We don't need no financial education?

Does the faculty of study influence students' financial literacy? Evidence from French students

Abstract

Although several initiatives exist to improve financial literacy, people's lack of financial literacy is still an unsolved problem. Financial literacy is an individual's level of knowledge of baseline financial concepts. Among the different populations facing issues with financial literacy, students have been of primary interest in recent research. However, the issue of specific fragile populations among the student community remains unaddressed. This study aims to fill this gap by exploring the relationship between the faculty of study and students' objective level of financial literacy, as well as students' perceptions of their level of financial literacy. We use a sample of 7,121 university students. The results show that economics and business students overperform in terms of objective financial literacy, relative to other faculties' students, whereas humanities students underperform. We also observe that social sciences and economics and business students are overconfident about their financial literacy.

Bien qu'il existe plusieurs initiatives visant à améliorer la littératie financière de la population mondiale, le manque de littératie financière des individus reste un problème non résolu. La littératie financière est le niveau de connaissance des individus sur les concepts financiers de base. Parmi les différentes populations confrontées à des difficultés en matière de littératie financière, les étudiants sont au cœur des recherches récentes. Cependant, la question des populations fragiles spécifiques au sein de la communauté étudiante n'a pas encore été abordée. Cette étude vise à combler cette lacune en explorant la relation entre la faculté d'études et le niveau objectif de littératie financière des étudiants, ainsi que la perception qu'ont les étudiants de leur niveau de littératie financière. Nous utilisons un échantillon de 7 121 étudiants universitaires. Les résultats montrent que les étudiants en faculté d'économie et de commerce sont plus performants en termes de littératie financière objective que les étudiants des autres facultés, tandis que les étudiants en sciences humaines sont moins performants. Nous observons également que les étudiants en sciences sociales et en économie et gestion sont trop confiants dans leur littératie financière.

Keywords

Introduction

Despite public authorities displaying efforts to improve financial literacy, the lack of financial literacy remains an unsolved, concerning issue (OECD, 2020). Financial literacy is individuals' level of knowledge regarding baseline financial concepts. It is the combination of three core concepts (Lusardi and Mitchell, 2008): understanding of how compound interest rates work, understanding of the effects of inflation, and understanding of risk and risk diversification. Financial literacy influences individuals' financial decisions (Aubert et al., 2018; Broihanne and Orkut, 2018; Bucher-Koenen and Lusardi, 2011; Klapper and Panos, 2011; Van Rooij et al., 2011, 2012), such as individual investors' asset portfolio quality (Boolell-Gunesh et al., 2009, 2012; Orkut, 2021). Ultimately, financial literacy affects individuals' financial well-being (Lee et al., 2019) and financial inclusion (Grohmann et al., 2018). Therefore, several initiatives have been established to foster individuals' financial literacy and to increase people's financial well-being, such as the iconic Global Money Week. The OECD/INFE directs this initiative and has aimed to make people aware of the necessity of good planning regarding their wealth since 2012. Nevertheless, recent reports regarding financial literacy (OECD, 2016, 2020) show that global scores of financial literacy remain low. Currently, financial literacy programs target large segments of the world population (Global Money Week). Regarding the small effects of those general programs, one question remains of primary importance: Should financial literacy programs target everyone, or should they target specific segments of the population?

The literature has identified populations that have lower financial literacy and that should be targeted as a priority (see Goyal and Kumar, 2021, for a systematic review). Indeed, financial illiteracy is associated with higher credit card debt, worse loan management, and more generally ineffective financial planning (Lusardi and Tufano, 2015; Mitchell and Lusardi, 2015). For instance, females have been identified as a fragile population, with lower financial literacy than men (Fonseca et al., 2012; Lusardi and Mitchell 2008, 2011). Similarly, low-income households suffer from low scores in financial literacy (Hastings et al., 2013), whereas high-income households are more likely to have higher financial literacy (Atkinson and Messy, 2012). Regarding age, the literature identifies two fragile populations. On the one hand, the older part of the population lacks financial literacy, which might be an issue for financial retirement planning (Lusardi and Mitchell, 2011). On the other hand, results underline that young people are less financially literate than the general population (Beal and Delpachitra, 2003; Lusardi and Mitchell, 2014; Lusardi et al., 2010). In this paper, we focus on the specific population of students, which is of primary interest as financial literacy is crucial for reducing students' financial fragility (Norvilitis et al., 2006; Xiao et al., 2011), thus increasing students' financial inclusion (Xiao and O'Neill, 2016) and financial well-being (Fan and Chatterjee, 2019). Therefore, identifying the determinants of students' financial literacy is of primary importance for both researchers and practitioners.

