

FINANCIAL EDUCATION: CHALLENGES AND OPPORTUNITIES FOR PUBLIC UNIVERSITY STUDENTS

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ABSTRACT

Financial education has become a fundamental element in the development of economic competencies in university settings, especially in contexts characterized by the increasing complexity of financial systems. The objective of this research was to analyze the impact of financial education on the development of economic competencies in final-year students of the Faculty of Business Sciences at a public university in Ecuador. The study was conducted using a quantitative approach, with a non-experimental, descriptive-correlational design. A structured survey with a Likert scale was administered to a sample of university students, evaluating two main variables: financial education and economic competencies. Data analysis was performed using Jamovi software, including descriptive statistics, reliability analysis, Bartlett's test of sphericity, the Kaiser-Meyer-Olkin (KMO) index, exploratory factor analysis, and Pearson correlation. The results showed high levels of reliability for the instrument (α between 0.854 and 0.880), as well as adequate structural validity (KMO = 0.899; $p < 0.001$). Factor analysis identified a two-dimensional structure grouping operational and strategic competencies. A strong and significant positive correlation was also found between financial education and economic competencies ($r = 0.728$; $p < 0.001$), confirming that strengthening financial education contributes to the development of economic skills in students. It is concluded that financial education not only influences economic knowledge but also behavior and decision-making, thus becoming a key element for the professional development and economic well-being of university students.

Keywords: financial education, economic competencies, university students, financial decision-making.

INTRODUCTION

In the contemporary context, characterized by the accelerated digitalization of economic systems and the increasing complexity of financial markets, financial education emerges as an essential component for the sustainable development of societies. The ability of individuals to make

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informed decisions about saving, investing, indebtedness, and consumption has become a determining factor of economic well-being both personally and collectively. Various studies have shown that adequate financial literacy contributes significantly to improving the economic stability of households, reducing vulnerability to economic crises, and promoting responsible behavior in the management of resources (Moreno-García & Hernández-Mejía, 2025). Likewise, the strengthening of financial competencies not only impacts the individual sphere, but also has an impact on macroeconomic development, by promoting a more aware and participatory citizenry in formal financial systems (Pavón, 2025).

In this sense, financial education acquires even greater relevance in contexts of economic uncertainty, such as those experienced during and after the COVID-19 pandemic, where deep inequalities in access to financial knowledge and banking services were evident. Recent research has shown that factors such as educational level, gender, and socioeconomic context significantly influence individuals' ability to understand and use financial tools effectively (Arzabal & García, 2025). In addition, financial socialization, understood as the process by which people acquire knowledge and attitudes about money, plays a key mediating role in the construction of economic well-being, especially when it is influenced by psychological variables such as risk perception and self-confidence (Feitó-Madrigal & Portal-Boza, 2025).

At the same time, digital transformation has substantially modified consumption patterns and payment methods, generating new opportunities, but also risks associated with impulsive behaviors and poorly informed financial decisions. In this scenario, recent studies have identified a direct relationship between the lack of financial education and the increase in uncontrolled consumption behaviors, especially in young populations exposed to highly stimulating digital environments (Flores-Rueda et al., 2025). Similarly, changes in sociodemographic profiles and payment preferences show the need to adapt financial education programs to the specific characteristics of each generation, considering their habits, values, and technological contexts (José et al., 2025).

Despite growing evidence on the importance of financial education, significant gaps persist in its effective implementation within education systems, particularly at the higher level. One of the main causes of this problem lies in the limited integration of financial content into academic curricula, which generates insufficient training in key skills for economic life. This educational deficit has the direct effect of the low capacity of students to properly manage their resources, which translates into high levels of indebtedness and little long-term financial planning. In turn, another relevant cause is related to the lack of innovative pedagogical approaches that promote the meaningful learning of financial concepts, which limits the appropriation of knowledge and its practical application. This aspect has a negative impact on students' motivation and willingness to adopt responsible financial behaviours. Finally, the poor articulation between financial education and public policies for financial inclusion constitutes a third critical factor, the effect of which is reflected in the persistence of sectors excluded from the formal financial system, which limits opportunities for economic and social development (Pavón, 2025).

In this framework, the present research is justified from multiple perspectives. From a theoretical point of view, it contributes to the strengthening of the conceptual body on financial education, integrating recent approaches that consider not only economic variables, but also psychological and social factors that influence financial behavior (Feitó-Madrigal & Portal-Boza, 2025). In methodological terms, it proposes a quantitative design that allows objectively measuring the relationships between key variables, using statistical tools that guarantee the validity and reliability of the results. From a practical perspective, the findings of this study can be used to design more

effective educational strategies aimed at improving the financial competencies of university students, thus contributing to their economic well-being and their successful insertion into the labor market (Zapata-Huamani & Vilca-Rugel, 2026).

