial literacy questions. This percentage is higher for the level of digitalization (65%). The overall level of financial literacy can thus be considered as not particularly high, while for digitalization this sample shows an overall positive attitude.

Table 3. Summary statistics for financial literacy and digitalization

	N	Mean	SD	Min	Max
Financial Literacy	5,372	0.55	0.18	0.00	1.00
Digitalization	5,372	0.65	0.27	0.00	1.00

Source: Authors' calculation from Bank of Italy survey (2023).

Tables 4 and 5 report regression results. In order to provide a clearer interpretation for our results, for each regression we report the Average Marginal Effects (AMEs) rather than the raw coefficients (including post-matching regression and robustness tests).

Table 4. Baseline logit model of entrepreneurship

	(1)	(2)	(3)	(4)
Financial literacy	0.191*** (0.0367)	0.238*** (0.0370)	0.271*** (0.0377)	0.261*** (0.0382)
Digitalization	0.218*** (0.0253)	0.234*** (0.0251)	0.233*** (0.0250)	0.230*** (0.0253)
Male		0.0327** (0.0132)	0.032** (0.0131)	0.033** (0.0133)
University		-0.120*** (0.0243)	-0.118*** (0.0244)	-0.125*** (0.0249)
High school		-0.022 (0.0221)	-0.023 (0.0221)	-0.026 (0.0224)
Age		-0.007*** (0.0015)	-0.008*** (0.0015)	-0.007*** (0.0017)
Parents		0.002 (0.0144)	-0.009 (0.0145)	-0.011 (0.0148)
North			-0.074*** (0.0150)	-0.074*** (0.0151)
Centre			-0.025 (0.0184)	-0.025 (0.0184)
City			-0.005 (0.0160)	-0.007 (0.0160)
Provincial			0.004 (0.0164)	0.004 (0.0165)
Student				0.031 (0.0196)
Worker				0.008 (0.0174)
High wealth				0.0227 (0.0214)
Medium wealth				0.0113 (0.0168)
Observations	5,372	5,372	5,372	5,372

Notes: The average marginal effects are reported. Robust standard errors in parentheses. *, **, *** indicate statistical significance at the 10%, 5% and 1% levels, respectively.

Table 4 reports the results of our baseline model (equation 1), analyzing the relationship between *Financial literacy*, *Digitalization*, and *Entrepreneurship*, with control variables progressively included. In line with previous results reported in literature (Oggero et al., 2019), this evidence shows a positive

and highly significant relationship between both *Financial literacy* and *Digitalization* and *Entrepreneurship*. These results remain consistent across all model specifications, from the first one with no control variables (column 1), to the last one with all control variables included (column 4). Considering the specification with all control variables, the coefficients related to *Financial literacy* and *Digitalization* show that an individual who scores the maximum (100%) on questions about financial literacy and digitalization is 26 and 23 percentage points (p.p.) respectively more likely to display an entrepreneurial attitude than an individual who scores 0.

Analyzing the control variables, a positive and highly significant coefficient is reported for male respondents while a negative and significant relationship is shown for graduated respondents, older respondents, and respondents coming from northern Italy. The positive and highly significant coefficient associated with male respondents is consistent with the extensive literature documenting persistent gender differences in entrepreneurial propensity (Oggero et al., 2019; Ali et al., 2025). Men tend to report higher risk tolerance, greater self-confidence, and stronger preferences for self-employment, which are factors that positively influence entrepreneurial intentions. Conversely, the negative and significant coefficients observed for higher education, higher age, and residence in northern Italy may reflect some contextual factors. University graduates and older respondents typically have better access to stable employment, well-paid jobs and career prospects, which may reduce the relative attractiveness of entrepreneurial activity (Loras & Vizcaino, 2013). Conversely, younger individuals, who are less likely to have completed their university education, may display a higher entrepreneurial propensity due to greater flexibility in career choices, since they typically face fewer financial and family commitments and have not yet consolidated stable positions in the labor market. Similarly, individuals from northern Italy, which is characterized by more developed labor markets and greater availability of stable and well-paid employment, may exhibit lower entrepreneurial propensity compared to those in less economically attractive areas, where entrepreneurship can represent an alternative to limited wage and employment opportunities.