A stream of literature explores the determinants of students' financial literacy, with a significant focus on the role of individual determinants. First, demographic determinants are investigated. Chen and Volpe (1998, 2002) highlight that among students, a gender gap is observed regarding financial literacy, with females being less financially literate than males. Regarding age, older students have higher financial literacy scores (Brau et al., 2019). Second, social determinants are investigated. Brau et al. (2019) show that the education level of parents positively influences students' financial literacy. Finally, the literature investigates the effects

of job experience on students' financial literacy. Chen and Volpe (1998) show that work experience during college studies positively influences students' financial literacy. Brau et al. (2019) highlight that students who experienced a job during high school have higher financial literacy. The role of education in students' financial literacy is the subject of some literature. Chen and Volpe (1998, 2002) highlight that more educated students (i.e., senior students) are more financially educated. Overall, the authors show that as students move up to a higher degree, they increase their financial literacy. The grounding studies of Chen and Volpe (1998, 2002) open up space for further studies. Sarigül (2014) highlights that with each step in a student's life (from *freshman* to *senior*), students increase their financial knowledge.

Nevertheless, an issue remains unaddressed in the literature: Do all faculties of study have the same effect on students' financial literacy? From a theoretical perspective, the faculty of study might affect students' financial literacy through several channels. On the one hand, the level of financial education that students receive is not homogenous across faculties of study, which might create heterogeneity of financial literacy across faculties of studies. Some studies find that pursuing a business or economics major is associated with higher objective financial literacy (Beal and Delpachitra, 2003; Chen and Volpe, 1998, 2002; Sarigül, 2014). On the other hand, numeracy is, according to Lusardi and Mitchell (2014), a major competence that supports the core concepts of financial literacy. Given the heterogeneity across faculties of study in terms of numeracy (Jonas, 2018), we can expect a variation in financial literacy across faculties of study. Furthermore, the literature on financial literacy underlines that individuals' perceptions regarding their financial literacy score are a key factor to explain their financial decisions and relate strongly to their objective financial literacy (Allgood and Walstad, 2016). Thus, as objective financial literacy is likely to vary across faculties of study, we expect the same for subjective financial literacy. However, it could be the case that for some individuals, we observe a low level of objective financial literacy but a high level of subjective financial literacy. Chu et al. (2017) define overconfidence in financial literacy as the positive difference between subjective financial literacy and objective financial literacy. Overconfidence in financial literacy is linked with detrimental effects on financial decisions and inclusion for the general population (Pak and Chatterjee, 2016; Pikulina et al., 2017). Chu et al. (2017) and Pikulina et al. (2017) show that an increase in objective financial literacy is associated with lower overconfidence in financial literacy. Therefore, we expect to find a lower level of overconfidence in financial literacy in faculties with a higher level of objective financial literacy.

To investigate the heterogeneity across the faculties of study in students' objective and subjective financial literacy, we use data from an original survey designed for this study. The survey gathers information regarding students' financial literacy and faculty of study. We also gather information regarding students' sociodemographic characteristics. After checking for missing values, we use 7,121 observations in the estimations. The sample we use is large, compared to what is usually found in the literature, and we are able to confirm its representativeness. We analyze the data using different models. First, we use an ANOVA model to assess the effect of the faculty of study on students' financial literacy. Second, we use logit models, ordered logit models, and Bonferroni group comparisons to test if there are variations in students' objective and subjective financial literacy across faculties. Finally, we test the effect of the faculty of study on students' confidence in their financial literacy using multinomial logit models.

Overall, the results of this study show that there is a complex relationship between the faculty of study and students' financial literacy. First, we show that the faculty of study has a strong influence on the variance in students' financial literacy. Second, we observe that the relationship between the faculty of study and financial literacy differs across faculties. Third, we show that some students are miscalibrated in their confidence in financial literacy.

This study provides several contributions. First, we show that the faculty of study has the second largest influence on students' objective financial literacy and subjective financial literacy, which, to our knowledge, is a novel result in the literature. Second, we provide a more fine-grained analysis of the relationship between students' faculty of study and their objective financial literacy, in comparison with existing studies that only compare economics and business major students (Chen and Volpe, 1998, 2002; Sarigül, 2014). We provide evidence that there is an important heterogeneity of financial literacy across faculties of study. The biggest difference is found between the economics and business faculty and the humanities faculty. Third, we show that the faculty of study is also related to students' subjective financial literacy, which is unaddressed in the literature. Fourth, we highlight that there are variations in the miscalibration of students' subjective financial literacy across faculties of study. Fifth, the results are based on a unique and large dataset with 7,121 observations, which has no precedent in the literature on the educational determinants of students' financial literacy. Finally, this study has practical implications for authorities in charge of fostering the financial literacy of students. We identify two fragile populations in which they should put specific efforts: humanities students suffering from a low level of objective financial literacy and social sciences students suffering from overconfidence in their financial literacy.

In the next section, we explain the method we use. In section 2, we present the results. In section 3, we present some robustness checks. Section 4 discusses the results, and section 5 concludes.

1. Empirical strategy

1.1 Research design and sample

To explore the influence of the faculty of study on students' financial literacy, we collect unique data using an online questionnaire administered on LimeSurveyV3. We survey all 58,875 students from the University of Strasbourg. Besides gathering information regarding students' financial literacy and faculty of study, the survey also gathers detailed demographic and personal information. The survey lasts from the 21st of October 2021 to the 1st of December 2021. The raw dataset gathers 11,227 answers. After checking for missing values, the final dataset contains 7,121 complete observations.