The object of study of this research is financial education in the university context, understood as the set of knowledge, skills and attitudes that allow students to make informed decisions about the management of their economic resources. On the other hand, the subject of study is made up of students in the last semester of the Faculty of Business Sciences of a public university in Ecuador, who are in a crucial stage of transition to the professional field, where financial decisions acquire significant relevance. This population group has particular characteristics that make it an ideal scenario to analyze the challenges and opportunities of financial education, considering their educational level, their exposure to academic content related to business management, and their proximity to active working life (Ibidunni & Nnaemeka, 2025).

In coherence with the above, the general objective of the research is to analyze the impact of financial education on the development of economic competencies in university students, considering the challenges and opportunities presented by the current context. Specifically, the following objectives are established: I. To analyze the theoretical foundations of financial education and its relationship with economic well-being; II. To evaluate the level of financial education in university students through a quantitative approach; III. Interpret the results obtained in order to propose strategies to strengthen financial training in the academic field. These objectives are structured sequentially, allowing the phenomenon to be approached from a comprehensive perspective that articulates theory, empirical measurement, and practical application (Moreno-García & Hernández-Mejía, 2025).

Financial education, as the central variable of this study, has been approached from multiple approaches in recent scientific literature, highlighting its multidimensional nature and its close relationship with economic well-being, decision-making and financial inclusion. In conceptual terms, it is understood as the set of knowledge, skills, and attitudes that allow individuals to properly manage their economic resources in changing and complex contexts. Along these lines, contemporary research has shown that financial literacy not only implies the mastery of technical concepts, but also the ability to apply them in real situations, which requires an effective integration between theory and practice (Moreno-García & Hernández-Mejía, 2025). This comprehensive approach has made it possible to broaden the understanding of the phenomenon, incorporating psychological and social variables that affect the financial behavior of individuals.

One of the most relevant dimensions of financial education is financial literacy, understood as the level of knowledge that people have about basic concepts such as saving, investing, credit, and inflation. Empirical studies have shown that there is a direct relationship between the level of financial literacy and the ability of individuals to make sound economic decisions. In the case of Mexico, for example, it has been shown that households with higher levels of financial knowledge have better indicators of economic well-being, which translates into greater stability and resilience in the face of adverse situations (Aragón et al., 2025). This finding reinforces the importance of incorporating financial content into education systems, especially at higher levels where students are prepared to face complex economic decisions.

Another key dimension is financial socialization, which refers to the process by which individuals acquire knowledge, attitudes, and behaviors related to money through their family, educational, and social environment. Recent research has highlighted the mediating role of psychological

factors in this process, pointing out that variables such as self-confidence, risk perception, and future orientation significantly influence the way people internalize and apply financial knowledge (Feitó-Madrugal & Portal-Boza, 2025). This approach allows us to understand why individuals with similar levels of formal education may present different financial behaviors, which shows the need to design educational strategies that consider these subjective factors.

In relation to the behavioral dimension, it has been observed that financial education directly influences the consumption, savings and investment habits of individuals. However, the absence of adequate training can lead to impulsive behaviors and unreasonable financial decisions. A study on uncontrolled consumption has identified that a lack of emotional control and poor financial planning are associated with compulsive purchasing behaviors, especially in digital environments where access to credit is immediate and decisions are made quickly (Flores-Rueda et al., 2025). This phenomenon represents a significant challenge for education systems, which must incorporate pedagogical approaches aimed at developing self-regulation and critical thinking skills.

On the other hand, financial inclusion is a fundamental dimension that connects financial education with effective access to formal financial services. In this sense, it has been proposed that financial literacy is a prerequisite for inclusion, as it allows individuals to understand and use financial products appropriately. An analysis of panel data has shown that improvements in financial and technological education contribute significantly to financial inclusion at the global level, reducing the existing gaps between different population groups (Pavón, 2025). This finding is especially relevant in Latin American contexts, where high levels of financial exclusion persist, particularly in rural and low-income sectors.

Likewise, the sociodemographic dimension has gained importance in recent studies on financial education, as it has been shown that factors such as age, gender, and educational level influence the financial behavior of individuals. Comparative research has shown that there are significant differences in payment methods and financial preferences between different generations, suggesting the need to adapt educational programs to the specific characteristics of each age group (José et al., 2025). In particular, it has been identified that young people are more inclined towards the use of financial technologies, which represents both an opportunity and a risk, depending on their level of preparation to manage these tools.

In this context, financial education is also linked to entrepreneurial training, especially in the university environment. Recent studies have shown that there is a positive relationship between the level of financial literacy and students' entrepreneurial intention, mediated by variables such as self-efficacy and innovation capacity. In this sense, the availability of resources and the development of dynamic capacities are factors that enhance entrepreneurship, which highlights the importance of integrating financial education into academic training programs aimed at entrepreneurship (Ibidunni & Nnaemeka, 2025). This relationship shows the potential of financial education as a tool to promote economic development and job creation.

From an institutional perspective, the quality of accounting information and financial transparency have also been the subject of analysis in the recent literature. In the university environment, it has been pointed out that the quality of financial information influences strategic decision-making and stakeholder trust, which underscores the need to train professionals with solid competencies in financial management (de Paula Mendes et al., 2025). Likewise, the concentration of the audit market and its impact on financial transparency have been analyzed in comparative studies, showing significant differences between public and private institutions (Jara-Sarrúa et al., 2025).

