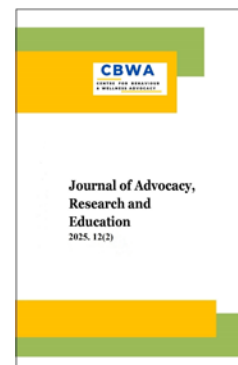




Publisher: Centre for Behaviour and Wellness  
Advocacy, Ghana  
Co-publisher: Cherkas Global University, USA  
Has been issued since 2014  
ISSN 2410-4981. E-ISSN 2508-1055  
2025. 12(2): 184-199




DOI: 10.13187/jare.2025.3.184

Journal homepage:  
<http://kadint.net/our-journal.html>



## Articles

### Determinants of Financial Literacy among Mexican University Students

Elena Moreno-García  <sup>a, b</sup>, Osvaldo García-Mata  <sup>c, \*</sup>,  
Guadalupe del Carmen Briano-Turrent  <sup>d</sup>

<sup>a</sup> Universidad Cristóbal Colón, Veracruz, Mexico

<sup>b</sup> Tecnológico Nacional de México, sede Misantla, Veracruz, Mexico

<sup>c</sup> Universidad Autónoma de Tamaulipas, Ciudad Victoria, Tamaulipas, Mexico

<sup>d</sup> Universidad Autónoma de San Luis Potosí, San Luis Potosí, Mexico

#### Abstract

Financial literacy enables effective decision-making across contexts and improves individuals' and society's financial well-being, facilitating their participation in economic life. This research aims to analyze the relationship between financial literacy and socio-economic, demographic, educational and family determinants among university students in Mexico. Data were collected from 1,355 students at three universities in different Mexican states, using non-probabilistic, self-determined sampling. The analysis method is based on constructing multiple linear regression models to estimate financial literacy and its three dimensions: knowledge, behavior and attitude. The results show that gender, type of institution, field of knowledge, work experience, and the mother's educational level are significantly related to university students' financial literacy level. This research contributes to the regional comparative literature by analyzing university students from different socio-economic regions in Mexico, generating evidence that can inform the design and implementation of public policies to strengthen financial literacy at the local level.

**Keywords:** Determinants, Financial Literacy, Financial Well-Being, Mexico, University Students.

#### 1. Introduction

Financial literacy can be defined as a process, tool, or strategy aimed at developing knowledge, attitudes, skills, abilities, and behaviors to facilitate intelligent and informed decision-making regarding financial products and services (Avendaño et al., 2021). Financial literacy enables effective decision-making across various contexts and improves individuals' and society's

---

\*Corresponding author

E-mail address: [ogarciam@docentes.uat.edu.mx](mailto:ogarciam@docentes.uat.edu.mx) (O. García-Mata)

Received: 11 September 2025 Revised: 25 December 2025 Accepted: 27 December 2025

Published: 30 December 2025

financial well-being (Escalera-Chávez et al., 2025; Culebro-Martínez et al., 2025), thereby facilitating their participation in economic life (OECD, 2017).

Mexico has been measuring financial literacy since 2018 by using data collected through the National Financial Inclusion Survey (ENIF, by its acronym in Spanish), whose goal is to generate statistical information and official indicators at national level to allow financial authorities to conduct diagnostics, design public policies, and establish financial inclusion and education goals (INEGI, 2024). The financial literacy index is constructed using data from the ENIF by summing the scores obtained from the following sub-indices: knowledge (basic understanding of financial concepts); behaviors (financial actions to experience minimal financial stress); and attitudes (attitude statements towards money and planning for the future) (CNBV, 2022).

Based on the 2021 ENIF, the financial literacy index for Mexico, which is 57, with a normalized score at 100, places it with a greater performance compared to countries such as Colombia, Romania, and Italy, but a lesser one than that obtained by Peru, Germany, and Hong Kong, and the average for OECD countries (CNBV, 2021; OECD/INFE, 2020). The sociodemographic characteristics of the population influence the financial literacy level, according to the results obtained from the ENIF, 2021. However, they do so in a non-uniform manner. On account of the previously stated, this work is of great relevance to the Mexican context, where significant differences are observed among the different regions (Maceda-Méndez, Espinosa-Espíndola, 2024).

The aim of this research is to analyze the relationship between economic, demographic, educational, and family determinants and university students' financial literacy in Mexico. One of the major contributions of this work focuses on students' analysis from three different universities belonging to contrasting geographical areas, according to the ENIF classification (CNBV, 2021): Northeast (San Luis Potosí and Tamaulipas) and South-Central and Eastern (Veracruz). There are significant differences in financial literacy levels in these regions, particularly in the financial knowledge and behavior dimensions.

Regional differences in financial literacy could be explained by differences in human development levels across regions. Although Mexico remains among the countries with a high Human Development Index (HDI), ranking 77 out of 193 countries measured, it does show significant regional differences (Briano-Turrent, 2025). According to data published by the National Population Council and based on the United Nations Development Program (UNDP) methodology, in 2020, San Luis Potosí recorded an HDI of 0.77, indicating a medium-high human development level. Veracruz had an HDI of 0.74, corresponding to a medium-high human development level, while Tamaulipas surpassed both states, with an HDI of 0.80 and a high human development level (UNDP Mexico, 2024).

In this context, this research contributes to the regional comparative literature by analyzing university students from different sociodemographic regions in Mexico, generating evidence that can contribute to the design and implementation of public policies and actions to strengthen financial literacy at the regional and local levels. It also expands the international literature by addressing new sociodemographic variables that may affect university students' financial literacy, such as their parents' educational level.

### ***Literature Review***

Studies from different parts of the world show that, even though young people with university education have a higher financial literacy level than those who did not attend university (Samuelsson et al., 2023), university students, both in developed and developing countries, have low financial literacy levels (Kharel et al., 2024; Lantara, Kartini, 2015). In Ecuador, Peñarreta-Quezada et al. (2024) found that university students have a high level of financial knowledge (68 % answered more than 70 % of the questions). However, they presented average financial behavior and attitude scores. In Mexico, Merino's (2023) results show that, in terms of financial knowledge, approximately 60 % of the young people who participated in the study do not understand the concepts of inflation, interest, and financial risk. Approximately 3 out of 4 have good financial behavior, and regarding their attitude, around 70 % think about their financial future.

### ***Gender, age, and university students' financial literacy***

University students' financial literacy level has been found to be associated with gender. According to Liaqat et al. (2021) and Philippos and Avdoulas (2019), university students with

higher financial literacy levels are men. In contrast, Peñarreta-Quezada et al. (2024), Valencia-Márquez et al. (2023), and Novák et al. (2021) found no association between students' gender and their financial literacy level. Student age has also been identified as a variable that significantly influences their financial literacy level (Ruiz-Palomo et al., 2023). Peñarreta-Quezada et al. (2024) found that students aged 26 or older had higher scores on the financial knowledge and behavior dimension and, therefore, higher financial literacy levels. Based on this evidence, the first research hypothesis is presented:

H1. University students' financial literacy is significantly related to their gender and age.

