



The Effect of Financial Literacy on Entrepreneurship Orientation

◆◆◆ Finansal Okuryazarlığın Girişimcilik Yönelimine Etkisi



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Abstract

Today, factors such as economic uncertainty, shrinkage in employment opportunities and diversification of individual career expectations cause young individuals to be more willing to establish their own businesses instead of traditional business areas. In this context, financial literacy emerges out as an important competence in terms of making the right decisions in the entrepreneurial process, managing risks and using resources effectively. The financial literacy of an entrepreneur plays a crucial role in the relationship between borrower and lender. The aim of this study is to investigate the effect of financial literacy on entrepreneurial orientation, and the survey method was used as the research technique. In line with this main objective, field research was conducted on 347 students who continue their education at Gaziantep University İslahiye Faculty of Economics and Administrative Sciences. The data obtained were evaluated by applying exploratory and confirmatory factor analysis, descriptive statistics, correlation, and regression analyses. As a result of the analysis, it was concluded that the perception and interest dimensions of financial literacy have an effect on the risk-taking and innovation dimensions of entrepreneurial orientation; and the spending and interest dimensions of financial literacy have an effect on the proactiveness dimension of entrepreneurial orientation.

Keywords: Financial literacy, entrepreneur, entrepreneurial orientation, financial information.

Öz

Günümüzde ekonomik belirsizlikler, istihdam olanaklarındaki daralma ve bireysel kariyer beklentilerinin çeşitlenmesi gibi faktörler, genç bireylerin geleneksel iş alanları yerine kendi işlerini kurma yönünde daha istekli olmalarına neden olmaktadır. Bu bağlamda, girişimcilik sürecinde doğru kararlar alabilmek, riskleri yönetebilmek ve kaynakları etkin kullanabilmek açısından finansal okuryazarlık önemli bir yetkinlik olarak öne çıkmaktadır. Bu çalışmanın amacı finansal okuryazarlığın girişimcilik yönelimi üzerine etkisini araştırmak olup, araştırma tekniği olarak anket yöntemi kullanılmıştır. Bu temel amaç doğrultusunda, Gaziantep Üniversitesi İslahiye İktisadi ve İdari Bilimler Fakültesinde eğitime devam eden 347 öğrenci üzerinde bir alan araştırması yapılmıştır. Bu öğrencilerden elde edilen veriler, açıklayıcı ve doğrulayıcı faktör analizi, tanımlayıcı istatistikler, korelasyon ve regresyon analizleri uygulanarak değerlendirilmiştir. Analizler sonucunda; finansal okuryazarlığın algı ve ilgi boyutlarının girişimcilik yöneliminin risk alma ve yenilikçilik boyutları üzerinde etkinin olduğunu; finansal okuryazarlığın harcama ve ilgi boyutunun girişimcilik yöneliminin proaktiflik boyutu üzerinde etkisinin olduğu sonucuna ulaşılmıştır.

Anahtar Kelimeler: Finansal okuryazarlık, girişimci, girişimcilik yönelimi, finansal bilgi.

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1. Introduction

Developments in economic globalization and the digital economy cause governments worldwide to support entrepreneurial engagement. Therefore, it is observed that governments have developed implementation practices regarding financial support policies and privileged tax measures to activate individual entrepreneurial potential (Xu and Jiang, 2024: 2). For economic development, entrepreneurship is emphasized to alleviate poverty, income inequalities, unemployment, and socio-economic hardships, especially in developing countries (Munyuki and Jonah, 2022: 138).

In recent years, the measurement of financial literacy among individuals and households as well as the results obtained are among the topics of interest in academic literature. Entrepreneurs emerge as recognized sources impacting the realm of growth and innovation. Entrepreneurs fundamentally need to possess a high level of financial literacy to enable growth and innovation. While correct financial decision-making and entrepreneurship are intertwined, there is no consensus in empirical studies (Calcagno et al., 2020: 271).

From an administrative perspective, the entrepreneur emerges as an individual who takes risks and combines factors of production to produce goods and services. On the other hand, from a financial literacy perspective, it refers to having the skills and knowledge to operate a business in a specific field to produce goods and services (İnce, 2020: 117-118). Individuals having an entrepreneurial orientation should be skilled in activating their operational areas, choosing viable assistance channels, taking the right steps during and after investment, operating with self-confidence by taking risks and having access to the necessary financial instruments and their content to achieve the financial growth of their ventures (World Bank, 2009).

Considering the complexity and wide diversity of financial products today, it is inevitable for entrepreneurs to improve their knowledge and skills regarding financial planning to ensure positive future outcomes from their decisions. Individuals having an entrepreneurial orientation should possess fundamental knowledge in areas of financial education, financial management, saving, retirement, investing, profitability, credit, insurance, cash management, and personal finance (Ahmad et al., 2019: 20).

Lusardi and Mitchell (2014) and Bunyaminu et al. (2019), who attribute many financial errors to a lack of financial literacy, emphasize the importance of financial literacy in coping with changes on a global scale. Financial literacy has been shown to enhance business performance, particularly in situations where entrepreneurs have easy access to capital and resources are flexible. Being financially literate is a key factor in implementing long-term financial planning, which is strategically important in managerial decision-making processes (Ali and Li, 2021: 342).