Non-significant results are reported for the remaining control variables. It is curious to notice how, despite opposite evidence reported in the literature (Hilgert et al., 2003; Rikwentishe et al., 2015), wealth has a non-significant association with entrepreneurial attitude. This evidence could be explained by the composition of our dependent variable. Since those who show entrepreneurial attitude (*Entrepreneurship*=1, 2,119 respondents) are mostly respondents who show intention to be entrepreneurs in the future (91%, 1,935 respondents), it is plausible that future intentions are not necessarily linked to current wealth, while in the case of actual entrepreneurship, the current availability of wealth would become more relevant.

Table 5 reports the results of the post-matching regression. By implementing a 1:1 nearest-neighbor matching, we generated two groups who are comparable in terms of their observable characteristics.¹ The resulting matched sample consists of 4,084 observations, equally divided between individuals who show entrepreneurial attitude (*Entrepreneurship*=1, treated group) and individuals who do not (*Entrepreneurship*=0, control group). We lose observations in the post-matching sample since we implement 1:1 nearest neighbor matching, selecting only one control unit for each treated individual (*Entrepreneurship* = 1). In addition, we impose a caliper of 0.05, which is relatively strict and ensures high-quality matches, but further reduces the sample by discarding pairs with propensity score differences above this threshold. We then re-estimated the logit model on this matched sample. The results, showing positive and highly significant coefficients for both our main variables of interest, with similar marginal effects (0.25 and 0.24), are fully consistent with the baseline estimates, thus confirming the positive association between *Financial literacy*, *Digitalization*, and *Entrepreneurship*.²

¹ Standard diagnostics assessing the balance between covariates or the corresponding balance graph are available upon request.

² Coefficients of control variables are available upon request.

Table 5. Post matching regression model of entrepreneurship

Financial literacy	0.252*** (0.0462)
Digitalization	0.245*** (0.0296)
Controls	Yes
Observations	4,084

Notes: The average marginal effects are reported. Robust standard errors in parentheses. *, **, *** indicate statistical significance at the 10%, 5% and 1% levels, respectively.

V. Robustness Checks

In order to strengthen our findings on the positive role of *Financial literacy* and *Digitalization* on entrepreneurial attitude, we run various robustness tests by estimating the same logit model but considering alternative measures for our main variables of interest. As shown in the tables below, all robustness tests using the alternative measures confirm the previous evidence obtained from the baseline estimates.

First, since respondents who show entrepreneurial attitude (*Entrepreneurship*=1, 2,119 respondents) are mostly composed of individuals who consider the possibility to run a business in the future (91%, 1,935 respondents), thus showing entrepreneurial intention instead of being already entrepreneurs (9%, 184 respondents), we re-estimate our baseline logit model but exclude current entrepreneurs from the sample. For this estimation, our sample is thus reduced to 5,188 observations. Results are reported in Table 6. The coefficients of our relationships of interest remain all positive and highly significant and are very similar to our baseline results, with control variables progressively included (as in the baseline model), thus confirming our main results.³

Table 6. Logit model of entrepreneurship – current entrepreneurs excluded

	(1)	(2)	(3)	(4)
Financial literacy	0.179*** (0.0368)	0.231*** (0.0371)	0.265*** (0.0378)	0.259*** (0.0384)
Digitalization	0.219*** (0.0255)	0.239*** (0.0253)	0.238*** (0.0252)	0.241*** (0.0254)
Individual characteristics	No	Yes	Yes	Yes
Location	No	No	Yes	Yes
Employment and wealth	No	No	No	Yes
Observations	5,188	5,188	5,188	5,188

Notes: The average marginal effects are reported. Robust standard errors in parentheses. *, **, *** indicate statistical significance at the 10%, 5% and 1% levels, respectively.