1.2. Data description

In Appendix A, we provide a table that summarizes the definition of the variables we use, how they are measured, and the source of each variable.

1.2.1 Dependent variables

Individuals' financial literacy is the dependent variable of the different models we specify. In the survey, students answer the Big Three financial literacy questions from the seminal work of Lusardi and Mitchell (2014). Arrondel (2017) uses a French version of the financial literacy questions, adapted in terms of wording and currency. Therefore, we use Arrondel's (2017) version of the financial literacy questions. The measure of financial literacy implies considering three factors that are determinants of individuals' financial literacy. The first factor that is measured is the ability to understand how compound interest works. We ask students how much there would be in a hypothetical savings account with an interest rate of 2% after letting on this account €100 for 5 years. Students have the choice between "Less than 102€," "More than 102€," "Exactly 102€," or "I don't know." The correct answer is "More than 102€." The second factor captured is the ability to understand the effects of inflation. We ask students what they could buy using a hypothetical savings account with €100 in it, with an interest rate of 2% and an inflation rate of 3%. The possible answers are "Less than today," "Exactly the same as today," "More than today," and "I don't know." The correct answer is "Less than today." The last factor defining baseline financial literacy is the understanding of risk and risk diversification. The measure is a true or false question, asking respondents if investing in a single stock company would provide a safer return than investing in a mutual fund. The correct answer is "False." For each question, we attribute a score of 0 for those who wrongly answer or who do not know and 1 for those who correctly answer the question. We thus have a dummy, *FL Interest*, *FL Inflation*, or *FL Risk*, for each question on financial literacy. Then, we add up all correct and incorrect answers for each student to obtain a general score of financial literacy, *Objective FL*, which ranges from 0 to 3.

We also capture the perceptions of students regarding their financial literacy. This self-assessed financial literacy is set in the different models as *Subjective FL*. To capture the students' subjective financial literacy, we use the construct proposed by Allgood and Walstad (2016). We ask the students, "Compared to your colleagues at the university, how do you assess your level of financial literacy?" Students answer using a 7-point Likert scale, where 1 is the lowest score of subjective financial literacy and 7 is the highest score.

1.2.2 Independent variables

The independent variable is the faculty in which the students are studying. Starting with the 36 faculties or institutes of the University of Strasbourg, we create 7 categories to regroup students. First, we regroup all the students studying in the fields of social sciences. This field includes, for instance, sociology students, law students, or political science students. This first group of students is the largest group, which is in line with the objective representation of the general population of the University of Strasbourg.[1]

Second, we create a group of students studying economics and business at the University of Strasbourg. According to the usual classification, those students are included with the social sciences students. However, we decide to classify them into a specific group due to their specific

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[1] To check for the representativity of the sample, we compare the students to the APOGEE database, which gathers the personal information of all students from the University of Strasbourg. The APOGEE database is updated each year using the mandatory registration forms that all students have to fill out.

exposure to financial education and financial literacy. Indeed, having courses in economics and business exposes students to financial education, which might influence their financial literacy. Therefore, considering students in economics and business as a specific group is relevant to this study.

Then, we create a group of students in the natural sciences faculty. The students in that group mainly study chemistry or physics. They are close to the fourth group, which comprises students studying formal sciences. We distinguish between natural and formal sciences using the criterion of experimentation. We consider natural sciences all sciences that are based on experiments such as chemistry. On the other hand, formal sciences include disciplines such as mathematics or computer sciences.

The fifth group is composed of students taking courses in humanities. Students who have courses in literature, history, geography, arts, philosophy, psychology, and theology are part of that group.

We create a specific group for students that are pursuing health or life sciences studies. Indeed, in the French classification of sciences, health and life sciences are separated from other natural sciences. Finally, we regroup in other faculties all the students we cannot sort into any of the precedent groups. This category represents 0.9% of the sample. The distribution of the sample across faculties is similar to the distribution of students across faculties at the University of Strasbourg.

Regarding the analyses and the models we use in the following sections, we create a dummy for each faculty. For the following analyses, we set the reference group as the social sciences group. We decide to do so because this group of students is the most represented in the sample.

1.2.3. Control variables

The literature highlights that different factors influence students' financial literacy. Therefore, we control for those variables in the estimations. First, gender is a determinant of students' financial literacy. Females have a lower score in financial literacy than their male colleagues (Chen and Volpe 2002). For gender, we directly ask students to which gender they belong. Second, a higher degree level is associated with higher financial literacy among students (Chen and Volpe, 1998). We follow the distinction of Chen and Volpe (1998), adapting class rank to the French academic system. Third, the previous work experience of students has a positive influence on financial literacy among students (Brau et al., 2019). To control for this, we ask students whether they have already had a paid job. We also include a control variable capturing whether students have already done an internship. Fourth, parents' diplomas and income positively influence students' financial literacy (Brau et al., 2019). Thus, we control for the diploma level of both parents. Finally, we control for students' nationality and age. We add these control variables because they influence the general population's financial literacy (Lusardi and Mitchell, 2008, 2011).