Changes in world economies, shifting needs and the evolving dynamic nature of financial products over time necessitate the continuous updating and internalization of financial literacy among individuals. In view of all these developments, many organizations and national economies are endeavoring to improve the level of financial literacy. This practice has started by a committee formed in Australia in 2011, namely Australian Securities and Investment Commission. Similar attempts were made in countries such as New Zealand, England and India (Ali et al., 2014: 336-337).

This study aims to make an original contribution to the literature by examining the impact of financial literacy on entrepreneurial orientation within the context of university students. While entrepreneurial orientation is generally examined within the framework of personality traits, risk-taking tendency or environmental factors (e.g. Beydoğan Tangör and Özgen, 2022; Yurdasever and Yıldırım, 2023; Paksoy et al., 2019), the effect of individuals' financial knowledge levels and financial decision-making competencies on entrepreneurial behavior is found in a limited number of studies (Kıran et al., 2018: 31; Seyrek and Gül, 2017: 104). However, in today's economic conditions, the sustainability and success of the entrepreneurial process largely depends on the competence of individuals to understand, manage and strategically use financial resources. In this context, examining

the impact of financial literacy levels, especially of young individuals, on entrepreneurial orientation provides important insights into both theoretical knowledge and practice. By focusing on university students, this study aims to address a significant gap in the literature and shed light on how young people's levels of financial knowledge relate to their entrepreneurial potential. The first chapter of this six-chapter article comprises the introduction. The second and third chapters explain the concepts of financial literacy and entrepreneurial orientation, respectively. The fourth chapter evaluates the relationship between financial literacy and entrepreneurial orientation within the context of existing literature. The fifth chapter reviews the methodology and findings of the study. The final chapter presents the conclusion and discussion of this study.

2. Conceptual Framework

2.1. Financial Literacy

The existence of financial knowledge constitutes the fundamental dimension of financial literacy. Financially literate individuals possess basic knowledge of certain financial concepts. Quite often, financial literacy and financial knowledge are considered synonymous. The term "financial literacy" originated in 1787 in a letter written by John Adams of the USA to Thomas Jefferson. The letter expresses the uncertainty and confusion arising from the nature of credit, money, and circulation in America. John Adams advocated the necessity of financial literacy to overcome this existing situation (Korkmaz et al., 2024: 15). As a result of these developments, financial literacy has begun to be used by researchers, institutions, and governments. Studies conducted since the 2000s have not established a standard definition for financial literacy. Marriott and Mellett (1996) defined financial literacy as an individual's understanding of financial information and acting in this direction. Hilgert et al. (2003) and Lusardi and Mitchell (2011a) conceptualized financial literacy as fundamental financial knowledge and basic computational skills. Mandell (2008) defines financial literacy as the ability to make long-term conscious decisions in selecting financial instruments. While Lusardi and Tufano (2015) viewed financial literacy as the ability to apply interest to real life, the Organisation for Economic Co-operation and Development (OECD) conceptualized it as not only perceiving financial concepts and risks but also making effective decisions and improving social welfare.

Many people's limited knowledge of basic economics and finance often leads them to make irreversible mistakes. With the increasing speed of globalization and markets becoming riskier, it is essential for people to be more cautious in making financial decisions (Lusardi and Mitchell, 2011b: 497-498). It is not possible to make a single definition of financial literacy, which has a vast body of literature. Financial literacy refers to individuals' attitudes and behaviors towards diversifying and increasing their knowledge of financial planning, credit, investment, budgeting, and savings. In fact, financial literacy is the state of having knowledge and understanding regarding financial concepts and risks and having the skill, motivation and self-confidence to evaluate within a financial framework to enable their adaptation to economic life and contribute to their own welfare and social welfare (Bayrakdaroğlu and Bilge, 2018: 98). According to Li and Qian (2020), financial literacy is the ability to understand and apply fundamental market principles to achieve effective financial resource allocation and identify market opportunities. According to Brüggen et al. (2017), financial literacy is the perception of the ability of expected, desired and existing life standards to maintain financial freedom. According to Goncalves et al. (2021), it is the ability of using knowledge and skills in managing financial resources effectively to obtain individual lifelong welfare. The increasing ease of access to financial services and opportunities as a result of developments in financial markets necessitates that individuals become more interested in financial literacy. Financial literacy, resulting from financial education, strengthens individuals both in terms of welfare and economics (Ali et al., 2021: 2).

Remund (2010) classified financial literacy into five different categories. Those (Parlak, 2024: 334):

- Level of knowledge of financial terms,
- The ability to talk about financial terms,
- The ability to manage personal finances,
- The ability to make appropriate financial decisions,
- The ability to effectively plan for future financial needs.

Current studies in the literature indicate a relationship between financial literacy and economic outcomes. It is suggested that financial literacy supports the increase in individuals' income, broadens their social networks, improves their risk attitude, and that all these developments influence their entrepreneurial orientation (Behrman et al., 2012: 303; Suresh, 2024: 84; Mishra, 2018: 1466). Financial literacy is important for creating job opportunities for people, increasing market knowledge, boosting business profits and raising awareness regarding risk management skills. Especially considering its role in highlighting the lack of funds that hinders the creation of new enterprises, financial literacy undoubtedly emerges as a crucial topic. While individuals with financial literacy may have lower borrowing costs, lower financial literacy and awareness in entrepreneurial orientation can lead individuals to take on more debt (Alshebami and Al Marri, 2022: 3).