These findings reinforce the importance of comprehensive financial education that not only addresses individual but also organizational aspects.

In summary, the literature review shows that financial education is a complex and multidimensional phenomenon, whose understanding requires an integrative approach that considers cognitive, behavioral, social, and institutional variables. The studies analyzed agree that financial literacy is a key factor for economic well-being, financial inclusion and entrepreneurial development, but they also warn of the challenges associated with its effective implementation in education systems. In this sense, it is necessary to continue researching the most appropriate pedagogical strategies to promote meaningful financial education, especially in university contexts where students are prepared to face increasingly complex economic decisions (Zapata-Huamani & Vilca-Rugel, 2026).

Financial education, analyzed from a broader perspective, is also closely linked to the financial well-being and economic stability of households, constituting a key dependent variable in multiple recent studies. In this sense, it has been shown that the ability of individuals to manage their personal finances does not depend only on access to information, but also on the quality of this information and its proper interpretation. Studies carried out in Latin American contexts have shown that the reconstruction of financial well-being in households requires not only technical knowledge, but also adequate planning and discipline in the management of income and expenses, which reinforces the importance of financial education as a transformative tool (Aragón et al., 2025). This approach allows us to understand that financial well-being is a dynamic outcome that is built on multiple interrelated dimensions.

From a structural dimension, access to and quality of financial services also have a significant impact on the effectiveness of financial education. In contexts where there are limitations in access to credit or restrictive conditions in financial systems, individuals face greater difficulties in applying the knowledge acquired. For example, research in the agricultural sector has shown that factors such as the requirement for collateral guarantee limit access to financing, which reduces opportunities for investment and economic growth, even in populations with a certain level of financial knowledge (Gbigbi et al., 2025). This finding suggests that financial education should be accompanied by public policies that facilitate equitable access to financial resources.

In the tax field, financial education is also related to the understanding of tax regulations and their impact on the different economic sectors. Recent studies have analyzed how certain legal provisions influence the financial decision-making of economic actors, showing that a limited understanding of the regulatory framework can generate negative effects on financial planning and the sustainability of productive activities (Gómez-Cano et al., 2025). This aspect highlights the need to include content related to tax education within financial training programs, especially in careers related to business sciences.

Another relevant line of research focuses on the relationship between financial literacy and long-term planning, particularly with regard to saving for retirement. In this sense, it has been identified that financial literacy levels directly influence the ability of individuals to make informed decisions about their economic future. During the COVID-19 pandemic, for example, a decrease in retirement savings levels was observed, largely associated with a lack of financial knowledge and economic uncertainty, which highlights the need to strengthen financial education from early stages of life (Moreno-García & Hernández-Mejía, 2025). This type of finding reinforces the idea that

financial education should not be limited to the resolution of immediate problems, but should promote a strategic vision of resource management.

Regarding the inclusion of specific groups, recent literature has highlighted the importance of incorporating a gender approach in financial education, considering the existing differences in access to knowledge and in economic decision-making between men and women. Research conducted in regional contexts has shown that women have higher levels of financial vulnerability, which translates into lower savings rates and greater exposure to debt. However, it has also been shown that financial education programs designed with a gender perspective can contribute significantly to reducing these gaps, promoting greater equity in access to economic opportunities (Arzabal & García, 2025). This approach is essential for the design of inclusive and effective education policies.

Likewise, the literature has begun to explore the relationship between financial education and the silver economy, understood as the set of economic activities aimed at the elderly population. In this context, the development of personalized financial portfolios that respond to the specific needs of this population group has been proposed, considering factors such as security, liquidity and profitability. These types of proposals demonstrate the importance of adapting financial education to the different stages of the life cycle, recognizing that financial needs and priorities change over time (López-Rodríguez et al., 2025). This differential approach allows us to broaden the scope of financial education and improve its effectiveness in various contexts.

From the educational field, the role of accounting training in economic development has also been analyzed, highlighting its contribution to the generation of professionals capable of efficiently managing financial resources in different sectors. Recent studies have indicated that the evolution of accounting education has been marked by the incorporation of more comprehensive approaches, which combine technical knowledge with analytical and ethical skills, which is essential to face the challenges of the current economic environment (Vargas & Vargas, 2025). This approach reinforces the need to integrate financial education into vocational training programmes, especially in areas related to business management.

On the other hand, the quality of internal assurance systems in universities also influences the effectiveness of educational processes, including financial training. Recent research has proposed evaluation models that allow strategic criteria to be weighted in institutional management, showing that adequate planning and quality control contribute to improving educational results and strengthening students' competencies (Rivera et al., 2026). This aspect is key to ensuring that financial education is implemented effectively and sustainably in the university environment.