***Economic determinants and university students' financial literacy***

There is evidence that students' financial literacy levels are strongly associated with their socio-economic status. Those from high-income families have higher levels of financial literacy (Lusardi, Messy, 2023; Ergün, 2017). Lantara and Kartini (2015) show that, in Indonesia, university students with higher financial literacy levels are those with higher incomes and work experience. This result is consistent with that found by Böhm et al. (2023) among university students in Slovakia and by Peñarreta-Quezada et al. (2024) in Ecuador. Based on these results, the second research hypothesis is established:

H2. Students' financial literacy has a positive and significant relationship with their income level and work experience.

***Educational determinants and university students' financial literacy***

Human capital theory posits that knowledge and education are perceived as a type of investment (Becker, 1964). According to Lusardi and Mitchell (2014), people who acquire financial knowledge have the potential to obtain above-average expected returns on their investments. From this perspective, this study addresses the relationship between financial literacy and university students' education. Educated individuals tend to be more competent in financial services and natural resources use than illiterate and unskilled individuals (Ahmad et al., 2022).

Antonio-Anderson et al. (2020) and Boisclair et al. (2017) found that higher educational levels are associated with higher financial literacy. Sarigül (2014) agrees with this result, finding that financial literacy among university students is higher among seniors than among first-year students. Preston and Wright (2024) reached the same conclusion, although they also found that the increase in financial literacy levels decreases with each additional year of study. In contrast, Novák et al.'s (2021) findings show that there was no association between students' financial literacy and their education level. It has also been shown that the area of specialization affects students' financial literacy level. In this sense, Lantara and Kartini (2015), Tavares et al. (2022), and Ergün's results (2017) show that economics and business students have a higher financial literacy level than students from other areas. However, the results by Gavurova et al. (2017) show that economics and business students' financial literacy levels are no different from those students belonging to other specialties.

The type of institution where they are enrolled is another identified variable as a determinant of students' financial literacy. Liaqat et al. (2021) and Villagómez and Hidalgo (2017) found that students at private institutions have higher levels of financial literacy. However, the results of Valencia-Márquez et al. (2023) indicate that university students' financial literacy levels do not differ by university funding source (public or private). Based on the above, the third research hypothesis is presented.

H3. University students' financial literacy is significantly related to their degree, field of study, and type of educational institution.

***Family determinants and university students' financial literacy***

According to Lusardi and Mitchell (2014), parents' educational level is a determining factor in young people's financial literacy levels. In this sense, the results of Merino (2023) and Amagir et al. (2020) show that, among young Mexicans, the mother's educational level is the only variable that significantly influences their financial literacy. Ansong and Gyensare (2012) reported the same finding, although they also noted that the father's educational level is not a determining factor in this relationship. In contrast, Böhm et al. (2023) and Philippas and Avdoulas (2019) found that the mother's educational level is not related to students' financial literacy. However, the father's educational level and having a father with a master's or doctoral degree are significantly associated with the student's financial literacy. From the above, the fourth and final hypothesis of this research is presented.

H4. Students' financial literacy has a positive and significant relationship with their parents' educational level.

## 2. Methods and Materials

### **Research Design**

The analytic cross-sectional design was adopted for this study.

### **Population and Sample**

The units of analysis are undergraduate students from three Mexican universities in three states in the Gulf-Northeast region of the country: Universidad Autónoma de San Luis Potosí (UASLP), which in the 2023-2024 academic year reported an enrollment of 23,301 at the state's capital campus; Universidad Autónoma de Tamaulipas (UAT), which registered an enrollment of 9,273 in the Ciudad Victoria campus; and Universidad Cristóbal Colón (UCC), which enrolled 1,869 students in the Veracruz campus (ANUIES, 2024). The first two operate with public funding, and the third with private funding.

### **Data Collection**

An electronic survey was administered from January to March 2024 to collect data using a non-probabilistic, self-selected sample of students across the three university campuses. Students gave their informed consent to participate in the study. Originally, 1,469 responses were received; however, after discarding incomplete and inconsistent records, a database of 1,355 students was created, equivalent to 4 % of the total population: 807 women, 525 men, and 23 students who preferred not to answer this question. Of the total, 27.1 % were enrolled at the UASLP, 38.6 % at the UAT, and 34.3 % at the UCC; 94.0 % of respondents at UASLP are enrolled in business and administration programs, while at UAT this figure is 28.9 % and at UCC 27.7 % (Table 1).

**Table 1.** Population and sample size

Institution	On-site registration				Sample				
	Women	Men	Total	%	Women	Men	Not declared	Total (%)	Adm. (%)
UASLP, San Luis Potosí Campus	12,197	11,104	23,301	65.4	234	131	2	367 (27.1)	94.0
UAT, Ciudad Victoria	5,426	3,847	9,273	29.1	284	226	13	523 (38.6)	28.9
UCC, Veracruz	1,035	834	1,869	5.5	289	168	8	465 (34.3)	27.7
<b>Total</b>	<b>18,658</b>	<b>15,785</b>	<b>34,443</b>	<b>100.0</b>	<b>807</b>	<b>525</b>	<b>23</b>	<b>1,355</b>	<b>46.1</b>

Source: own, based on ANUIES (2024) data.

### **Variables and Constructs**

The survey was structured into four sections. The first includes demographic variables (gender, age), economic variables (household income level, whether the respondent works in addition to studying), educational variables (institution, field of knowledge, academic year), and family variables (parents' educational level). The three remaining sections address questions on financial behavior, attitudes, and knowledge, consistent with the OECD-recommended questions for measuring financial literacy (Atkinson, Messy, 2012).

In order to evaluate financial knowledge (FK), seven questions are posed that assess the student's knowledge of inflation effects, simple interest, compound interest, the relationship between risk and return, and diversification and risk. If the respondent answers correctly, one point is assigned, and zero otherwise. To rule out multi-collinearity problems among items, tetrachoric coefficients are estimated, suitable for determining correlations between binary variables, with an acceptance criterion for correlations less than 0.6. The number of correct answers is then arithmetically summed to obtain a financial well-being indicator that ranges from 0 to 7. This indicator is subsequently transformed into a scale of 0 to 100.

To assess financial attitude (FA), four items were included with statements related to the preference of living in the present and not worrying about the future. For financial behavior (FB), five items were posed that describe positive financial behaviors such as budgeting, setting financial goals, making informed purchases, and paying bills on time. Both sections were coded on a five-point Likert scale according to whether the statement described the respondent. Regarding financial behavior, if the respondent agreed with the statement, it means that their behavior contributes to improving their financial literacy level. Conversely, financial attitude was assigned inverse values; that is, if the statement describes the respondent, it means their financial attitude was unfavorable to their financial literacy.

Subsequently, financial attitude and financial behavior indicators were estimated using confirmatory factor analysis. Before this, the internal consistency of the data is tested by calculating Cronbach's alpha coefficient and applying an acceptance criterion for an alpha greater than 0.65. The suitability of the data for factor analysis is also assessed using Bartlett's test of sphericity and estimating the Kaiser-Mayer-Olkin (KMO) coefficient, with acceptance criteria of  $p < 0.05$  and  $KMO > 0.65$ , respectively (Bartlett, 1937; Kaiser, 1974).