2.2. Entrepreneurial Orientation

As set forth by Schumpeter in his concept of creative destruction, entrepreneurship constitutes the driving force of economic development. Entrepreneurship, which is accepted as the engine of technological innovation and economic growth, not only discovers new products and new markets for their sale but also enhances income mobility by creating new business spaces for society (Burchi et al., 2021: 2; Li and Qian, 2020: 584). Entrepreneurial orientation can be defined as consideration of entrepreneurship, tendency toward and interest in entrepreneurship. Thus, entrepreneurial orientation represents entrepreneurial decisions and also policies and practices to be executed for future actions (Wiklund and Shepherd, 2003: 1310). Entrepreneurial orientation consists of although different but also intertwined behavior patterns such as innovativeness, risk-taking, competitive aggression, proactiveness and autonomy. Entrepreneurial orientation, which is essential for the regeneration and survival of strategic businesses, is not merely a venture creation process. Entrepreneurial orientation, which is different from entrepreneurship, represents the fundamental entrepreneurial process answering the question of how new ventures are undertaken. However, the term 'entrepreneurship' answers the question of what is undertaken and represents the content of entrepreneurial decisions (Pearce et al, 2010: 227; Lumpkin and Dess, 2001: 432).

Miller (1983) conceptualized three dimensions of entrepreneurial orientation present in the current literature. These three conceptualized dimensions emerge as proactiveness, innovativeness, and risk-taking. The concept of proactiveness is defined as seeking advantages, looking for opportunities, being forward-looking and introducing new services and products. The concept of innovativeness, on the other hand, is defined as creativity for new products, services, or processes. The concept of risk-taking, in turn, can be defined as committing significant resources and incurring substantial debt to engage in uncertain environments (Purnomo, 2019: 106). Lumpkin and Dess (1996) added two more dimensions to entrepreneurial orientation, namely competitive aggression and autonomy. While the concept of competitive aggression refers to the intensity of a firm's efforts to outperform its rivals, the concept of autonomy, in turn, presents the ideas or visions created by individuals or teams (Casillas and Moreno, 2010: 269-270).

2.3. Relationship Between Financial Literacy and Entrepreneurial Orientation

Entrepreneurs preparing to operate in complex markets must possess the necessary knowledge of the functioning of financial products and services available to them. High financial literacy in entrepreneurial orientation is effective in individuals achieving stronger quantitative performance. Competence gained in areas such as savings rates, assessing interest rates, and ensuring risk diversification will positively influence entrepreneurial orientation (Wachira and Kihui, 2012: 47).

In the relationship between financial literacy and entrepreneurial orientation, individuals with financial literacy gain the power to make more informed decisions, leading to better investments, more cognitive behavior in risk-taking capacity, the creation of risk diversification, and easier payment options for repayable loans. Taking all these positive reflections into account, the most suitable selection of financial products/services takes place as a result of a financially literate entrepreneur's orientation, and the entrepreneur can manage the financing of the business effectively (Anshika and Singla, 2022: 1352-1353).

The existence of financial instruments with great diversity and complexity has also made it difficult for individuals in the task of managing money. Despite this complexity, financial literacy is of great importance to increase individuals' welfare in both developed and developing countries. A financially literate entrepreneur will be able to be the one who knows the most suitable fund options and financial instruments according to his / her entrepreneurial venture's growth stages and the scale used. An individual with an entrepreneurial orientation should be able to establish the the financial sourcing network of the business and also ensure the provision of necessary inputs, taking into account the status of the business. An entrepreneur who has wisely managed resources should be able to increase his / her access to resources through practices that encourage participation in financial markets (Garg and Singh, 2018: 173; İnce, 2020: 117).

Considering that entrepreneurs make a significant contribution to national economies, the role of entrepreneurs needs to be fostered through strong financial literacy. Brown et al. (2006) associate the essential principle for an entrepreneur's success with the power of financial literacy. According to Drexler et al. (2014), existence of fundamental financial literacy is an important factor for a venture to grow and succeed in a competitive economy. Therefore, an entrepreneur with limited financial literacy will have an adverse effect on the business.

Many studies have been conducted on financial literacy and entrepreneurial orientation but these studies lack a consensus. Some studies indicate a positive relationship between financial literacy and entrepreneurial orientation, while others, however, suggest that a significant relationship between these two variables does not exist.