The relationship between financial education and entrepreneurial intention has been widely documented in recent literature, highlighting the moderating role of variables such as gender and socioeconomic context. In this sense, it has been shown that students with higher levels of financial literacy are more willing to undertake, which translates into greater economic dynamism and the generation of new employment opportunities (Zapata-Huamaní & Vilca-Rugel, 2026). This finding reinforces the importance of promoting financial education as an integral part of university education, not only as a tool for personal management, but also as an engine for economic development.

MATERIALS AND METHODS

The research was structured under a non-experimental design, because the variables were not deliberately manipulated, but were observed in their natural academic context. The approach was

quantitative, since it sought to measure financial education and its relationship with the development of economic competencies through numerical data obtained through a survey. The type of study was descriptive-correlational, because it allowed to characterize the level of financial education of the students and, subsequently, to identify the relationship between this variable and university economic competencies. This methodological orientation responds to the instructions of the study proposed for students in the last semester of business sciences at a public university in Ecuador.

The population was made up of 564 students in the last semester of the Faculty of Business Sciences of a public university in Ecuador. The instrument was applied between January and March 2026, through an online form, which made it possible to collect information in an organized, anonymous, and systematic manner. A non-probabilistic convenience sampling was used, considering the availability of the students and their belonging to the academic group defined as the subject of study. Statistical processing was carried out in Jamovi, a program that allowed the development of descriptive analyses, reliability tests, correlations and, depending on the quality of the data, exploratory factor analysis to examine the internal consistency of the proposed dimensions.

The technique used was the survey and the instrument corresponded to a structured questionnaire with a five-level Likert scale, where 1 represented "strongly disagree" and 5 "strongly agree". Financial education was defined as an independent variable, consisting of five dimensions: financial literacy, savings planning, responsible use of credit, understanding of financial products, and digital financial education. The dependent variable was university economic competencies, made up of five dimensions: economic decision-making, perceived financial well-being, responsible consumption behavior, entrepreneurial intention, and financial planning capacity. Each dimension was measured by means of an item, ensuring that the instrument maintains clarity, relevance and coherence with the objectives of the study.

Table 1. *Operationalization of variables*

Variable	Dimension	Item (Instrument Question)	Supporting author(s)
Financial education (Independent variable)	Financial literacy	I understand basic concepts such as savings, interest, credit and investment.	Moreno-García & Hernández-Mejía (2025); Pavón (2025)
	Savings planning	I organize my income to allocate a part to savings.	Aragón et al. (2025); Moreno-García & Hernández-Mejía (2025)
	Responsible use of credit	I evaluate my ability to pay before acquiring a debt.	Gbigbi et al. (2025); Flores-Rueda et al. (2025)
	Understanding Financial Products	I recognize the advantages and risks of financial products such as accounts, cards or loans.	López-Rodríguez et al. (2025); José et al. (2025)
	Digital Financial Education	I use digital financial tools in an informed and safe way.	Pavón (2025); José et al. (2025)
University economic competencies	Economic decision-making	I analyze different options before making an economic decision.	Feitó-Madrigal & Portal-Boza (2025); Aragón et al. (2025)

(Dependent variable)	Perceived Financial Well-Being	I believe that I manage my resources adequately to cover my needs.	Aragón et al. (2025); Feitó-Madrigal & Portal-Boza (2025)
	Responsible consumption behaviour	I avoid making impulse purchases that affect my economic stability.	Flores-Rueda et al. (2025); Arzabal & García (2025)
	Entrepreneurial intention	I believe that my financial knowledge strengthens my interest in entrepreneurship.	Ibidunni & Nnaemeka (2025); Zapata-Huamani & Vilca-Rugel (2026)
	Financial planning skills	I project my expenses and income to meet future economic goals.	Moreno-García & Hernández-Mejía (2025); Vargas & Vargas (2025)

Source: Own elaboration

The validation of the instrument was carried out through the judgment of two experts in university entrepreneurship, who evaluated the clarity, relevance, coherence and sufficiency of the items. In addition, a theoretical validation was carried out (Table 1), in contrast with the studies reviewed, considering that financial education is related to literacy, economic well-being, financial inclusion, consumption behavior, use of financial technologies, and entrepreneurial intention. This double validation made it possible to ensure that the selected dimensions responded to both academic criteria and recent scientific evidence

RESULTS

3.1 Descriptive statistics

The descriptive analysis of the dimensions evaluated (Table 2) allows us to identify a general trend towards moderately high levels of financial education and economic competencies in the university students analyzed. In terms of averages, most dimensions are above 3.70, indicating a favorable perception in relation to financial knowledge and skills. The dimension of financial well-being is particularly noteworthy, with an average of 3.83, which suggests that students consider that they have some control over their economic resources and are able to meet their basic needs relatively efficiently. This result is consistent with previous studies that show a positive relationship between financial literacy and the perception of economic stability (Aragón et al., 2025).

In the case of the dimensions associated with the independent variable, such as financial literacy, savings planning, and responsible use of credit, the average values range between 3.74 and 3.80, reflecting an adequate, although not optimal, level of financial education. These results indicate that, although students have basic knowledge of financial concepts, there are still opportunities for improvement in the consolidation of sustainable financial habits. In particular, savings planning has an average of 3.77, which suggests that, although students recognize the importance of saving, not all of them implement it systematically in their daily lives, coinciding with what Moreno-García and Hernández-Mejía (2025) pointed out about the gap between financial knowledge and practice.