2. Results

2.1. Descriptive statistics

Table 1 reports descriptive statistics. We observe that the median of correct answers in the sample is 2 out of the 3 questions of the financial literacy test, which is consistent with previous findings (Lusardi and Mitchell, 2014). Also consistent with Lusardi and Mitchell (2014), most of the students in the sample correctly answer the question about interest rates. With 66.75% correct answers, the question of inflation rates is more difficult for students. Finally, the question of risk and risk diversification has the lowest rate of correct answers. We observe that the average subjective financial literacy of students in the sample is 3.0237. Compared to the study of Allgood and Walstad (2016), this is quite low. Indeed, in their sample from the general US population, Allgood and Walstad (2016) find an average subjective financial literacy of 4.9474.

Regarding the distribution of students across faculties in the sample, we observe that the largest group is represented by students studying in the social sciences faculty. The overall distribution across faculties in the sample is similar to the distribution observed for all students at the University of Strasbourg. Most of the sampled students are female. Although females effectively represent the majority of students at the University of Strasbourg, they are still overrepresented in terms of survey respondents. This is a common bias in surveys (Smith, 2008).

In Appendix B, we provide a detailed description of the means of objective and subjective financial literacy for each faculty of study. We also break down the score of objective financial literacy into each question of financial literacy (the Big Three). We observe that humanities students are the lowest performing ones in terms of financial literacy. For each question, they have the lowest average score of correct answers. The understanding of how compound interest works is not an issue for most students. Surprisingly, the highest performing students are students in the natural sciences faculty. Economics and business students are the second highest performing students in terms of understanding how interest rates work. Regarding the understanding of inflation's effects, we observe a rise in incorrect answers for each faculty. Still, most students in each faculty correctly answer the inflation question. Finally, there is a gap between economics and business students and other students regarding the question of understanding risk and risk diversification. Of economics and business students, 78.43% correctly answer that question; the second highest performing faculty is formal sciences students, with 65.55% correct answers. Of the humanities students, 52.38% correctly answer that question, which is also the lowest rate in the whole sample for all financial literacy questions. For the French general population, the question of risk diversification is also the hardest one (Arrondel, 2017).

[Insert Table 1 here]

Although the descriptive analysis suggests that the faculty of study has an effect on students' financial literacy, further analysis is needed to explore the relationship between the faculty of study and financial literacy.

2.2. Does the faculty of study influence students' financial literacy?

To test whether the differences in students' financial literacy are related to their faculty of study, we first specify an ANOVA model. In the ANOVA model, the dependent variable is the measure of students' objective financial literacy and, alternatively, subjective financial literacy. As explanatory variables, we use the other determinants of financial literacy put forth in the literature (Brau et al., 2019): *Gender, Age, Nationality, Current Degree, Parents' Degree, Already Paid Work,* and *Already Internship.* Finally, we add to the model the variable *Faculty*, which is a categorical variable for each faculty of study of students. Table 2 displays the results.

[Insert Table 2 here]

The ANOVA shows that the variable *Faculty* significantly influences the variance of financial literacy variables (objective or subjective). In the first model, the variable *Faculty* is the second factor (behind gender) influencing the variance of objective financial literacy. Regarding students' subjective financial literacy, the variable *Faculty* is also the second strongest predictor of the variance of the dependent variable *Subjective FL*. Although the results show that the faculty of study has an influence on students' financial literacy, further analyses are needed to capture different effects across faculties.

2.3. Does the effect of faculty on financial literacy differ across faculties?

In this section, we break down the analysis of the relationship between the faculty of study and financial literacy by looking at the effect of each faculty of study on students' objective and financial literacy. We use students' answers to each Big Three (Lusardi and Mitchell, 2014) financial literacy question with logit models. Then, we investigate the relationship between the faculty of study and students' subjective financial literacy using an ordered logit model. Table 3 reports the coefficients for the logit and ordered logit models.

[Insert Table 3 here]

Across all models, we observe that compared to social sciences students, students in the economics and business faculty are more likely to perform better on each financial literacy question. On the contrary, students in humanities are less likely to perform well on any question compared to social sciences students. This result is in line with previous findings, highlighting the role of faculties in shaping students' financial literacy (Chen and Volpe, 1998, 2002; Sarigül, 2014). We observe that natural sciences and formal sciences students have a better chance at outperforming social sciences students on the question of interest rates. On the other hand, natural sciences students have lower chances of performing well than social sciences students when it comes to understanding risk and risk diversification. Therefore, the results suggest that faculties of studies foster different competencies of students that are useful for different dimensions of financial literacy. The results are consistent with the idea that numeracy, which is higher for science students due to their exposure to numbers and number manipulation,

might increase their financial literacy, particularly the understanding of interest rates. According to Lusardi and Mitchell (2014), numeracy is a core competence explaining the performance on the interest rate question. On the other hand, numeracy is not involved in the understanding of risk and risk diversification, but other competencies might be important. The results suggest that the social sciences faculty might develop competencies that are beneficial for understanding risk, as social sciences students outperform on the risk diversification dimension of financial literacy. The economics and business faculty might foster competencies that are beneficial for each dimension of financial literacy because economics and business students outperform other students on each question.