In their 2012 study, Klapper et al., who highlighted a positive effect of financial literacy on entrepreneurial orientation, investigated the importance of financial literacy and its effect on individuals' behavior. Their survey was designed to investigate financial literacy, official / unofficial consumer borrowing, spending attitudes and borrowing habits. The results obtained show that financial literacy has a positive effect on individual involvement in financial markets and helps individuals in preparing for potential economic shocks. Sezici and Çelikkol (2017) investigated the direct effects of both entrepreneurial attitude and financial literacy on entrepreneurial orientation, and also investigated the intermediary effect of perceived social support on these relationships. According to the results obtained from 304 students, it was concluded that social support for entrepreneurship has a full mediating role on both entrepreneurial attitude and financial literacy. Seyrek and Gül (2017) investigated the relationship between financial literacy levels and entrepreneurship intents of university students. According to the results compiled by survey method, there is a positive relationship between financial literacy level and entrepreneurial intent. Akbulut and Yapa (2018) investigated the relationship between entrepreneurship and financial literacy through a quantitative method, namely a survey with 234 students. According to the results obtained from the research, it

was concluded that entrepreneurship courses have a positive effect on financial literacy. Li and Qian (2020) investigated the relationship between the financial literacy and entrepreneurship activities. According to the empirical results, financial literacy has important outcomes on entrepreneur's performance and involvement in entrepreneurship. Kuşcu and Yılmaz (2022) investigated the effect of financial literacy of students studying at university on their entrepreneurial orientation, using a quantitative research method involving 475 students. According to the reaearch results, it was found that there was a statistically positive and significant effect between the participants financial literacy and entreprenenurial orientation. In this respect, it was observed that more individual financial literacy meant more entreprenurial orientation. In their study, Taşlıyan et al. (2023) investigated the effect of digital financial literacy levels on individual entrepreneurial orientation. According to the survey results from 177 participating students selected by random sampling method, a significant relationship was found between the use of financial technology products and services and entrepreneurial orientation. Xu and Jiang (2024) investigated the effect of financial literacy on entrepreneurial behaviour through the China Household Finance Survey using data from 2015-2017 as a reference. The research finding indicated that financial literacy had a lasting and positive effect on entrepreneurial orientation.

On the other hand, some studies in the literature indicated that there was no significant relationship between financial literacy and entrepreneurial orientation. The study conducted by Kiran, Bozkurt, and Tunc in 2018 aimed to determine the relationship between financial literacy and entrepreneurial intent. In this study conducted using a quantitative research method, data obtained through a survey were analysed with suitable statistical analysis methods. The findings obtained from the study showed that there was no statistically significant relationship between financial literacy and entrepreneurial intent. In their study in Saudi Arabia, Alshebami and Al Marri (2022) investigated the effect of financial literacy on entrepreneurs' intent. According to the findings of the study conducted using an online survey method, no direct relationship was found between financial literacy and entrepreneurial intent. Anshika and Singla (2022) aimed to investigate the financial literacy levels of entrepreneurs. The study was analysed within the scope of a vast literature and found that entrepreneurs worldwide had low levels of financial literacy. Trombetta (2023) investigated whether there were significant differences in the financial literacy levels of entrepreneurs in Italy, Spain, and England and whether financial literacy supported entrepreneurial success. This study concluded that basic-level financial literacy increased the survival chances of ventures, whereas high-level financial literacy decreased their survival chances.

3. Study Methodology

3.1. Aim, Model and Hypothesis of the Study

This study aims to examine the effect of financial literacy on entrepreneurship orientation in the context of students studying at Gaziantep University Islahiye Faculty of Economics and Administrative Sciences. The study hypotheses and model created for this purpose are shown below.

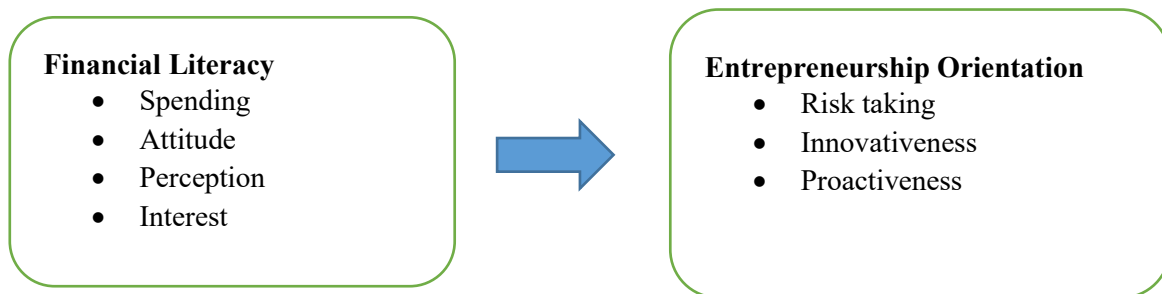


Figure 1. Research model

H_{1(a)(b)(c)}: The spending aspect of financial literacy meaningfully affects the all aspects of entrepreneurial orientation.

H_{2(a)(b)(c)}: The attitude aspect of financial literacy meaningfully affects the all aspects of entrepreneurial orientation.

H_{3(a)(b)(c)}: The perception aspect of financial literacy meaningfully affects the all aspects of entrepreneurial orientation.

H_{4(a)(b)(c)}: The interest aspect of financial literacy meaningfully affects the all aspects of entrepreneurial orientation.

3.2. Data Collection Tools

Following the approval of the Gaziantep University Rectorate Social and Human Sciences Scientific Research and Publication Ethics Committee decision (number: E-87841438-302.08.01-639129 date: 07.04.2025), data were collected using an online survey form created via 'Google Forms'. The aforementioned online survey form comprises of three distinct segments. The initial segment incorporates 4 questions designed to elicit participant demographic profiles, whereas the subsequent segment featured 24 items constructed to assess financial literacy and entrepreneurial proclivity, derived from an comprehensive literature reviews. Details pertaining to the measurement scales utilized for data compilation were described hereunder.