On the other hand, the digital financial education dimension has a mean of 3.73 and a relatively high standard deviation (1.22), which shows a greater dispersion in the responses. This finding suggests the existence of heterogeneity in the level of mastery of digital financial tools among

students, which may be associated with differences in access to technology, digital skills or previous experiences. This result is relevant in the current context, where the digitalization of financial services requires specific skills for their safe and efficient use, as Pavón (2025) states when analyzing the relationship between technological literacy and financial inclusion.

In relation to the dependent variable, the dimensions of economic decision-making and responsible consumption have means of 3.74 and 3.81 respectively, which indicates that students tend to adopt relatively rational behaviors in their economic decisions. However, the dimension of entrepreneurial intention shows a slightly lower mean (3.69), which could be interpreted as a lower willingness towards the creation of business initiatives, possibly influenced by factors such as the perception of risk or lack of resources. This result is aligned with research that highlights the need to strengthen financial education as a basis for the development of entrepreneurship (Zapata-Huamaní & Vilca-Rugel, 2026).

A critical aspect identified in the analysis is the dimension of financial planning capacity, which has the lowest mean (3.32) and the highest standard deviation (1.42). This behavior indicates not only a lower level of development in this competency, but also a high variability among students, suggesting that while some possess well-developed planning skills, others significantly lack them. This finding reinforces the need to design specific educational interventions aimed at improving long-term financial planning, a fundamental aspect for future economic stability.

Table 2. Descriptive statistics

	Media	OF	Minimum	Maximum	Asymmetry	
					Asymmetry	EE
Alfabetizacion_financiera	3.74	1.17	1	5	-0.532	0.125
Planificacion_ahorro	3.77	1.18	1	5	-0.583	0.125
Responsible credit	3.80	1.22	1	5	-0.606	0.125
Comprension_productos	3.80	1.17	1	5	-0.543	0.125
Educ_financiera_digital	3.73	1.22	1	5	-0.641	0.125
Take:decisiones_economicas	3.74	1.17	1	5	-0.492	0.125
Bienestar_financiero	3.83	1.14	1	5	-0.637	0.125
Consumo_responsable	3.81	1.15	1	5	-0.676	0.125
Intencion_emprendedora	3.69	1.24	1	5	-0.579	0.125
Capacidad_planif_financiera	3.32	1.42	1	5	-0.331	0.125

Note: Own elaboration

Regarding asymmetry, all dimensions have negative values, which indicates a skewed distribution to the right, that is, a greater concentration of responses at the high levels of the scale (4 and 5). This behavior is consistent with the results of frequencies previously analyzed and confirms the positive trend in the perception of financial competencies. However, the less pronounced asymmetry in the financial planning dimension (-0.331) suggests a more balanced distribution, which coincides with its lower mean and greater dispersion.

Overall, the results show that, although students have an acceptable level of financial education, there are specific areas that require strengthening, especially in relation to financial planning and the use of digital tools. These findings have important implications for the design of educational programs, since they allow us to identify the priority dimensions that must be addressed to improve financial education in the university environment.

3.2 Reliability analysis (scientific writing – Scopus level)

The analysis of the internal consistency of the instrument applied (Table 3) shows a high level of reliability, which guarantees the stability and coherence of the measurements made in the dimensions of financial education and economic competencies. The results obtained using Cronbach's alpha coefficient show values ranging from 0.854 to 0.880, far exceeding the minimum recommended threshold of 0.70 for social studies, which allows us to affirm that the instrument presents an adequate internal consistency for research purposes.

Table 3. Element Reliability Statistics

	If the	
	Cronbach's alpha	McDonald's ω
Alfabetizacion_financiera	0.863	0.868
Planificacion_ahorro	0.862	0.867
Responsible credit	0.860	0.866
Comprension_productos	0.862	0.867
Educ_financiera_digital	0.866	0.871
Take:decisiones_economicas	0.857	0.862
Bienestar_financiero	0.859	0.864
Consumo_responsable	0.862	0.867
Intencion_emprededora	0.854	0.862
Capacidad_planif_finaciera	0.880	0.881

Note: Own elaboration

In addition, McDonald's omega coefficient, considered a more robust measure in contexts where the multidimensionality of the construct is assumed, presents values between 0.862 and 0.881, which confirms the reliability of the instrument from a more demanding perspective. The proximity between the alpha and omega values suggests that the items maintain a homogeneous structure and that they contribute in a balanced way to the measurement of the variables analyzed.

A relevant aspect of the analysis is that the elimination of no item significantly increases reliability levels, indicating that all items contribute positively to the instrument. In particular, the dimension of financial planning capacity has the highest value of alpha (0.880) and omega (0.881), which shows a high consistency in the measurement of this competence, despite having shown weaknesses in the descriptive analysis. This finding suggests that, although there are differences in

the level of development of this skill among students, the item used manages to accurately capture this variability.