The results on subjective financial literacy are consistent with the results on objective financial literacy. We observe that economics and business students are more likely to have higher subjective financial literacy than social sciences students. Humanities students have lower chances of having high subjective financial literacy than social sciences students. This is in line with Allgood and Walstad (2016), who show that objective and subjective financial literacy are highly correlated. However, social sciences students are more likely to have high subjective financial literacy than sciences (formal, natural, and life) students. This result is surprising because social sciences students do not differ from life sciences students in terms of objective financial literacy. This result suggests that there might be a phenomenon of miscalibration in terms of financial literacy across students. Therefore, further analysis is needed to check whether the faculty of study has an influence on students' confidence in financial literacy.

2.4. Differences in students' confidence in financial literacy

Confidence in financial literacy is the ability of individuals to correctly assess their level of financial literacy (Chu et al., 2017). To define students' confidence in financial literacy, we rely on the categorization of Allgood and Walstad (2016). A student with a score of objective financial literacy above the median of the sample (=2) has high objective financial literacy. We also use the median (=3) to distinguish between students with high or low subjective financial literacy. Thus, we can identify students with low objective financial literacy and high subjective financial literacy (Objective Low/Subjective High). According to Chu et al. (2017), these students are overconfident in their financial literacy. We also identify students with high objective financial literacy and low subjective financial literacy (Objective High/Subjective Low), who are underconfident in their financial literacy (Chu et al., 2017). Furthermore, we identify students with low objective financial literacy and low subjective financial literacy and students with high objective financial literacy and high subjective financial literacy. Students with a level of subjective financial literacy that matches their level of objective financial literacy have well-calibrated confidence. We create a dummy for each group of students, *Overconfident*, *Underconfident*, or *Well-Calibrated*. Table 4 summarizes the definition and construction of the variables. We use a multinomial logit model to compare students. Table 5 presents the results.

[Insert Table 4 here]

[Insert Table 5 here]

Overall, the results point to the existence of a relationship between students' faculty of study and students' financial literacy calibration. The results in Table 6 show that there is no significant difference between economics and business students and social sciences students in terms of their likelihood of being overconfident in their financial literacy. However, we observe that students in the natural, formal, and life sciences faculties and in the humanities faculty are less likely to be overconfident in their financial literacy than to be well-calibrated compared to social sciences students. On the contrary, we observe that life sciences students are the only students who are more likely to be underconfident in their financial literacy.

3. Robustness checks

In this section, we provide additional analyses to ensure the reliability of the results we presented in the previous section. First, some pieces of literature (Furrebøe et al., 2023; Klapper et al., 2013) use a score of objective financial literacy rather than correct answers to each question of financial literacy as a measure of objective financial literacy. Therefore, we specify a model using the score of objective financial literacy as the independent variable. We calculate the score of objective financial literacy by adding up all the correct answers to the Big Three questions of financial literacy. Thus, a student that has all correct answers has a maximal score of 3. Results are reported in specification 1 of Table 6. Using the score of objective financial literacy as the independent variable, we observe that economics and business students are more likely to outperform social sciences students in terms of objective financial literacy. This result confirms the findings in Table 4 because we observe that economics and business students are more likely to outperform social sciences students on each question on objective financial literacy. We also find, using the score of objective literacy, that humanities students are less likely to perform well in objective financial literacy than social sciences students. Again, this confirms the previous results in this study, which show that humanities students, on each question of financial literacy, perform worse than social sciences students. However, we do not find any significant difference between social sciences students and natural, formal, and life sciences students. We suggest that the absence of significant differences is due to compensating effects. On one hand, we observe in the previous results that formal and natural sciences students outperform social sciences students on financial literacy questions that involve numeracy. On the other hand, we show that social sciences students perform better on the risk and risk diversification question.

Second, some students in the sample are part of selective faculties. In the French academic system, students can pass highly selective exams before entering specific universities. Students who succeed in those exams can enter selective faculties, *Grandes Écoles*. Klapper and Léger-Jarniou (2006) show that students who are part of *Grandes Écoles* have specific sociodemographic characteristics that should be considered when researchers use samples with such students. Therefore, we create a dummy, *Selective Faculty*, to check whether the student is part of a French selective faculty. We add *Selective Faculty* as an additional control in the following models. The results are presented in specifications 2 and 3 in Table 7. For both objective and subjective financial literacy, adding *Selective Faculty* as a control variable does not affect the significance of the results. Moreover, we still find a positive effect of the economics and business faculty and a negative effect of the humanities faculty on students' financial literacy.