Financial Literacy Scale: To measure the financial literacy representing the independent variable of the study, Sarıgül (2015) the 14- item Financial Literacy Scale was used. This measurement toll composes of four aspects, namely: spending, attitude, perception, and interest. Sarıgül (2015: 211) calculated the Cronbach's Alpha value of the financial literacy scale as 0,72. In practice the items were rated according to a 5-point Likert scale, with options ranging from '1=strongly disagree' to '5=strongly agree'.

Entrepreneurship Orientation Scale: To measure the Entrepreneurship Orientation representing the dependent variable of the study, Bolton and Lane (2012) 10- item “Entrepreneurship Orientation Scale” was used. Ercan and Yıldırım (2021) adapted this scale into Turkish with validity and reliability studies. This measurement toll composes of three aspects, namely: risk – taking, innovativeness and proactiveness. Ercan and Yıldırım (2021: 150) calculated the Cronbach’s Alpha value of entrepreneurship orientation scale as 0.80. In practice, the items were rated according to a 5-point Likert scale, with options ranging from '1=strongly disagree' to '5=strongly agree'.

3.3. Study Population and Sample

The statistical population of the study consists of 429 students having education at Islahiye Faculty of Economics and Administrative Science. The sample size for this study is 347 students, which is sufficient to represent the population with a 95% confidence interval (Yazıcıoğlu and Erdoğan, 2004: 50).

An examination of the demographic characteristics of the study sample indicated that 53.6% of the student respondents were male and 46.4% were female. The findings revealed that 48.7% of the student population was enrolled in public administration, 46.4% in economics, and 9.5% in business administration, furthermore the grade distribution was as follows: 38% freshmen, 29.1% sophomores, 27.4% juniors, and 5.5% seniors. An analysis of the study sample's age distribution revealed that 52.2% of students were between 18 and 20 years old, 40.3% were between 21 and 23 years old, and 7.5% were 27 years or older.

4. Findings

To assess the construct validity and reliability of the "Financial Literacy Scale" and the "Entrepreneurial Orientation Scale" employed in this study, reliability analysis and exploratory factor analysis (EFA) were conducted. The results of the EFA are presented in Table 1.

Table 1. EFA Results Regarding Scales of Financial Literacy and Entrepreneurship Orientation.

Scales		Number of questions	Cronbach α	Factor Loads	Eigen Value	KMO Value	Barlett' s Test of Sphericity	Sig
Financial Literacy	Spending	4	0.897	0.755-0.822	3.157	0.912	3906.055	0.000
	Attitude	4	0.887	0.693-0.783	2.858			
	Perception	3	0.905	0.748-0.845	2.730			
	Interest	3	0.919	0.797-0.850	2.564			
Entrepreneurship Orientation	Risk Taking	3	0.844	0.742-0.799	2.856	0.841	1962.142	0.000
	Innovativeness	4	0.852	0.729-0.802	2.434			
	Proactiveness	3	0.848	0.798-0.867	2.168			

The EFA result in Table 1 indicates that KMO values exceeding 0.60 for financial literacy and individual entrepreneurship scales confirm the adequate sampling in conducting EFA. In addition, the significant outcome of Bartlett's Test of Sphericity proves the relationship between the variables. The factor loads for the items within the spending daspect of the financial literacy scale were observed to range from 0.755 to 0.822, those for the attitude aspect from 0.693 to 0.783, those for the perception dimension from 0.748 to 0.845, and those for the interest dimension from 0.797 to 0.850. This four-dimensional structure accounted for 80.778% of the total variance. Meanwhile, the factor loads for the items within the risk-taking aspect of the individual entrepreneurship scale were found to range from 0.742 to 0.799, those for the innovativeness aspect from 0.729 to 0.802 and those for the proactiveness aspect from 0.798 to 0.867. This three-dimensional structure accounted for 74.577% of the total variance. Furthermore, it was determined that the Cronbach's Alpha internal consistency values for both the financial literacy scale and the dimensions of the individual entrepreneurship scale were above 0.70. These results indicate not only the validity of the four-factor structure of the financial literacy scale and the three-factor structure of the individual entrepreneurship scale but also demonstrate their reliability (Hair et al., 2010: 119; Çokluk et al., 2012 197). Depictive statistics related to the financial literacy scales and entrepreneurship orientation scales are given in Table 2.

Tablo 2. Descriptive Statistics Related to Financial Literacy and Entrepreneurial Orientation Scales

Variables		N	Mean	Std. Deviation	Skewness	Kurtosis
Financial Literacy	Spending	347	3.76	0.899	-0.906	0.766
	Attitude	347	3.74	0.979	-0.672	-0.123
	Perception	347	3.73	1.000	-0.869	0.490
	Interest	347	3.51	1.095	-0.521	-0.505
Entrepreneurship Orientation	Risk Taking	347	3.65	1.046	-0.438	-0.594
	Innovativeness	347	3.64	0.975	-0.568	-0.164
	Proactiveness	347	3.98	0.887	-1.014	1.190

The fact that skewness and kurtosis coefficients for each dimension of the financial literacy and entrepreneurship scales are within the ± 1.5 range suggests a normal distribution of the data (Tabachnick and Fidell, 2013: 133). On the other hand, an analysis of the arithmetic means for each scale revealed the following: for the financial literacy scale, the spending aspect's mean was 3.76 ± 0.899 , the attitude aspect's mean was 3.47 ± 0.979 , the perception aspect's mean was 3.73 ± 1.000 , and the interest aspect's mean was 3.51 ± 1.095 . Regarding the entrepreneurial orientation scale, the risk-taking aspect exhibited a mean of 3.65 ± 1.046 , the innovativeness aspect a mean of 3.64 ± 0.975 ,

and the proactiveness aspect a mean of 3.98 ± 0.887 . The results of the first order confirmatory factor analysis (CFA) conducted to verify the factor structure of the financial literacy and entrepreneurial scales are presented in Table 3.