Table 7 reports results of the second robustness test, which considers three alternative measures for financial literacy, consisting of the eight financial knowledge questions (column 1), the eight financial behavior questions (column 2), and finally the Big Three questions only (column 3). Even using these three reduced measures for financial literacy, coefficients remain positive and highly significant, thus confirming the previous results in each of these three cases.

³ Coefficients of control variables are available upon request.

Table 7. Logit model of entrepreneurship – alternative measures for financial literacy

	(1)	(2)	(3)
Financial knowledge	0.0933*** (0.0276)		
Financial behavior		0.267*** (0.0341)	
Big Three			0.054** (0.0210)
Digitalization	0.261*** (0.0246)	0.224*** (0.0251)	0.265*** (0.0246)
Controls	Yes	Yes	Yes
Observations	5,372	5,372	5,372

Notes: The average marginal effects are reported. Robust standard errors in parentheses. *, **, *** indicate statistical significance at the 10%, 5% and 1% levels, respectively.

Table 8 reports the results of the third robustness test, considering an alternative measure for digitalization consisting of a survey question asking respondents whether they are able to perform the following digital activities: to identify fraud attempts, to manage confidential data, to navigate online, to send e-mail or use video-platforms, to read books or journals, to participate in online education courses, to create and manage online documents, to install and use software, and to activate and use a digital identity system. This variable thus captures the overall digital literacy of the respondents (*Digital literacy*), and it is considered as a continuous variable with values between 0 and 1, where 1 represents the full score, meaning being able (“Very” or “Fairly”) to perform all of these activities. Even using this alternative measure for digitalization, coefficients remain positive and significant and previous results are confirmed.

Table 8. Logit model of entrepreneurship – alternative measure for digitalization

Financial literacy	0.265*** (0.0394)
Digital literacy	0.237*** (0.0359)
Controls	Yes
Observations	5,372

Notes: The average marginal effects are reported. Robust standard errors in parentheses. *, **, *** indicate statistical significance at the 10%, 5% and 1% levels, respectively.

Finally, we run a fourth robustness test by introducing in our model two additional alternative measures for both financial literacy and digitalization. Results are reported in Table 9. Specifically, we consider for both of these variables a self-assessment by the respondents about their own level of financial literacy and digitalization on a 1-10 scale. In fact, the survey contains two questions asking respondents how they assess their own financial and digital knowledge from 1 to 10, where 1 means “very low” and 10 “very high.” Even considering these perceived knowledge indicators, the positive role of *Financial literacy* and *Digitalization* on *Entrepreneurship* is confirmed. Results for control variables are confirmed too, and are quite similar across the robustness tests.⁴

⁴ Coefficients are available upon request.

Table 9. Logit model of entrepreneurship – self assessments for financial literacy and digitalization

Self-financial literacy	0.009*** (0.0032)
Self-digitalization	0.0238*** (0.0033)
Controls	Yes
Observations	5,372

Notes: The average marginal effects are reported. Robust standard errors in parentheses. *, **, *** indicate statistical significance at the 10%, 5% and 1% levels, respectively.

VI. Discussion

Considering the overall results, the analysis provides robust empirical evidence that higher levels of financial literacy and digitalization are strongly and positively associated with entrepreneurial attitudes. These findings are consistent with the research objectives outlined in the introduction and confirm the central role played by financial competences and digital skills in shaping individuals' propensity to engage in entrepreneurship.

More specifically, the results show that both financial literacy and digitalization significantly increase the likelihood of displaying an entrepreneurial attitude, even after controlling for a wide set of socio-demographic characteristics and mitigating potential selection bias through a matching approach. These results remain stable across multiple robustness checks using alternative measures of both financial literacy and digitalization, strengthening confidence in the reliability of the findings.

From an interpretative perspective, these results suggest that financial literacy and digitalization are strongly associated with entrepreneurial attitude because they are related to the individuals' ability to understand, evaluate, and manage the economic and financial dimensions of entrepreneurial activity. Financial literacy enhances individuals' capacity to assess investment opportunities, understand risk–return trade-offs, plan budgets, and navigate complex financial products. These competences reduce uncertainty and perceived risk associated with starting a business, making entrepreneurship a more feasible and attractive career option. In line with human capital theory (Hung et al., 2009; Lusardi & Mitchell, 2014), financially literate individuals are better equipped to transform ideas into business projects by making informed financial decisions at early stages of the entrepreneurial process.