Financial attitude and financial behavior indicators are transformed to fit a scale ranging from 0 to 100, with higher scores indicating a greater contribution to the financial literacy level. Skewness and kurtosis measures are also estimated for these indicators and the financial knowledge indicator to identify whether they approximate a normal distribution. Finally, once the indicators for the three components (FK, FA, FB) are estimated and standardized, the overall financial literacy (FL) indicator is estimated by the simple average of the component scores (see Equation 1).

$$FL = \frac{FK + FA + FB}{3} ; FL, FK, FA, FB \in [0, 100] \quad (1)$$

### ***Econometric Analysis***

In this research, the dependent variable is financial literacy, which is analyzed both globally and through its components separately. It should be noted that these components can vary inversely, and therefore, it is important to analyze them independently (Atkinson, Messy, 2012; Cucinelli et al., 2019).

The independent variables are the demographic, economic, educational, and family factors which presumably determine students' financial literacy levels. The demographic variables considered are gender and age. On the one hand, gender includes three mutually exclusive categories (female, male, does not state) which receive a value of one if the respondent identified with one of them. Age, on the other hand, is treated ordinally, ranging from 17 to 25, with 25 including 16 students who declared themselves to be 25 years of age or older.

The economic variables are the household income level and whether the person works in addition to studying. Income level (n\_inc) is ordinally coded in eleven intervals of 260 US dollars (which at the time of the survey was equivalent to 5,000 Mexican pesos), starting at 0 and reaching the eleventh level, which corresponds to more than 2,600 US dollars. Whether the respondent works in addition to studying (work) is coded dichotomously, assigning one if affirmative and zero otherwise.

The educational variables are the type of institution, field of knowledge, and academic year. Institution (inst) is used to determine whether it is primarily funded by public or private resources (type\_inst); one is assigned if it is funded privately and zero if public. Field of knowledge is a categorical variable indicating whether the respondent is studying: in a business and administration program (adm\_bus), in programs such as accounting, economics, business management, or international business; in a social science program (soc\_sc), for example, criminology, communication, international relations; or in other areas (other\_area) such as nursing, medicine, engineering, veterinary medicine, gastronomy, etc. Finally, the variable academic year (acad\_uni), coded ordinally, is used to indicate the respondent's seniority, ranging from one to six.

The family variables considered are the father's educational level (f\_educ) and mother's (m\_educ), coded ordinally into three levels: no schooling, primary, or secondary school (0); high school (1); and undergraduate or graduate (2). If the parents' educational level is unknown to the student, the record is omitted from the analysis. A description of these variables is presented in Table 2.

**Table 2.** Variables description

<b>Variable</b>	<b>Description</b>	<b>Source</b>
<i>Dependent variables</i>		
Financial literacy (FL)	Continuous variable estimated by its components arithmetic average: financial knowledge, attitude and behavior. $FL \in [0, 100]$	Atkinson and Messy (2012)
Financial Knowledge (FK)	Continuous variable estimated by multiplying 100 by the percentage of correct answers in seven questions about financial knowledge. $FK \in [0, 100]$	
Financial attitude (FA)	Continuous variable estimated from four items factor analysis on a Likert scale and adjusted to a 100-point scale. $FA \in [0, 100]$	
Financial behavior (FB)	Continuous variable estimated from five-item factor analysis on a Likert scale and adjusted to a 100-point scale. $FB \in [0, 100]$	
<i>Independent variables</i>		
<i>Demographic</i>		
Gender (gender, female, male, does not state)	Set of dichotomous variables that includes three mutually exclusive categories that receive a value of one if the respondent identified with one of them and zero otherwise. $gender = \{female, male, does\ not\ state\} \in \{0, 1\}$	Lantara and Kartini (2015); Liaqat et al. (2021); Peñarreta-Quezada et al. (2024)
Age (age)	Ordinal variable that indicates the student's age. $age \in \{17, 25\}$	
<i>Economic</i>		
Income level ( $n\_inc$ )	Ordinal variable in eleven intervals of 260 US dollars, starting at 0 (0–206), continuing with 1 (261–521), 2 (522–782) and so on, consecutively, until reaching the eleventh level (more than 2,600). $n\_inc \in \{0, 1, \dots, 10\}$	Lantara and Kartini (2015); Lusardi and Messy (2023); Peñarreta-Quezada et al. (2024)
Work status (work)	Dichotomous variable indicating whether the respondent works in addition to studying (1) or not (0). $work \in \{0, 1\}$	
<i>Educational</i>		
Institution ( $inst$ )	Nominal variable that identifies the institution in which the person surveyed is enrolled. $inst \in \{UASLP, UAT, UCC\}$	Chen and Volpe (1998); Lantara and Kartini (2015); Liaqat et al. (2021)
Type of institution ( $type\_inst$ )	Dichotomous variable that receives the value of one if the institution is financed primarily with private resources and zero with public resources. $type\_inst \in \{0, 1\}$	
Field of knowledge ( $field$ )	Categorical variable that indicates whether the person surveyed studies in a program in the business and administration area ( $adm\_bus$ ), in the social sciences area ( $soc\_sc$ ), or in other areas of specialty ( $other\_field$ ). $esp = \{adm\_bus, soc\_sc, other\_field\} \in \{0, 1\}$	
Academic year ( $acad\_year$ )	Ordinal variable indicating the seniority the respondent has at their current university. $acad\_year \in \{1, 2, \dots, 6\}$	
<i>Parents' education</i>		
Parents' educational level	Ordinal variables coded at three levels: no education, primary, or secondary (0); high school (1); and	Lusardi and Messy (2023);

Variable	Description	Source
( <i>m_educ</i> , <i>f_educ</i> )	undergraduate or graduate (2). If parents' educational level is unknown to the student, the record is omitted from the analysis. $m\_educ, f\_educ \in \{0, 1, 2\}$	Merino (2023)

Using these variables, four multiple linear regression models and a structural equation model were constructed. The analysis was performed using Stata version 14.0. The first four models were used to individually analyze the relationship between the determining factors described and the dependent variables: financial literacy (FL), financial knowledge (FK), financial attitude (FA), and financial behavior (FB), as shown in equation 2:

$$FX = a_{X0} + a_{X1} \cdot gender + a_{X2} \cdot age + a_{X3} \cdot n\_inc + a_{X4} \cdot work + a_{X5} \cdot field + a_{X6} \cdot acad\_year + a_{X7} \cdot m\_educ + a_{X8} \cdot f\_educ + error \quad (2)$$

The structure of equation 2 works for both overall financial literacy and its components,  $X = \{FL, FK, FA, FB\}$ . Additionally, the gender variable includes the categories "female" and "male," with the "does not state" category as the reference (equation 3):

$$a_{X1} \cdot gender = a_{X1m} \cdot woman + a_{X1h} \cdot man \quad (3)$$

Furthermore, the specialty variable (field) includes the categories "business and administration" (*adm\_bus*) and "social sciences" (*soc\_cs*), which are compared with the "other\_specialties" category (*other\_field*) as the reference (equation 4):

$$a_{X6} \cdot field = a_{X6a} \cdot adm\_bus + a_{X6h} \cdot soc\_sc \quad (4)$$

### 3. Results

#### **Financial Literacy Factor Analysis**

In this study, indicators were estimated to measure financial knowledge, financial attitude, and financial behavior among university students. Financial knowledge (FK) was calculated by an arithmetic seven binary-coded items sum, with a value of 1 if the question was answered correctly and 0 otherwise.