Tablo 3. CFA Results Related to the Financial Literacy and Entrepreneurial Orientation Scales

Scales	χ^2	df	χ^2/df	RMSEA	AGFI	GFI	CFI	TLI	NFI
			≤ 5	≤ 0.080	≥ 0.85	≥ 0.90	≥ 0.90	≥ 0.90	≥ 0.90
Financial Literacy	191.701	69	2.778	0.072	0.886	0.925	0.968	0.958	0.952
Entrepreneurship Orientation	92.824	30	3.094	0.078	0.908	0.950	0.968	0.951	0.953

It is observed in Table 3 that the model fit indices of the financial literacy and individual entrepreneurship scales are within the acceptable limits (Meydan and Sesen, 2011: 37; Gürbüz, 2024: 38). Moreover, the factor loadings for the spending aspect of the financial literacy scale were observed to range from 0.815 to 0.857, those for the attitude aspect ranged from 0.754 to 0.85, the perception aspect's factor loadings ranged from 0.863 to 0.883, and the interest aspect's factor loadings ranged from 0.845 to 0.929. Similarly, the factor loadings for the risk-taking aspect of the entrepreneurship scale were found to range from 0.741 to 0.918, the innovativeness aspect's loadings ranged from 0.726 to 0.790, and the proactiveness aspect's loadings ranged from 0.658 to 0.900. Table 4 presents the results of the correlation analysis performed to determine the direction and magnitude of the relationship between financial literacy and entrepreneurial orientation.

Table 4. Correlation Analysis Results

Scales		Spending	Attitude	Perception	Involvement	Risk Taking	Innovativeness	Inventiveness
Financial Literacy	Spending	1						
	Attitude	0.631**	1					
	Perception	0.637**	0.630**	1				
	Interest	0.569**	0.612**	0.601**	1			
Entrepreneurship Orientation	Risk Taking	0.482**	0.523**	0.584**	0.621**	1		
	Innovativeness	0.504**	0.530**	0.587**	0.680**	0.681**	1	
	Proactiveness	0.447**	0.361**	0.377**	0.384**	0.443**	0.423**	1

**p<0.01

As presented in Table 4, a moderate and positive correlation is observed between the spending aspect of financial literacy and risk taking (0.482**), innovativeness (0.504**) and proactiveness (0.447**) aspects of entrepreneurship orientation; and between attitude aspect of financial literacy and risk taking (0.523**), innovativeness (0.530) and proactiveness (0.361**) aspects of individual entrepreneurship orientation; and between perception aspect of financial literacy and risk taking (0.584**), innovativeness (0.587**) and proactiveness (0.377**) aspects of individual entrepreneurship orientation; and also between interest aspect of financial literacy and risk taking (0.621**), innovativeness (0.680**) and proactiveness (0.384**) of individual entrepreneurship orientation. A multiple regression analysis was applied to determine the impact of financial literacy on entrepreneurial orientation.

Table 5. The Effect of Financial Literacy on Entrepreneurship Orientation

Dependent Variable	Independent Variable	Effects			Model Summary		Anova	
		β	t	Sig.	R	R ²	F	Sig. F
Risk Taking	Spending	0.027	0.482	0.630	0.680	0.462	73.480	0.000
	Attitude	0.100	1.728	0.085				
	Perception	0.276	4.789	0.000				
	Interest	0.379	6.945	0.000				

The results presented in Table 5 indicate that the multiple regression model ($F=91.412$; $p<0.01$) aiming to assess the impact of financial literacy's spending, attitude, perception and interest dimensions on the risk taking aspect of entrepreneurial orientation is statistically significant. In this model, while it was determined that the spending ($\beta:0.027$; $p>0.05$) and attitude ($\beta:0.100$; $p>0.05$) aspects of financial literacy did not have a significant effect on the risk taking dimension of entrepreneurial orientation, it was found that the perception ($\beta:0.276$; $p<0.01$) and interest ($\beta:0.379$; $p<0.01$) aspects of financial literacy had a significant effect on the risk taking dimension of entrepreneurial orientation. Furthermore, the interest and perception aspects of financial literacy were found to have an explanatory power of 46.2% over the risk taking aspect of entrepreneurial orientation ($R^2=0.462$). Consequently, hypotheses H1(a), H2(a) were not supported, whereas hypothesis H3(a), H4(a) were confirmed.