3.3 Bartlett Sphericity Test Analysis

Bartlett's sphericity test showed a statistically significant result ($\chi^2 = 1503$; $df = 45$; $p < 0.001$), indicating that the correlation matrix differs from an identity matrix. This result confirms the existence of significant relationships between the variables analyzed, a necessary condition for the application of exploratory factor analysis. The significance obtained allows us to reject the null hypothesis of independence between the items, evidencing that they share common variance and that it is possible to identify underlying latent structures. Likewise, the high value of the χ^2 statistic suggests a considerable interdependence between the dimensions, which supports their grouping into broader theoretical constructs. Consequently, the data meet the necessary assumptions to continue with the structural validation through factor analysis, guaranteeing the relevance of the proposed model.

3.4 KMO Sample Adequacy Measure

The Kaiser-Meyer-Olkin index (KMO) reached an overall value of 0.899, which indicates a very high sampling adequacy for the application of exploratory factor analysis. This result shows that the partial correlations between the variables are low and that the common variance is sufficient to identify consistent latent structures. At the individual level, the MSA values of the items range between 0.700 and 0.949, highlighting dimensions such as financial literacy (0.949) and responsible use of credit (0.940), which confirms an excellent consistency in the measurement of these constructs. Although the dimension of financial planning capacity has the lowest value (0.700), it remains within the acceptable range, so it does not compromise the quality of the model. Taken together, the results of the KMO, together with the significance of the Bartlett test, confirm that the data are suitable for factor extraction, validating the structure of the instrument and allowing progress in the identification of underlying factors.

Table 4. KMO Sampling Suitability Measure

	MSA
Global	0.899
Alfabetizacion_financiera	0.949
Planificacion_ahorro	0.929
Responsible credit	0.940
Comprension_productos	0.924
Educ_financiera_digital	0.929
Take:decisiones_economicas	0.934
Bienestar_financiero	0.921
Consumo_responsable	0.934
Intencion_emprendedora	0.812
Capacidad_planif_financiera	0.700

Note: Own elaboration

3.5 Factor load analysis

The exploratory factor analysis (Table 5), performed using the maximum likelihood method with Varimax rotation, allowed the identification of a two-dimensional structure of the instrument. The

first factor groups most of the variables related to financial education and economic behavior, presenting factor loads between 0.542 and 0.720, which shows an adequate representation of the items within the construct. The dimensions of financial well-being (0.720), economic decision-making (0.662) and responsible use of credit (0.657) are particularly noteworthy, indicating a strong association with this main factor.

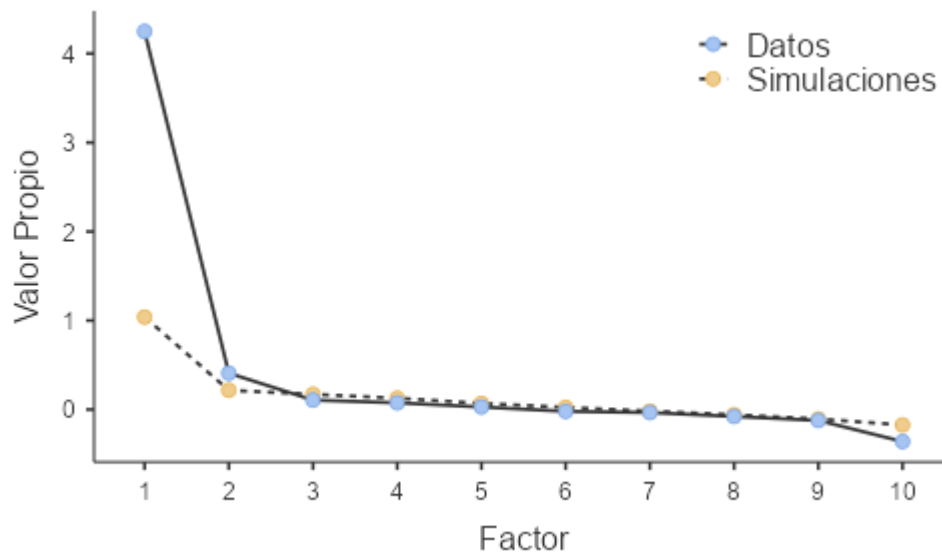
The second factor is mainly defined by the entrepreneurial intention variable, which has a high factor load (0.918), accompanied by the financial planning capacity (0.640). This grouping suggests the existence of a differentiated component linked to future economic projection and the development of business initiatives, which allows us to interpret this factor as a dimension oriented to strategic and entrepreneurial behaviour.