[Insert Table 6 here]

In addition to the results we present in Table 6, we perform Bonferroni's post-hoc tests to verify the significance of the pairwise group comparison. We perform group comparisons for each faculty on both objective and subjective financial literacy. The tables presenting the results of Bonferroni's post-hoc tests can be found in Appendix C1 and C2. The results are confirmed by Bonferroni's post-hoc tests that verify the significance of the pairwise group comparisons regarding objective financial literacy by faculty (see Appendix C1). We observe that economics and business students are more likely to outperform the other students in terms of objective financial literacy. We observe a negative difference between humanities students and sciences students (formal, natural, and life). The Bonferroni pairwise group comparison confirms the result regarding students' subjective financial literacy (see Appendix C2). Indeed, we observe that life sciences students, compared to social sciences students, economics and business students, and humanities students are more underconfident in financial literacy. This is also the case for humanities students.

4. Discussion

This paper investigates the effect of the faculty of study on students' financial literacy. To explore this issue, we rely on a uniquely large sample of 7,121 university students. The students come from a large university, and the sample is representative of the university's population. We use information regarding students' objective and subjective financial literacy. This paper provides several results.

First, we show that the faculty of study significantly influences students' financial literacy. Among all the effects influencing students' financial literacy that we test, the faculty of study is the second largest. We highlight the fact that among the determinants of students' financial literacy, the faculty of study is of primary importance. In the literature investigating the sociodemographic (Brau et al., 2019; Lusardi and Mitchell, 2008) and educational determinants of financial literacy (Beal and Delpachitra, 2003; Chen and Volpe, 1998, 2002; Sarigül, 2014), there is no study, to our knowledge, investigating the relative importance of each determinant of financial literacy. This issue is of primary importance because some determinants, such as gender or the parents' educational background, are deeply rooted in individuals. On the contrary, the faculty of study is a reachable determinant of students' financial literacy. Moreover, we show that the faculty of study is the second-largest determinant of students' financial literacy. There is thus a double interest in acting on that specific determinant to foster students' financial literacy.

Second, we break down the global faculty effect on financial literacy by looking at the effect of each faculty on financial literacy and by comparing the difference of effects across faculties. On the one hand, we observe that students in the economics and business faculty have higher financial literacy scores than any other students, which is consistent with the fact that higher exposure to financial education positively influences financial literacy (Chen and Volpe, 1998, 2002; Sarigül, 2014). We further observe that humanities students perform worse than any other students. This is, to some extent, consistent with the fact that lower exposure to numeracy undermines financial literacy. The literature investigating the effect of faculty on

financial literacy mainly distinguishes between students with a major in economics and business and other students (Chen and Volpe, 1998, 2000). Our study deepens this analysis by using a more detailed measure considering 7 different faculties as explanatory variables. Therefore, we provide a more fine-grained analysis of the relationship between the faculty of study and students' financial literacy. The results in this study point to a heterogenous effect of college education, depending on the faculty of study, on financial education.

Third, we also explore the effect of the faculty on students' subjective financial literacy. We find that economics and business students and humanities students have a subjective financial literacy that matches their objective financial literacy, which is consistent with Allgood and Walstad (2016). The only exception is social sciences students, who show a high score of subjective financial literacy, whereas they do not show a high score of objective financial literacy compared to other students. Literature shows that along with individuals' objective score of financial literacy, the perceptions the individuals have about their score of financial literacy is also a strong predictor of their financial behaviors (Allgood and Walstad, 2016). Therefore, identifying students' determinants of subjective financial literacy is of primary importance. In this study, we show that the faculty of study also has an effect on students' subjective financial literacy. To our knowledge, this study is the first to establish a link between the faculty of study and subjective financial literacy.

Finally, we show that social sciences students and economics and business students are overconfident in their financial literacy, whereas life sciences students are underconfident in their financial literacy. We shed light on differences in terms of miscalibration in subjective financial literacy. The results highlight that some students suffer from overconfidence or underconfidence in financial literacy. These situations happen when there is a gap between students' objective and subjective level financial literacy (Chu et al., 2019). The nascent literature comparing individuals' objective and subjective financial literacy, for now, highlights that most individuals are well-calibrated (Allgood and Walstad, 2016). In the sample we use, social sciences students and economics and business students are overconfident in financial literacy. Therefore, we suggest that students suffer from miscalibration in terms of financial literacy. In that sense, future research should assess why students are suffering from miscalibration in subjective financial literacy, the effects of this miscalibration, and how to correct it.

Our work is also an empirical contribution as we rely on a sample with high potential in terms of generalization of results. Indeed, the seminal studies of Chen and Volpe (1998, 2002) on the educational determinants of students' financial literacy use samples with between 700 and 1,000 observations. More recent studies (Beal and Delpachitra, 2003; Sarigül, 2014) use samples with 1,000 observations. With 7,121 observations, the sample we use is, to our knowledge, the largest student sample used in the literature. We also check for the representativeness of the sample, and we provide in this paper a representative sample of the student population.