Similarly, indicators for financial attitude (FA) and financial behavior (FB) were estimated using confirmatory factor analysis with principal components and Varimax rotation. Tests were previously conducted to determine the internal consistency of the items, the adequacy of the sample, and the feasibility of performing a factor analysis on the data.

In order to assess internal consistency, Cronbach's alpha coefficients were estimated for both constructs. On the one hand, with the four items originally proposed for financial attitude (FA), the alpha coefficient did not exceed the acceptance threshold of 0.65. However, by omitting FA3 and retaining FA1, FA2, and FA4, the alpha coefficient registered a value of 0.6823, validating the items' internal consistency. Furthermore, the five items proposed to assess financial behavior (FB) obtained an alpha coefficient of 0.7831, thus accepting their internal consistency.

Bartlett's test of sphericity was applied to the above items, yielding a  $p > 0.001$  for each of the constructs, indicating that the sample was adequate for processing. Likewise, the Kaiser-Meyer-Olkin test yielded values of 0.652 for financial attitude and 0.778 for financial behavior, indicating that the constructs are acceptable for factor analysis.

To estimate the financial attitude and behavior indicators, confirmatory factor analyses were conducted using principal component factors with Varimax rotation. As a result, it was found that each construct could be represented by a single factor, thus meeting Kaiser's (1974) criterion, which requires retaining factors with eigenvalues greater than or equal to 1. Furthermore, it was observed that for financial attitude (FA), this factor explains 61.2 % of the variance, while the factor retained for financial behavior (FB) explains 54.4 % of its variance (Table 3).

**Table 3.** Factor analysis of financial attitude and financial behavior

Variable/Item	Load Factor	Explained Variance
Financial attitude		0.612
FA1	0.727	
FA2	0.814	
FA4	0.804	
Financial behavior		0.541
FB1	0.709	
FB2	0.789	
FB3	0.870	
FB4	0.641	
FB5	0.645	

Thus, indicators were estimated to measure financial attitude (FA) and financial behavior (FB). These, along with the previously calculated financial knowledge (FK) indicator, were transformed to fit a scale of 0 to 100, where 100 represents the highest score in each financial literacy (FL) component. The latter is estimated by taking the simple average of the three components. Finally, it was verified that the four constructs (FA, FB, FK, FL) met the normality tests before proceeding to the regression analysis, as shown in [Table 4](#).

**Table 4.** Normality tests for financial literacy constructs

Indicator	Observ.	Mean	St. Dev.	Asymmetry	Kurtosis
Financial knowledge (FK)	1,355	66.7	19.9	-0.9	4.1
Financial attitude (FA)	1,355	59.4	23.9	-0.2	2.6
Financial behavior (FB)	1,355	64.3	22.2	-0.4	2.7
Financial literacy (FL)	1,355	63.5	14.1	-0.3	3.2

The 1,355 students who participated in the study recorded an average of 63.5 points on a scale of 0 to 100, with a standard deviation (SD) of 14.1. By component, the highest score was for financial knowledge with 66.7 (SD = 19.9), followed by financial behavior with 64.3 (SD = 22.2), and financial attitude with 59.4 (SD = 23.9).

#### ***Financial Literacy Descriptive Statistics***

There was a significant difference observed in financial behavior, financial knowledge, and the overall financial literacy indicator, favoring men ( $p < 0.001$ ). Furthermore, the older the students, the greater their financial knowledge ( $p < 0.05$ ). Likewise, the higher the household income, the better their financial behavior and the more accurate their financial knowledge scores were ( $p < 0.001$  and  $p < 0.01$ , respectively). Similarly, when university students work in addition to studying, their financial behavior and knowledge improve significantly compared to their non-working peers ( $p < 0.001$  and  $p < 0.05$ , respectively). These results are shown in [Table 5](#).

By educational institution, students at the UASLP obtained the best results in financial attitude and financial knowledge, while, in financial behavior, the differences in results were not statistically significant. However, no significant difference was found in financial literacy between students at public and private institutions.

By field of knowledge, students in business and administration-related programs performed significantly better on financial attitude, financial knowledge, and overall financial literacy ( $p < 0.001$ ). However, only the financial attitude component showed significant differences related to the academic year in which the students were enrolled ( $p < 0.05$ ).

**Table 5.** Financial literacy by demographic and economic variables

Variables	Observations		Financial attitude (FA)		Financial behavior (FB)		Financial knowledge (FK)		Financial literacy (FL)	
	Freq.	%	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
<i>Demographics</i>										
Gender			F=0.11		F=14.68***		F=13.31***		F=13.05***	
Women	807	59.6	59.6	23.2	61.9	22.2	64.6	19.4	62.1	13.8
Men	525	38.7	59.1	25.0	68.3	21.5	70.1	20.0	65.8	14.2
Does not declare	23	1.7	58.0	25.8	57.5	25.3	60.2	25.1	58.6	16.1
Age			F=1.17		F=0.87		F=2.28*		F=0.65	
17	30	2.2	59.2	24.1	57.2	22.3	61.4	23.5	59.3	17.5
18	243	17.9	61.0	22.3	64.1	22.4	64.5	20.3	63.2	14.0
19	307	22.7	58.0	23.7	63.7	21.9	67.4	20.7	63.1	13.6
20	247	18.2	59.6	23.7	65.8	21.7	65.9	18.5	63.8	13.7
21	270	19.9	60.2	23.1	63.9	21.9	66.8	20.2	63.6	14.1
22	136	10.0	59.0	25.6	64.6	23.2	68.0	18.6	63.8	13.6
23	56	4.1	54.7	28.2	66.5	23.1	70.2	18.1	63.8	15.6
24	30	2.2	67.5	24.7	61.6	24.5	62.9	21.4	64.0	17.6
25	36	2.7	54.9	29.7	68.7	21.4	76.6	17.8	66.7	16.2
<i>Economic</i>										
Income level*			F=1.44		F=4.09***		F=2.42**		F=1.68	
0 - 260	226	16.7	60.2	25.7	63.6	22.8	62.8	21.4	62.2	14.6
261 - 521	262	19.3	61.1	23.1	61.2	23.7	63.8	18.9	62.0	14.1
522 - 782	244	18.0	61.2	23.8	62.1	21.2	68.1	18.0	63.8	14.1
783 - 1,043	150	11.1	57.7	24.0	62.2	20.9	67.8	18.0	62.6	13.0
1,044 - 1,304	104	7.7	60.5	24.1	67.1	22.5	70.1	19.8	65.9	15.8
1,305 - 1,564	111	8.2	60.4	21.5	63.2	22.1	68.0	20.7	63.8	12.7
1,565 - 1,825	65	4.8	58.3	21.9	73.8	18.2	68.8	21.6	67.0	13.4
1,826 - 2,086	49	3.6	55.2	24.9	66.1	19.7	69.4	19.3	63.6	12.5
2,087 - 2,347	33	2.4	51.7	26.9	66.8	23.6	65.8	25.2	61.4	18.2
2,348 - 2,600	29	2.1	58.9	19.9	71.8	17.8	71.4	16.2	67.4	10.8
More than 2,600	82	6.1	53.4	25.0	73.1	21.3	69.3	22.8	65.3	14.7
Work status			F=1.36		F=18.52***		F=5.87*		F=16.46***	
Works and studies	583	43.0	60.3	24.1	67.3	20.8	68.2	19.0	65.2	13.6
Does not work	772	57.0	58.7	23.8	62.1	22.9	65.5	20.5	62.1	14.3
<b>Total</b>	<b>1,355</b>	<b>100.0</b>	<b>59.4</b>	<b>23.9</b>	<b>64.3</b>	<b>22.2</b>	<b>66.7</b>	<b>19.9</b>	<b>63.5</b>	<b>14.1</b>

Statistical significance with two-tailed ANOVA, F statistic and p-value:

\*p < 0.05; \*\*p < 0.01; \*\*\*p < 0.001.