Table 5. Factor Loads

	Factor		Uniqueness
	1	2	
Bienestar_financiero	0.720		0.45611
Take:decisiones_economicas	0.662		0.48750
Responsible credit	0.657		0.52507
Planificacion_ahorro	0.639		0.55425
Consumo_responsable	0.614		0.56396
Alfabetizacion_financiera	0.612		0.57564
Comprension_productos	0.600		0.57055
Educ_financiera_digital	0.542		0.64261
Intencion_emprededora	0.390	0.918	0.00500
Capacidad_planif_financiera		0.640	0.56304

Note. The 'Maximum Verisimilitude' extraction method was used in combination with a 'varimax' rotation

Figure 1. Sedimentation Graph



In terms of uniqueness, the values obtained remain at acceptable levels, indicating that a significant proportion of the variance of each item is explained by the factors identified. The exception is observed in entrepreneurial intention, whose low uniqueness (0.005) reflects a strong dependence on the second factor, consolidating its role as a central indicator of this dimension. Overall, the results show a factor structure consistent with the theoretical model proposed, confirming the existence of two differentiated but related constructs: one associated with financial education and economic behavior, and the other linked to strategic planning and entrepreneurial intention (Figure 1). This configuration validates the structure of the instrument and supports its use for the analysis of relationships between variables in the university context.

3.6 Correlations

Pearson's correlation matrix (Table 6) shows a positive, high and statistically significant relationship between financial education and economic competencies ($r = 0.728$; $p < 0.001$). This result indicates that as the level of financial education in university students increases, their competencies for economic decision-making, responsible consumption, and financial planning are also strengthened.

From an interpretative perspective, the value of the coefficient ($r > 0.70$) allows the relationship to be classified as strong, which suggests a consistent association between both variables. In practical terms, this implies that financial knowledge and skills are not only maintained at the theoretical level, but are translated into concrete economic behaviors. This finding reinforces the idea that financial education is a determining factor in the development of economic skills in university contexts.

Likewise, the statistical significance ($p < 0.001$) allows us to rule out the null hypothesis of absence of relationship, confirming that the observed link is not the product of chance. This result is consistent with the literature that indicates that financial literacy directly influences economic well-being and rational decision-making, by providing tools to manage risks and opportunities (Aragón et al., 2025).

Table 6. Correlation of variables

	Educacion_financiera	Competencia_economica
Educacion_financiera	—	
Competencia_economica	0.728***	—

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Poor is therefore shown that financial literacy is significantly associated with the development of economic competencies in college students.

DISCUSSION

The results obtained in this study confirm the close relationship between the characteristics of digital business platforms and the digital purchase decision of Ecuadorian consumers. The high and positive correlation ($r = 0.91$) shows that trust, usability and social influence act synergistically to strengthen the attitude and intention to purchase in digital environments. This finding coincides with the approach of Ajzen and Driver (1991), who from the Theory of Planned Behavior argue that beliefs about control, norms, and attitudes determine the final behavior of the individual. In the digital context, these elements translate into perceptions of security, ease of use, and social approval, central components of the Ecuadorian consumer experience.

The dimension of trust and perceived security emerged as a key factor within the independent variable. Consumers showed high levels of agreement with the statement "I trust the security of the payments I make on e-commerce platforms", with a mean of 4.00 and a standard deviation of 1.17. This result coincides with the study by Saxena and Thakur (2024), who establish that trust acts as a mediating variable between the perception of risk and the intention to buy online. In the Ecuadorian case, trust is based both on the technological reliability of the platforms and on the mechanisms of reputation and reviews, confirming that transparency and digital credibility are essential pillars for the adoption of e-commerce.

In terms of usability and ease of use, consumers perceive digital platforms as practical and accessible tools ($M = 3.96$, $SD = 1.02$). This finding is consistent with the Technology Acceptance Model (TAM), developed and validated by Han et al. (2024), which postulates that ease of use and perceived usefulness directly influence attitudes towards technology. In Ecuador, digital adoption has grown driven by the use of mobile devices and the increase in platforms with interfaces adapted to different levels of digital literacy, as highlighted by the reports by Mentinno (2025). However, challenges remain in optimizing the user experience, reinforcing the need for inclusive, usability-focused design.

Social influence, represented by the weight of reviews and opinions from other users ($M = 4.12$, $SD = 1.08$), was consolidated as the dimension with the highest average score. This result reaffirms the importance of the gregarious or imitation behavior described by Ali and Amir (2024), who argue that consumers tend to reproduce the decisions of other users when they perceive social validation or popularity in products. Similarly, Ong et al. (2024) demonstrated that digital interactions and live sales generate a social contagion effect that increases the likelihood of purchase. In Ecuador, where digital communities play a central role in building trust, this dynamic is especially relevant for strengthening local e-commerce.

The correlation observed between the dimensions of the independent and dependent variable ($r \geq 0.70$ in all cases) also confirms the interdependence between cognitive and emotional factors in



digital consumer behavior. The strongest relationship was observed between trust and social influence ($r = 0.846$), suggesting that the perceived credibility of a platform is nurtured by collective experience. This result coincides with the findings of Jeon et al. (2024), who demonstrated that perceived familiarity and recommendation from third parties, especially micro-influencers, reinforce the willingness to consume digital products. Thus, Ecuadorian e-commerce is based not only on technology, but also on the construction of communities of trust.