At the same time, financial digitalization plays a complementary and increasingly important role in lowering barriers to entrepreneurial entry. Digital financial skills enable individuals to interact efficiently with digital payment systems, online banking, fintech platforms, and digital credit channels, which are now essential components of modern entrepreneurial ecosystems. For young individuals in particular, digital financial competences can reduce transaction costs, expand access to information and funding opportunities, and facilitate the management of business operations in an increasingly digitalized economy. The positive role of digitalization found in this study suggests that entrepreneurial attitudes are not shaped solely by traditional financial knowledge, but also by the ability to operate confidently in digital financial environments.

These results may have several important implications for policy and on academic and educational levels. From a policy perspective, the evidence suggests that promoting financial literacy and digital financial skills among young people can represent an effective tool to foster entrepreneurial attitudes and, potentially, future entrepreneurial activity. Public policies aimed at strengthening financial education programs, both within the formal education system and through targeted learning initiatives, could help reduce informational and capability barriers that discourage young individuals from pursuing

entrepreneurial careers. Similarly, policies supporting digital inclusion and access to digital financial services may further enhance entrepreneurial potential, particularly in contexts characterized by structural rigidities in labor markets.

From a theoretical perspective, this study contributes to the entrepreneurship literature by jointly analyzing financial literacy and financial digitalization as complementary dimensions of individual human capital. While much of the existing literature has examined these factors separately, the results highlight the importance of considering their combined effects when studying entrepreneurial attitudes, especially in younger individuals. By focusing on entrepreneurial intentions rather than realized entrepreneurship alone, the paper also enriches this growing literature by emphasizing the importance of early-stage attitudes and aspirations in shaping long-term entrepreneurial dynamics.

The findings also carry relevant implications for entrepreneurship education. Traditional entrepreneurship education often focuses on business planning, management skills, and innovation, while devoting limited attention to financial competences and digital financial tools. The results of this study suggest that integrating financial literacy and digital finance modules into entrepreneurship education programs could enhance their effectiveness by equipping potential entrepreneurs with the practical skills needed to navigate financial markets and digital environments. Such an integrated approach may be particularly beneficial for young individuals who are at an early stage of their career.

Despite its contributions, this study is not without limitations, which open avenues for future research. First, while the adoption of propensity score matching enhances the robustness of our findings and addresses potential selection bias, we remain cautious in claiming a strictly causal relationship due to the inherent limitations of cross-sectional data. Future research could employ, for example, experimental designs to better identify causal mechanisms linking financial literacy, digitalization, and entrepreneurial behavior.

Secondly, considering the composition of our dependent variable, this study focuses more on entrepreneurial attitude instead of actual business creation, especially due to the young age of the respondents of this sample. In fact, entrepreneurial intention does not necessarily move to action. Several factors may influence this path, from contextual factors including social and political variables (Boyd & Vozikis, 1994), to national culture or to individual and behavioral traits such as long-term or short-term orientation, self-control, or uncertainty aversion (Bogatyreva et al., 2019; Van Gelderen et al., 2015). Unfortunately, this survey does not explore these aspects. While intention can be considered as a crucial precursor to entrepreneurship, future work could examine whether and how financial literacy and digitalization translate into realized entrepreneurial outcomes, while also including other aspects that may influence actual entrepreneurship such as specific individual and contextual factors.

Finally, further research could consist of collecting data and running analyses on a panel dimension, in order to provide longitudinal evidence, or in exploring these relationships in other contexts or countries.

In conclusion, this paper provides robust evidence that financial literacy and digitalization can be positively associated with entrepreneurial attitude among young individuals. By highlighting the importance of these competences in shaping entrepreneurial intentions, the study underscores the need for integrated policy and educational strategies aimed at fostering financially and digitally capable future entrepreneurs in increasingly complex and digitalized economies.

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