\* Income level declared in US dollars. Peso/dollar exchange rate June 5th, 2025 (19.17 Mexican pesos per dollar). Calculated with data from Banco de México exchange market web page.

Retrieved from: <https://www.banxico.org.mx/tipcamb/main.do?page=tip&idioma=sp>

Additionally, it was observed that the higher the mother's educational level, the higher the scores obtained by her children in financial behavior and knowledge ( $p < 0.001$ ) and, in general, in financial literacy ( $p < 0.01$ ). Similarly, the father's educational level is positively related to university students' performance in financial knowledge ( $p < 0.01$ ). However, the higher the father's education, the lower their score in financial attitude ( $p < 0.01$ ). These results can be seen in [Table 6](#).

**Table 6.** Financial literacy by educational and family variables

Variables	Observations		Financial attitude (FA)		Financial behavior (FB)		Financial knowledge (FK)		Financial literacy (FL)	
	Freq.	%	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
<i>Educational</i>										
University			F=6.84**		F=0.08		F=14.71***		F=10.48***	
UASLP	367	27.1	63.0	22.5	64.1	19.6	70.8	17.8	66.0	12.2
UAT	523	38.6	57.0	25.4	64.3	23.6	63.5	21.2	61.6	14.9
UCC	465	34.3	59.3	22.9	64.7	22.5	66.9	19.5	63.6	14.4
Institution			F=0.02		F=0.14		F=0.11		F=0.07	
Public	890	65.7	59.5	24.5	64.2	22.0	66.5	20.2	63.4	14.0
Private	465	34.3	59.3	22.9	64.7	22.5	66.9	19.5	63.6	14.4
Field of knowledge			F=7.43***		F=2.20		F=30.74***		F=23.79***	
Administration	625	46.1	62.0	23.0	65.7	20.1	71.1	18.0	66.2	12.6
Social Sc.	379	28.0	56.4	25.5	63.6	24.2	61.8	19.5	60.6	14.8
Other	351	25.9	58.0	23.4	62.8	23.4	64.1	21.9	61.6	15.0
Academic year			F=2.70*		F=0.73		F=2.18		F=1.63	
1	244	18.0	59.6	23.3	64.5	23.6	63.8	21.4	62.6	15.6
2	524	38.7	60.2	23.5	64.2	21.4	68.2	19.4	64.2	13.2
3	255	18.8	56.2	24.6	64.6	22.7	66.0	19.1	62.3	13.8
4	257	19.0	60.7	23.9	63.0	22.2	66.1	20.4	63.3	14.8
5	67	4.9	56.5	26.1	67.8	21.2	70.1	18.2	64.8	13.9
6	8	0.6	81.2	13.5	72.4	16.7	64.3	22.9	72.6	10.9
<i>Educational level of parents</i>										
Mother's education			F=1.83		F=7.76***		F=7.18***		F=4.13**	
Up to secondary	276	20.4	61.7	25.1	58.7	21.2	65.8	19.4	62.1	14.4
High School	436	32.2	60.0	24.1	65.8	22.4	66.9	18.3	64.2	13.9
Bachelor or postgraduate	572	42.2	58.2	23.4	66.0	22.0	68.1	19.9	64.1	13.9
Does not know	71	5.2	56.3	22.6	63.9	23.0	56.7	27.4	59.0	15.5
Father's education			F=3.80**		F=1.00		F=3.92**		F=1.79	
Up to secondary	246	18.2	62.4	24.1	62.2	22.4	65.4	20.2	63.3	14.2
High School	396	29.2	61.2	23.1	64.8	20.6	66.8	19.6	64.3	12.8
Bachelor or postgraduate	579	42.7	57.5	24.6	65.0	23.0	68.1	19.5	63.5	14.8
Does not know	134	9.9	56.8	22.6	64.4	22.8	61.9	21.2	61.0	14.5
<b>Total</b>	<b>1,355</b>	<b>100.0</b>	<b>59.4</b>	<b>23.9</b>	<b>64.3</b>	<b>22.2</b>	<b>66.7</b>	<b>19.9</b>	<b>63.5</b>	<b>14.1</b>
Statistical significance with two-tailed ANOVA, F statistic and p-value: *p < 0.05; **p < 0.01; ***p < 0.001.										

### ***Financial Literacy Econometric Analysis***

Different demographic, economic, educational, and family factors determine the financial literacy of those university students who participated in this research. It should be noted that these factors vary according to each financial literacy component, even inversely to the other components.

Financial attitude is primarily determined by income level ( $p > 0.05$ ), although students from higher-income families reported being less future-oriented and more inclined to make impulse purchases. Similarly, those enrolled in social science programs ( $p < 0.01$ ) and other majors unrelated to management and business ( $p < 0.05$ ) were less inclined to save. In contrast, students

from private institutions demonstrated a financial attitude compatible with foresight and savings, compared to their peers from public institutions (Table 7).

**Table 7.** Analysis of the determinants of financial literacy

Variables	Financial attitude (FA)			Financial behavior (FB)			Financial knowledge (FK)			Financial literacy (FL)		
	Coef.	E.E.	p	Coef.	E.E.	p	Coef.	E.E.	p	Coef.	E.E.	p
Gender (ref. man)	-0.144	1.485		-4.902	1.342	***	-4.804	1.157	***	-3.283	0.844	***
Age	-0.583	0.543		0.459	0.491		1.238	0.424	**	0.371	0.309	
Income level	-0.738	0.263	**	0.670	0.238	**	0.344	0.205		0.092	0.150	
Work	2.704	1.505		4.802	1.361	***	1.003	1.173		2.836	0.856	**
Type of institution (ref. public)	3.522	1.705	*	1.562	1.542		3.242	1.329	*	2.775	0.970	**
Field of knowledge (ref. Adm)												
Social Sc.	-6.273	1.756	***	-1.460	1.587		-10.251	1.369	***	-5.995	0.998	***
Other	-4.894	1.825	**	-2.377	1.650		-7.797	1.423	***	-5.023	1.038	***
Academic year	0.745	0.818		-0.257	0.740		-0.016	0.638		0.157	0.465	
Father educ level	-1.913	1.078		-0.469	0.974		0.983	0.840		-0.466	0.613	
Mother educ level	-0.083	1.075		2.688	0.972	**	1.019	0.838		1.208	0.611	*
Constant	75.024	10.147		52.703	9.176		45.190	7.911		57.639	5.771	
Observations		1,174			1,174			1,174			1,174	
P>F		0.001			0.000			0.000			0.000	
R2 Adjusted		0.018			0.047			0.083			0.064	

Significance: \*p < 0.05; \*\*p < 0.01; \*\*\*p < 0.001.