From a practical perspective, our study advocates targeting specific segments of the student population when developing financial literacy programs. Indeed, we identify an initial fragile population: humanities students who have the lowest objective financial literacy. Thus, financial literacy initiatives targeting this population should achieve a main objective: improving the financial knowledge of humanities students to foster humanities students'

objective financial literacy because financial literacy is a key factor for students' financial well-being (Fan and Chatterjee, 2019). The second fragile population we identify is social sciences students. Although they do not show low scores of objective financial literacy, social sciences students have a high score of subjective financial literacy compared to other students. Previous studies show that for general populations, a discordance between subjective and objective financial literacy is detrimental to making healthy financial decisions (Allgood and Walstad, 2016). The mismatch between social sciences students' objective and subjective financial literacy might thus push them to make poor financial decisions. Our study shows that teachers and financial literacy programs should pay particular attention to social sciences students and to some extent to economics and business students. It is important to bring social sciences students "back to reality" by making them aware of the gap between what they think about their level of financial literacy and their objective level of financial literacy.

Our study does not come without limitations. The data is collected during a single period. Thus, we are not able to compare individuals' scores of financial literacy before and after entering the university across different steps of their academic careers. We cannot assess whether the effect of the faculty we observe is due to a selection process of students when entering a faculty or to an educational effect. To address the issue, we suggest that further studies should employ a longitudinal design. In that way, it would be possible to measure the scores of financial literacy of students for different class ranks. Future longitudinal studies could check the potential educational effect of the faculty on students' financial literacy.

Although the sample is built on high-quality data, we only survey French students. This might affect the results in the sense that the organization of educational programs differs across countries. Whereas the French academic system operates with a strong distinction between faculties, other countries propose a major/minor system. In that type of educational system, we would expect to find a higher porosity regarding financial education, as students can choose to pursue an economics and business major without completely stopping attending other courses. Although financially literate students are concentrated in France, the distribution of financially literate students might be wider in countries with a major/minor system. To address this issue, we recommend conducting studies similar to this one in countries using a major/minor system.

5. Conclusion

In this paper, we investigate the effects of faculty of study on students' financial literacy. We measure students' financial literacy using an original questionnaire. We also capture students' perceptions of their financial literacy. The results suggest that students taking economics and business courses have the highest level of objective financial literacy compared to the rest of the students. On the contrary, students taking courses in humanities perform poorly in terms of objective financial literacy. Concerning perceptions of financial literacy, we observe that students in the humanities have low perceptions of their financial literacy, which is in line with their low level of objective financial literacy. We observe that students in social sciences have high subjective financial literacy, whereas they do not show outstanding performances in terms of objective financial literacy. The results also suggest that students in social sciences might suffer from overconfidence in their financial literacy.

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Appendices

[Insert Appendix A here]

[Insert Appendix B here]

[Insert Appendix C1 here]

[Insert Appendix C2 here]

Table 1: Descriptive statistics

Variables	N	Mean	SD	Variance	Median	Min	Max
Objective FL	7,121	2.1260	0.9103	0.8287	2	0	3
FL Interest	7,121	0.8358	0.3704	0.1372	1	0	1
FL Inflation	7,121	0.6675	0.4712	0.2220	1	0	1
FL Risk	7,121	0.6227	0.4848	0.2350	1	0	1
Subjective FL	7,121	3.0237	1.3986	1.9560	3	1	7
Faculty*:*							
Social Sciences	7,121	0.2868	0.4523	0.2046	0	0	1
Economics and Business	7,121	0.1094	0.3122	0.0974	0	0	1
Natural Sciences	7,121	0.0802	0.2716	0.0738	0	0	1
Formal Sciences	7,121	0.1048	0.3063	0.0938	0	0	1
Humanities	7,121	0.2211	0.4151	0.1723	0	0	1
Life Sciences	7,121	0.1887	0.3913	0.1531	0	0	1
Other Faculties	7,121	0.0090	0.0943	0.0089	0	0	1
Age	7,121	21.5662	4.0559	16.4504	21	16	75
Gender:							
Male	7,121	0.3390	0.4734	0.2241	0	0	1
Female	7,121	0.6478	0.4777	0.2282	1	0	1
Other	7,121	0.0132	0.1141	0.0130	0	0	1
Nationality:							
French	7,121	0.8708	0.3354	0.1125	1	0	1
Other countries from the EU	7,121	0.0397	0.1954	0.0382	0	0	1
Countries outside EU	7,121	0.0895	0.2854	0.0815	0	0	1
Current Degree:							
First year Bachelor	7,121	0.2446	0.4299	0.1848	0	0	1
Second year Bachelor	7,121	0.1833	0.3869	0.1497	0	0	1
Third year Bachelor	7,121	0.1855	0.3887	0.1511	0	0	1
First year Master	7,121	0.1711	0.3766	0.1418	0	0	1
Second year Master	7,121	0.1655	0.3717	0.1382	0	0	1
Ph.D.	7,121	0.0500	0.2179	0.0475	0	0	1
Parents Degree:							
Less than Baccalaureate	7,121	0.2136	0.4097	0.1550	0	0	1
Baccalaureate or equivalent	7,121	0.1770	0.3813	0.1455	0	0	1
Technical Degree	7,121	0.1969	0.3976	0.1582	0	0	1
Bachelor Degree or equivalent	7,121	0.1075	0.3089	0.0958	0	0	1
First year Master or equivalent	7,121	0.0814	0.2735	0.0748	0	0	1
Master Degree or equivalent	7,121	0.1655	0.3703	0.1376	0	0	1
Ph.D. or equivalent	7,121	0.0581	0.2309	0.0545	0	0	1
Already Paid Work	7,121	0.4631	0.4987	0.2487	0	0	1
Already Internship	7,121	0.4873	0.4999	0.2499	0	0	1
Selective Faculty	7,121	0.1852	0.3885	0.1509	0	0	1