Table 6. The Effect of Financial Literacy on Entrepreneurship Orientation

Dependent Variable	Independent Variable	Effects			Model Summary		Anova	
		β	t	Sig.	R	R ²	F	Sig. F
Innovativeness	Spending	0.045	0.829	0.408	0.719	0.517	91.412	0.000
	Attitude	0.064	1.169	0.243				
	Perception	0.232	4.245	0.000				
	Interest	0.476	9.213	0.000				

The results presented in Table 6 indicate that the multiple regression model ($F=91.412$; $p<0.01$) aiming to assess the impact of financial literacy's spending, attitude, perception and interest dimensions on the innovativeness aspect of entrepreneurial orientation is statistically significant. In this model, while it was determined that the spending ($\beta:0.045$; $p>0.05$) and attitude ($\beta:0.064$; $p>0.05$) aspects of financial literacy did not have a significant effect on the proactiveness aspect of entrepreneurial orientation, it was found that the perception ($\beta:0.232$; $p<0.01$) and interest ($\beta:0.476$; $p<0.05$) aspects of financial literacy had a significant effect on the innovativeness dimension of entrepreneurial orientation. Furthermore, the interest and perception aspects of financial literacy were found to have an explanatory power of 51.7% over the innovativeness aspect of entrepreneurial orientation ($R^2=0.517$). Consequently, hypotheses H1(b), H2(b) were not supported, whereas hypothesis H3(b), H4(b) were confirmed.

Table 7. The Effect of Financial Literacy on Entrepreneurship Orientation

Dependent Variable	Independent Variable	Effects			Model Summary		Anova	
		β	t	Sig.	R	R ²	F	Sig. F
Proactiveness	Spending	0.287	4.228	0.000	0.479	0.230	25.494	0.000
	Attitude	0.038	0.547	0.585				
	Perception	0.082	1.183	0.238				
	Interest	0.148	2.270	0.024				

The results presented in Table 7 indicate that the multiple regression model ($F=91.412$; $p<0.01$) aiming to assess the impact of financial literacy's spending, attitude, perception and interest dimensions on the proactiveness aspect of entrepreneurial orientation is statistically significant. In

this model, while it was determined that the attitude ($\beta:0.038$; $p>0.05$) and perception ($\beta:0.082$; $p<0.01$) aspects of financial literacy did not have a significant effect on the proactiveness dimension of entrepreneurial orientation, it was found that spending ($\beta:0.287$; $p>0.05$) and interest ($\beta:0.148$; $p<0.05$) aspect of financial literacy and had a significant effect on the proactiveness dimension of entrepreneurial orientation. Furthermore, the interest aspect of financial literacy was found to have an explanatory power of 23% over the proactiveness aspect of entrepreneurial orientation ($R^2=0.230$). Consequently, hypotheses H2(c) and H3(c) were not supported, whereas hypothesis H1(c) and H4(c) was confirmed.

5. Discussion and Conclusion

The purpose of this study is to investigate the effect of financial literacy on entrepreneurial orientation. To this end, data were collected via a survey from 347 students enrolled in the Economics and Public Administration Departments of the Gaziantep University Faculty of Economics and Administrative Sciences in İslahiye. In this study, the sub-dimensions of financial literacy were considered as spending, attitude, perception, and interest; while the sub-dimensions of entrepreneurial orientation were considered as risk-taking, innovativeness, and proactiveness. The research findings are discussed in more detail below.

According to the research findings, the mean scores on the financial literacy scale for the students who responded to the survey were determined as follows: spending dimension 3.76; attitude dimension 3.74; perception dimension 3.73; and interest dimension 3.51. The fact that these values are greater than 3 indicate the presence of a financial literacy inclination among the students. Furthermore, the mean scores on the entrepreneurial orientation scale for the surveyed students were found to be: risk-taking dimension 3.65; innovativeness dimension 3.64; and proactiveness dimension 3.98. The fact that this value is also greater than 3 suggests that the students have a positive entrepreneurial intention (Kıran et al., 2018: 47).

As a result of correlation analysis conducted in the scope of this study, a positive, medium-level relationship was found between the spending aspect of financial literacy and risk-taking, innovativeness and proactiveness aspects of individual entrepreneurial orientation; between the attitude aspect of financial literacy and risk-taking, innovativeness and proactiveness aspects of entrepreneurial orientation; between the perception aspect of financial literacy and risk-taking, innovativeness and proactiveness aspects of entrepreneurial orientation and between the interest aspect of financial literacy and risk-taking, innovativeness and proactiveness aspects of entrepreneurial orientation. As supported by the studies of Klapper et al. (2012), Li and Qian (2020) and Kuşçu and Yılmaz (2022), increasing financial literacy level will enhance the success of individuals' entrepreneurial decisions. As a result of the regression analysis, it was determined that the spending and attitude aspects of financial literacy did not have a significant effect on the risk-taking aspect of entrepreneurial orientation, while the perception and interest aspects of financial literacy, on the other hand, had a significant effect on the risk-taking aspect of entrepreneurial orientation. It is observed that entrepreneurs with a high level of financial literacy exhibited a high level of risk-taking tendency by taking bold steps such as penetrating new markets, venturing into unknown markets, and allocating a considerable amount of resources to unpredictable ventures. The studies conducted by Bajtelsmit and Bernasek (1996), Asong and Gyensare (2012), Halko et al. (2012), and Sezici and Çelikkol (2017) found in their studies that a high level of financial literacy positively affected entrepreneurial orientation. Studies show that having an entrepreneurial orientation can be considered equivalent to having the ability to make decisions on risky investments. However, although some studies suggest that demographic factors such as gender or social roles affect entrepreneurial orientation, it was determined that making risky decisions resulted from the entrepreneur's lack of information about financial subjects or investment instruments.