From a psychological perspective, emotions play a mediating role in the digital purchase decision. Although the emotional dimension presented limited data, the literature reviewed underlines its relevance. Ramírez et al. (2024) showed that positive emotions, such as satisfaction and enthusiasm, directly influence the purchase decision, while negative emotions, such as anxiety or fear of fraud, inhibit it. Along the same lines, Chen (2025), using structural equation models, found that emotions derived from social interaction strengthen purchase intention through digital engagement. Therefore, the emotional dimension, although not fully quantified in this study, remains an indispensable component for understanding the digital consumption experience.

The role of attitude towards the digital platform was also significant. Ecuadorian consumers demonstrated a generally favorable attitude towards platforms, with an average of 3.94. This result aligns with the findings of Al Maalouf et al. (2025), who found that positive attitudes towards technology more robustly predict purchase intent than economic factors, such as price or promotions. In addition, Han et al. (2024) and Nair and Manohar (2024) argue that attitudes are enhanced when the consumer perceives tangible benefits in terms of convenience and personalization, something that is also reflected in the growing acceptance of digital services in Ecuador.

The finding of a high overall correlation between the main variables ($r = 0.91$) suggests that the perception of digital platforms directly influences the purchase decision. This result is based on the integration of the factors proposed by Guan and Lin (2024), who demonstrated that online reviews and shared information about products act as substitutes for the face-to-face experience, increasing confidence and willingness to buy. In addition, it coincides with Nivornusit et al. (2024), who, when studying competition in digital delivery services, highlighted that differentiation based on reputation and trust is more effective than strategies focused solely on prices.

In terms of sustainability and responsibility, the results are partially aligned with the studies of Dlamini and Mahowa (2024), who observed that environmental awareness and ethics influence the purchase of green products. Although this study did not directly address sustainable consumption, Ecuadorian consumers expressed a growing interest in the transparency and good practices of digital platforms, which is linked to the trend towards more informed and ethical consumption. This aspect is also supported by Chernov and Gura (2024), who point out that the perception of value in the luxury market increasingly depends on the authenticity and trust projected by digital brands.

Likewise, the results are consistent with the findings of Kumar et al. (2025) on the personalization of the digital experience, where consumer preferences are strengthened through the use of recommendation algorithms and adapted content. In the Ecuadorian case, this trend is incipient but growing, especially among platforms that employ segmentation based on behavioral data. Similarly, Ibrahim and Xue (2024) argue that the design of user-oriented interfaces is crucial to foster digital adoption, which reinforces the need to consider the aesthetic and functional experience as factors of competitive differentiation.

The discussion must also be situated in the Ecuadorian cultural and socioeconomic framework. According to Mentinno (2025), e-commerce in Ecuador is experiencing sustained growth driven by digitalization and trust in transactions, although technological and digital education gaps persist. In this sense, the results of this study reaffirm the need for public policies aimed at strengthening digital literacy and consumer protection, as proposed by Ong, Tacardon and Gumasing (2025) in their analysis of eating behavior in urban environments in Southeast Asia. In both contexts, the adoption of technology depends on the perception of control, trust, and usefulness, variables that are transversal to different emerging digital cultures.

Finally, the consistency between the observed dimensions and the revised theoretical models supports the internal validity of the study. The high correlations between trust, usability, attitude, and purchase intent demonstrate the structural cohesion of digital behavior, as suggested by the integrative models of Hair et al. (2013), which recommend the combination of correlational and multivariate approaches to understand complex phenomena such as technological adoption. Consequently, this study provides solid empirical evidence for the Ecuadorian context, confirming that trust, user experience, and social validation are central determinants in the digital purchase decision.

CONCLUSIONS

The results of the research allow us to conclude that financial education is a determining factor in the development of economic competencies in university students. First, it was evidenced that the measurement instrument has high levels of reliability and structural validity, which guarantees the consistency of the data obtained and supports the methodological soundness of the study. The confirmation of a two-dimensional factor structure made it possible to identify that financial education is not a homogeneous construct, but is composed of a set of operational and strategic competencies that influence students' economic behavior in a differentiated way.

In relation to the first specific objective, it was possible to analyze the theoretical foundations of financial education, evidencing its multidimensional nature and its influence on variables such as economic well-being, decision-making and consumption behavior. These results made it possible to understand that financial education not only involves technical knowledge, but also practical skills and behavioral factors that affect the management of resources.

Regarding the second objective, it was determined through quantitative analysis that students have moderately high levels of financial education, with strengths in dimensions such as the responsible use of credit and responsible consumption. However, weaknesses in financial planning capacity were identified, revealing a gap between knowledge and its long-term application. This finding shows the need to strengthen competencies oriented to future economic projection.

Regarding the third objective, the correlation analysis allowed us to verify the existence of a positive, high and significant relationship between financial education and economic skills ($r = 0.728$; $p < 0.001$). This result confirms that the higher the levels of financial education, the greater the ability of students to make informed economic decisions, manage their resources and develop responsible financial behaviors.

In summary, the research shows that financial education plays a key role in the comprehensive education of university students, directly influencing their economic behavior and their ability to face the challenges of the current financial environment.

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