In this sense, financial behavior is significantly related to gender, favoring men, and to work status favoring working students ( $p < 0.001$ ). Likewise, prudent and sustainable financial behavior is positively associated with family income and the mother's education level ( $p < 0.01$ ).

Furthermore, financial knowledge shows a significant difference by gender, favoring men, and by field of knowledge, favoring business and administration students ( $p < 0.001$ ). Furthermore, among the students who participated in the research, age is positively associated with financial knowledge ( $p < 0.01$ ), as well as being enrolled in a private institution is ( $p < 0.05$ ).

Finally, in financial literacy comprehensive assessment, the most influential factors were being male and enrolled in a business and administration-related program ( $p < 0.001$ ), working in addition to studying and being enrolled in a private institution ( $p < 0.01$ ), and having a student's mother with a high education level ( $p < 0.05$ ). In contrast, the student's academic year and the father's educational level were not significant for financial literacy or any of its components.

#### 4. Discussion

The results obtained in this study coincide with those of Peñarreta-Quezada et al. (2024), where students' scores in the financial knowledge dimension were higher than those obtained in the financial behavior and financial attitude dimensions. The results obtained on the questions measuring financial knowledge were better than those reported by Merino (2023) in another population of Mexican university students. They also coincide with the results of Hernández-Mejía et al. (2022), who identified that, in general, Mexicans answered the question about inflation better and the question they failed the most was the one on calculating compound interest. The financial behavior of 71.5 % of the university students who participated in the study was short-term, as they did not set any financial goals. In this sense, they coincide with Lara and Ortega (2016), who described young people of this age as living in the present without worrying about the medium and long-term future. Furthermore, the results regarding financial behavior coincide with Merino's

(2023), in that timely debt repayment and prudent consumption are the best practices that a greater percentage of young people follow.

Although the participants are university students, their financial knowledge is low. Only the inflation awareness result is better than that reported by the ENIF 2021 for the general Mexican population. The rest of the knowledge assessed was lower in the student population, highlighting the low result obtained in the compound interest calculation, fifteen percentage points below that reported by the ENIF for the Mexican population with only primary education. Students' financial behavior is also lower than that reported by the ENIF 2021. For example, the number of students who prepare a budget is 27.4 % lower than the number of Mexicans with bachelor's degrees who budget. Regarding timely bill payment, this difference is 28.9 %. As for financial literacy, 9.0 % more students are inclined to save than the percentage of the Mexican population with a bachelor's degree who reported this attitude in the ENIF 2021. Students' scores were lower for the remaining financial literacy indicators.

On financial literacy determinants, the results show a gender difference favoring men, consistent with Liaqat et al. (2021); Philippas and Avdoulas (2019); and Lantara and Kartini's (2015) findings in university student populations. Regarding age, although the present study found no significant difference in the relationship between this variable and financial literacy, the results are consistent with those of Peñarreta-Quezada et al. (2024), who found that young people's financial knowledge increases with age.

The economic determinants analysis results show that students' family income does not influence their financial literacy, which contrasts with the findings by Lusardi and Messy (2023) and Ergün (2017). However, work experience is a significant financial literacy determinant. This result is consistent with those of Ergün (2017), Böhm et al. (2023), and Lantara and Kartini's (2015). The dimension analysis shows that income and work economic determinants do not influence students' financial knowledge, but they do influence their behavior. This contrasts with the findings of Peñarreta-Quezada et al. (2024), who identified that students' work experience influences their financial knowledge level and attitudes towards finance, but not their behavior. As for the educational variables analyzed, the type of university and the field of knowledge have a significant relationship with university students' financial literacy. When analyzing by dimension, it is observed that the relationship between these variables is significant with students' financial knowledge, but not with their behavior. Lantara and Kartini (2015), Tavares et al. (2022), and Ergün (2017), agree that having a higher financial literacy level, increases when studying a business and administration program.

The results on the relationship between financial literacy level and type of university are consistent with those of Liaqat et al. (2021) and Villagómez and Hidalgo (2017), in that the highest financial literacy level is found among students from private institutions. In contrast to the results obtained by Antonio-Anderson et al. (2020), Boisclair et al. (2017), Sarigül (2014) and Preston and Wright (2024), students' financial knowledge is not associated with their degree. Finally, as reported by Ansong and Gyensare (2012), the results show that it is the mother's educational level, and not the father's, that is a significant determinant of university students' financial literacy.

## 5. Conclusion

This research aimed to analyze the relationship between economic, demographic, educational, and family determinants and university students' financial literacy in Mexico. It was identified that there is a gender gap in financial literacy, and that the type of university, the students' field of knowledge, work experience, and their mother's educational level are the most significant financial literacy determinants.

This study addresses a gap in the literature by analyzing financial literacy level in general and by each of its three dimensions (knowledge, behavior, and attitude) in a population of university students living in different states in Mexico, attending different types of universities, and studying programs in different fields of knowledge. The results can serve as a basis for designing policies aimed at improving university students' financial literacy across Mexico. Although some previous studies have identified some financial literacy determinants among university students, these are limited in the Mexican context; they have not conducted comparative analyses by region or included sociodemographic variables such as parents' educational level.

Future research can analyze the differences in teaching-learning content and strategies, between public and private universities to identify best practices that contribute to increasing their students' financial knowledge, behavior, and attitudes. Furthermore, this type of study can be extended to other Latin American countries with similar financial literacy levels to identify how they have addressed the problem and the actions implemented to strengthen financial literacy.

## 6. Declarations

### ***Ethics approval and consent to participate***

The authors declare that all methods used in this project complied with the 2024 revision of the Declaration of Helsinki. The Institutional Review Boards of the UASLP, UAT, and UCC approved the study's ethical standards. Also, all individuals participating in the study gave their express, written consent.

### ***Consent for publication***

The authors affirm that study participants provided informed consent for participation and publication. Participants signed informed consent regarding publishing their data.

### ***Availability of data and materials***

Data and materials associated with this study are available upon request.

### ***Conflict of interest statement***

The authors report no conflicts of interest.

### ***Funding***


There is no funding to support this research. However, the authors sincerely thank the Centre for Behaviour and Wellness Advocacy, Ghana, for providing financial support through the Institutional Open Access Publication Fund.

### ***Authors' contributions***


This document is the work of the authors, as an intellectual contribution to the academic work, and they have approved it for publication. Conceptualization: EMG, OGM and GCBT, methodology, data curation, data analysis: OGM, writing – original draft preparation, writing: EMG, OGM and GCBT; writing – review and editing: EMG; writing – supervision: OGM and GCBT. All authors have read and agreed to the final version of the manuscript for publication.