Secondly, it was determined that the spending and attitude aspects of financial literacy did not have a significant effect on the innovativeness aspect of entrepreneurial orientation, while the perception and interest aspects of financial literacy, on the other hand, had a significant effect on the innovativeness aspect of entrepreneurial orientation. Entrepreneurs open to innovativeness become more successful than the non-innovative ones by paying more attention to management, human resources, marketing, financing, production efficiency, governmental programs and services than the non-innovative ones (Yalçın and Üner, 2019: 726).

Lastly, it was determined that the attitude and perception dimensions of financial literacy did not have a significant effect on the proactivity dimension of entrepreneurial orientation, while the spending and interest dimension of financial literacy had a significant effect on the proactivity dimension of entrepreneurial orientation. It is observed that financially literate entrepreneurs are prospective opportunity creators as a result of introducing products that will be successful in competition and predicting future demands. Proactive entrepreneurs are constantly updating themselves so as not to lose their skills. Having an entrepreneurial attitude indicates that individuals are extroverted, open to development and have a high sense of responsibility. These kinds of personality traits of an entrepreneur ensure that he/she has good relationships within his/her social circle and indicate that he/she is valued and respected. Having these features enables the entrepreneur to create his/her own unique communication network, thereby causing the chance of his/her success to increase.

Various researchers, organizations, and economists have pointed out that financial literacy has been a highly engaging subject for the past quarter-century. Individuals' attempts to increase their financial welfare have further emphasized the importance of financial literacy. In order for entrepreneurs to manage risks and expectations correctly, they need to have a certain level of proficiency in financial concepts. Financial literacy enables entrepreneurs to have deep insights into a venture's objectives and strategies. Therefore, governments should enact policies related to entrepreneurship and should implement these policies effectively and efficiently within the framework of their regulations. Programs developed by the governments should be designed to address the gaps in the resource and competence areas of entrepreneurship. The framework for entrepreneurship should be developed in alignment with the investment climate and national development plans. Entrepreneurial culture should be fostered throughout the country through societal support, and capacity should be built. Deficiencies in entrepreneurial capacity should also be addressed through education. Another important aspect for national economies is the level of individuals' financial knowledge. Policy makers should introduce the public to financial literacy and raise awareness by sensitizing individuals to the benefits of financial tools. Moreover, providing training on how to manage financial instruments is also of great importance. Therefore, it is extremely important for young entrepreneurs that policy makers allocate more space to financial literacy and entrepreneurship education within the current curriculum. (Ahmad et al. 2019: 34-35; Abubakar, 2015: 291-292).

Financial literacy, consisting of elements such as financial spending, attitude, perception, and interest, can be defined as individuals' ability to manage their income, debts, savings, and expenditures (Kutukız and Özden, 2018: 362). Entrepreneurial orientation, on the other hand, represents the policies and practices implemented for entrepreneurial decisions and actions (Wiklund and Shepherd, 2003: 1310). These two intertwined concepts are of vital importance for future generations to achieve higher living standards, adapt more effectively to the evolving world, and confidently engage in international markets and trade opportunities. The existence of an ecosystem where financial literacy fosters entrepreneurship and entrepreneurship fosters financial literacy is a crucial factor in achieving strong economic objectives (Akbulut and Yapa, 2018: 33).

In order to eliminate widespread poor financial decision-making caused by low financial literacy and incomplete information, policy approaches should aim to promote financial literacy

through targeted financial policies. In this context, it is important to reduce barriers to access in the financial sector and to implement various incentive programs that simplify financial decision-making. Establishing more effective communication channels and applications to support information gathering and decision-making in the financial domain will enhance the positive impact of such policies on low levels of financial literacy. Long-term financial education programs are essential, highlighting the importance of sustained financial training initiatives. Opportunities to learn basic financial concepts through comprehensive financial education programs should be expanded, and individuals' reliance on random advice from their surroundings should be reduced. Policy reforms can also support effective training programs for SMEs and their owners, including topics such as the preparation of financial statements, budgeting, and the evaluation of investment opportunities (Lusardi, 2008, 29-34; Zoutini et al. 2024: 16-17; Ali and Li, 2021: 351).

The study contributes to the measurement of individuals' financial literacy levels and their entrepreneurial orientations. Like any scientific research, it is not possible for this study to be conducted without limitations. Acknowledging these limitations leads to suggestions for future research. Firstly, the measurement of financial literacy and entrepreneurial orientation variables in this study relies on self-reporting and the perceptions of the participants. Secondly, although this study has limitations regarding cause-and-effect inference and the generalizability of its findings due to its cross-sectional design and the use of convenience sampling, examining the research model with a longitudinal research design by collecting data from different sources could help future studies address this issue. Continuous improvements in research methodology will help advance knowledge on sustainable financial literacy and entrepreneurship, offering valuable insights for practitioners, policymakers, and researchers.

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