## Authors' ORCID

Elena Moreno-García

 <https://orcid.org/0000-0001-9591-5921>

Oswaldo García-Mata

 <https://orcid.org/0000-0001-7791-0983>

Guadalupe del Carmen Briano-Turrent

 <https://orcid.org/0000-0001-8241-0385>

## References

[Ahmad et al., 2022](#) – Ahmad, M., Ahmed, Z., Yang, X., Hussain, N., Sinha, A (2022). Financial development and environmental degradation: do human capital and institutional quality make a difference? *Gondwana Research*. 105: 299-310. DOI: <https://doi.org/10.1016/j.gr.2021.09.012>

[Amagir et al., 2020](#) – Amagir, A., Groot, W., van den Brink, H.M., Wilschut, A. (2020). Financial Literacy of High School Students in the Netherlands: Knowledge, Attitudes, Self-Efficacy, and Behavior. *International Review of Economics Education*. 34: 1-15. DOI: <https://doi.org/10.1016/j.iree.2020.100185>

[Ansong, Gyensare, 2012](#) – Ansong, A., Gyensare, M. (2012). Determinants of university working-students' financial literacy at the University of Cape Coast, Ghana. *International Journal of Business and Management*. 7(9): 126-133. DOI: <http://dx.doi.org/10.5539/ijbm.v7n9p126>

[Antonio-Anderson et al., 2020](#) – Antonio-Anderson, C., Peña-Cárdenas, M.C., López, C.P. (2020). Determinantes de la Alfabetización Financiera. *Investigación Administrativa*. 49(125): 1-15. DOI: <https://doi.org/10.35426/iav49n125.05>

[ANUIES, 2024](#) – ANUIES. Asociación Nacional de Universidades e Instituciones de Educación Superior, Información estadística de educación Superior. 2024. [Electronic resource]. URL: <http://www.anui.es/informacion-y-servicios/informacion-estadistica-de-educacion-superior>

[Atkinson, Messy, 2012](#) – Atkinson, A., Messy, F. (2012). Measuring financial literacy: Results of the OECD / International Network on Financial Education (INFE) Pilot Study. DOI: <https://dx.doi.org/10.1787/5k9csfs90fr4-en>

- Avendaño, et al., 2021** – Avendaño, W.R., Rueda, G., Velasco, B.M. (2021). Percepciones y habilidades financieras en estudiantes universitarios. *Formación Universitaria*. 14(3): 95-104. DOI: <http://dx.doi.org/10.4067/S0718-50062021000300095>
- Bartlett, 1937** – Bartlett, M.S. (1937). Properties of sufficiency and statistical tests. *Proceedings of the Royal Society of London. Series A – Mathematical and Physical Sciences*. 160(901): 268-282. DOI: <https://doi.org/10.1098/rspa.1937.0109>
- Becker, 1993** – Becker, J.G.S. (1993). *Human capital: A theoretical analysis with special reference to education*, 3a. Ed., 1-389. The University of Chicago Pres. Chicago, United States.
- Böhm et al., 2023** – Böhm, P., Böhmová, G., Gazdíková, J., Šimková, V. (2023). Determinants of Financial Literacy: Analysis of the Impact of Family and Socioeconomic Variables on Undergraduate Students in the Slovak Republic. *Journal of Risk and Financial Management*. 16(4): 1-20. DOI: <https://doi.org/10.3390/jrfm16040252>
- Boisclair et al., 2017** – Boisclair, D., Lusardi, A., Michaud, P. (2017). Financial literacy and retirement planning in Canada. *Journal of Pension Economics and Finance*. 16(3): 277-296. DOI: <https://doi.org/10.1017/S1474747215000311>
- Briano-Turrent, 2025** – Briano-Turrent, G. (2025). The effect of financial inclusion on economic and social indicators in Mexico. *Latin American Journal of Central Banking*. 6(1): 1-16. DOI: <https://doi.org/10.1016/j.latcb.2024.100161>
- Chen, Volpe, 2021** – Chen, H., Volpe, R. (2021). An analysis of personal financial literacy among college students. *Financial Services Review*. 7(2): 107-128. DOI: [https://doi.org/10.1016/S1057-0810\(99\)80006-7](https://doi.org/10.1016/S1057-0810(99)80006-7)
- CNBV, 2021** – CNBV, Comisión Nacional Bancaria y de Valores. Encuesta Nacional de Inclusión Financiera ENIF 2021: Reporte de Resultados. 2021. [Electronic resource]. URL: <http://bit.ly/ENIFCNBV>
- CNBV, 2022** – CNBV. Comisión Nacional Bancaria y de Valores, Boletín Trimestral de Inclusión Financiera. 2022. [Electronic resource]. URL: [https://www.gob.mx/cms/uploads/attachment/file/765094/Boletin\\_IF\\_3T\\_2022.pdf](https://www.gob.mx/cms/uploads/attachment/file/765094/Boletin_IF_3T_2022.pdf)
- Cucinelli et al., 2019** – Cucinelli, D., Trivellato, P., Zenga, M. (2019). Financial literacy: The role of the local context. *Journal of Consumer Affairs*. 53(4): 1874-1919. DOI: <http://doi.org/10.1111/joca.12270>
- Culebro-Martínez et al., 2025** – Culebro-Martínez, R., Larracilla-Salazar, N., Moreno-García, E. (2025). Objective and subjective financial wellbeing: A gender study of financial behavior in Mexico. *Journal of Advocacy, Research and Education*. 12(1): 59-74. DOI: <http://doi.org/10.13187/jare.2025.1.59>
- Ergün, 2017** – Ergün, K. (2017). Financial literacy among university students: A study in eight European countries. *International Journal of Consumer Studies*. 42(1): 2-15. DOI: <http://doi.org/10.1111/ijcs.12408>
- Escalera-Chávez et al., 2025** – Escalera-Chávez, M., Tejeda-Peña, E., García-Santillán, A. (2025). Financial capabilities and their relationship with financial well-being: Are there gender differences? *Journal of Advocacy, Research and Education*. 12(1): 33-45. DOI: <http://doi.org/10.13187/jare.2025.1.33>
- García-Mata, 2021** – García-Mata, O. (2021). Una aproximación regional al alfabetismo financiero en México. *Economía, Sociedad y Territorio*. 21(65): 147-177. DOI: <https://doi.org/10.22136/est20211641>
- Gavurova et al., 2017** – Gavurova, B., Huculova, E., Kubak, M., Cepel, M. (2017). The state of students' financial literacy in selected Slovak universities and its relationship with active pension savings. *Economics and Sociology*. 10(3): 206-219. DOI: <https://doi.org/10.14254/2071-789X.2017/10-3/15>
- Hernández-Mejía et al., 2022** – Hernández-Mejía, S., García-Santillán, A., Moreno-García, E. (2022). Financial literacy and its relationship with sociodemographic variables. *Economics and Sociology*. 15(1): 40-55. DOI: <https://doi.org/10.14254/2071-789X.2022/15-1/3>
- Kaiser, 1974** – Kaiser, H.F. (1974). An index of factorial simplicity. *Psychometrika*. 39(1): 31-36. DOI: <https://doi.org/10.1007/BF02291575>
- Kaur et al., 2015** – Kaur, M., Vhora, T., Arora, A. (2015). Financial literacy among university students: A study of Guru Nanak Dev University, Amritsar, Punjab. *Asia-Pacific Journal of*

*Management Research and Innovation*. 11(2): 143-152. DOI: <https://doi.org/10.1177/2319510X15576178>

**Kharel et al., 2024** – Kharel, K.R., Upadhyaya, Y.M., Acharya, B., Budhathoki, D.K., Gyawali, A. (2024). Financial literacy among management students: Insights from universities in Nepal. *Knowledge and Performance Management*. 8(1): 63-73. DOI: [https://doi.org/10.21511/kpm.08\(1\).2024.05](https://doi.org/10.21511/kpm.08(1).2024.05)

**Lantara, Kartini, 2015** – Lantara, I.W.N., Kartini, N.K.R. (2015). Financial literacy among university students: Empirical evidence from Indonesia. *Journal of Indonesian Economy and Business*. 30(3): 247-256. DOI: <https://doi.org/10.22146/jieb.10314>

**Lara, Ortega, 2016** – Lara, I., Ortega, I. (2016). Los consumidores de la Generación Z impulsan la transformación digital de las empresas. *Revista de Estudios de Juventud*. 114: 71 – 82.

**Liaqat et al., 2020** – Liaqat, F., Mahmood, K., Ali, F. (2020). Demographic and socio-economic differences in financial information literacy among university students. *Information Development*. 37(3): 376-388. DOI: <https://doi.org/10.1177/0266666920939601>

**Lopus et al., 2019** – Lopus, J.S., Amidjono, D.S., Grimes, P.W. (2019). Improving financial literacy of the poor and vulnerable in Indonesia: An empirical analysis. *International Review of Economics Education*. 32: 1-14. DOI: <https://doi.org/10.1016/j.iree.2019.100168>

**Lusardi, Mitchell, 2014** – Lusardi, A., Mitchell, O.S. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature*. 52(1): 5-44. DOI: <http://dx.doi.org/10.1257/jel.52.1.5>

**Lusardi, Messy, 2023** – Lusardi, A., Messy, F. (2023). The importance of financial literacy and its impact on financial wellbeing. *Journal of Financial Literacy and Wellbeing*. 1: 1-11. DOI: <http://doi.org/10.1017/flw.2023.8>

**Maceda-Méndez, Espinosa-Espíndola, 2024** – Maceda-Méndez, A., Espinosa-Espíndola, M.T. (2024). Análisis por regiones del índice de competencias económico-financieras en México. *Inter Disciplina*. 12(34): 165-191. DOI: <https://doi.org/10.22201/ceiich.24485705e.2024.34.84934>

**Merino, 2023** – Merino, E.L. (2023). Factores que influyen en la educación financiera de los jóvenes de Celaya, Guanajuato, México. *Revista Mexicana de Economía y Finanzas, Nueva Época*. 18(3): 1-21. DOI: <https://doi.org/10.21919/remef.v18i3.890>

**Novák et al., 2021** – Novák, M., Trnovsky, K., Darmo, L. (2021). Financial literacy survey in the Slovak Republic. *International Journal of Interdisciplinary Educational Studies*. 16(1): 39-56. DOI: <https://doi.org/10.18848/2327-011X/CGP/v16i01/39-56>

**OECD, 2017** – OECD. Organization for Economic Cooperation and Development, Overview: Students' financial literacy, in PISA 2015 Results (Volume IV): Students' Financial Literacy. 1-270, OECD Publishing, Paris, France. 2017.

**OECD/INFE, 2020** – OECD/INFE. Organization for Economic Cooperation and Development / International Network on Financial Education, International survey of adult financial literacy. 2020. [Electronic resource]. URL: <http://www.oecd.org/financial/education/launchoftheoecdinfeglobalfinancialliteracysurveyreport.htm>

**Oseifuah et al., 2018** – Oseifuah, E., Gyekye, A., Formadi, P. (2018). Financial literacy among undergraduate students: Empirical evidence from Ghana. *Academy of Accounting and Financial Studies Journal*. 22(6): 1-17.

**Peñarreta-Quezada et al., 2024** – Peñarreta-Quezada, M-A., Salas-Tenesaca, E-E., Álvarez-García, J., del Río-Rama, M. (2024). Variables sociodemográficas y niveles de educación financiera en jóvenes universitarios de Ecuador. *Revista Mexicana de Economía y Finanzas, Nueva Época*. 19(1): 1-15. DOI: <https://doi.org/10.21919/remef.v19i1.920>

**Philippas, Avdoulas, 2019** – Philippas, N.D., Avdoulas, C. (2019). Financial literacy and financial well-being among Generation-Z university students: Evidence from Greece. *European Journal of Finance*. 26(4-5): 360-381. DOI: <https://doi.org/10.1080/1351847X.2019.1701512>

**PNUD México, 2024** – PNUD México. Programa de las Naciones Unidas para el Desarrollo México, Desarrollo Humano en América Latina y el Caribe mejora más que en otras regiones, pero no logra recuperar niveles prepandemia, revela el PNUD. 2024. URL: <https://shorturl.at/Q4Bge>

**Preston, Wright, 2024** – Preston, A., Wright, R.E. (2024). When does the gender gap in financial literacy begin? *Economic Record*. 100(328): 44-73. DOI: <https://doi.org/10.1111/1475-4932.12785>

**Ruiz-Palomo et al., 2023** – Ruiz-Palomo, D., Galache-Laza, M.T., Cisneros-Ruiz, A.J., García-Lopera, F. (2023). Financial knowledge of pre-university students: Effects of age and gender. *Heliyon*. 9(4): 1-10. DOI: <https://doi.org/10.1016/j.heliyon.2023.e15440>

**Samuelsson et al., 2023** – Samuelsson, E., Levinsson, H., Ahlström, R. (2023). Financial literacy, personal financial situation, and mental health among young adults in Sweden. *Journal of Financial Literacy and Wellbeing*. 1(3): 541-564. DOI: <https://doi.org/10.1017/flw.2024.3>

**Sarigül, 2014** – Sarigül, H. (2014). A survey of financial literacy among university students, *Journal of Accounting and Finance*. (64): 207-224.

**Tavares et al., 2022** – Tavares, F., Almeida, L., Soares, V., Tavares, V. (2022). Financial literacy: An exploratory analysis in Portugal. *Studies in Business and Economics*. 17(2): 252-269. DOI: <https://doi.org/10.2478/sbe-2022-0037>

**Tejeda-Peña et al., 2023** – Tejeda-Peña, E., Molchanova, V., García-Santillán, A., (2023). Financial literacy on college students in the context of Tuxtepec, Oaxaca. *European Journal of Contemporary Education*. 12(1): 221-229. DOI: <https://doi.org/10.13187/ejced.2023.1.221>

**Valencia-Márquez et al., 2023** – Valencia-Márquez, L., Escalera-Chávez, M., García-Santillán, A., Molchanova, V. (2023). Financial skills and gender difference on college students. *European Journal of Contemporary Education*. 12(4): 1463-1471. DOI: <https://doi.org/10.13187/ejced.2023.4.1463>

**Villagómez, Hidalgo, 2017** – Villagómez, A., Hidalgo, J.A. (2017). Financial literacy and mathematics: A study among young Mexican High School students. *Revista Mexicana de Economía y Finanzas Nueva Época*. 12(2): 1-22. DOI: <https://doi.org/10.21919/remef.v12i2.88>