Table 2: ANOVA for Objective and Subjective financial literacy

In both ANOVA analyses, the first column reports the degrees of freedom for the model, the predictor variables, and the residual. Degrees of freedom (DF) represent the number of pieces of information available for each parameter. The second column reports the partial mean squares (Partial MS) which are the sum of squares for each parameter in the ANOVA, divided by the corresponding degrees of freedom. The third column reports the F-stat which is the ratio between the mean square of each parameter and the mean square error. In the left part of Table 2, we run the ANOVA analysis using *Objective FL* as the dependent variable. In the right part of Table 2, we use *Subjective FL* as the dependent variable. For each analysis, we also report the number of observations (N), the root mean square error (Root MSE) which is the square root of the mean square error, the r-squared (R^2) which is the proportion of the variance in the dependent variable that is explained by the model, and the adjusted r-squared (Adjusted R^2) which the r-squared corrected by the number of independent variables in the model.

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

	Dependent variable: *Objective FL*				Dependent variable: *Subjective FL*			
	DF	Partial MS	F Stat.		DF	Partial MS	F Stat.	
Model	73	7.4325	9.78	***	73	24.9432	14.52	***
Faculty	6	26.5565	34.93	***	6	126.9943	73.92	***
Gender	2	94.3531	124.11	***	2	151.8135	88.37	***
Age	44	0.8108	1.07		44	3.7608	2.19	***
Nationality	2	0.0643	0.08		2	103.6146	60.31	***
Current Degree	5	4.8695	6.41	***	5	9.6101	5.59	***
Parent 1 Degree	6	2.5354	3.33	***	6	2.0493	1.19	
Parent 2 Degree	6	1.5442	2.03	*	6	3.7306	2.17	**
Already Paid Work	1	0.0022	0.00		1	24.3734	14.19	***
Already Internship	1	1.3498	1.78		1	12.3274	7.18	***
Residual	7,047	0.7602			7,047	1.7179		
Total	7,120	0.8287			7,120	1.9560		

N=7,121 | N=7,121
Root MSE= 0.8719 | Root MSE= 1.3107
R²= 0.0920 | R²= 0.1307
Adjusted R²= 0.0826 | Adjusted R²= 0.1217

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Table 3: Effects of the faculty of study on students' financial literacy

In Model 1, we specify an ordered logit model to compare the understanding of the working of compound interest rates among the different faculties of the University. We chose a logit model as the dependent variable *FL Interest* is a dummy. We use dummies for each faculty of study as independent variables. To compare faculties, we exclude the dummy for Social Sciences Faculty from the model. All the coefficients represent the likelihood to have an understanding of the working of interest rates compared to Social Sciences students. We control for *Age*, *Gender*, *Nationality*, the current level of degree of the student (*Current Degree*), parents' degree (*Parent 1 Degree*, *Parent 2 Degree*), and if the student already had a paid job (*Already Paid Job*) or did an internship (*Already Internship*). In Model 2, we use as the dependent variable the understanding of the working of inflation, *FL Inflation*. In Model 3, we use the understanding of risk and risk diversification. In Model 4, we use the variable *Subjective FL* as the dependent variable. As *Subjective FL* is a score ranging from 1 to 7, we specify an ordered logit model. Ordered logit models do not have a constant coefficient as the probability of the dependent variable of taking in each category depends on cut points. Since there are 7 possible values of the variable *Subjective FL*, there are 7 cuts for the ordered logit model. For practical reasons, we do not report the cuts of the ordered logit model.

Standard errors in parentheses; *** $p<0.01$, ** $p<0.05$, * $p<0.1$

VARIABLES	(1) FL Interest (logit)		(2) FL Inflation (logit)		(3) FL Risk (logit)		(4) Subjective FL (ologit)	
Independent variables								
Economics and Business	0.5220	***	0.6238	***	0.6844	***	0.7370	***
	(0.1365)		(0.1034)		(0.1031)		(0.0757)	
Natural Sciences	0.4941	***	0.0338		-0.3740	***	-0.5529	***
	(0.1631)		(0.1085)		(0.1004)		(0.0856)	
Formal Sciences	0.2214	*	0.1382		-0.1056		-0.2417	***
	(0.1308)		(0.1007)		(0.0953)		(0.0801)	
Humanities	-0.3873	***	-0.3993	***	-0.4373	***	-0.6317	***
	(0.0883)		(0.0727)		(0.0711)		(0.0618)	
Life Sciences	0.0262		-0.0623		0.0353		-0.7127	***
	(0.1004)		(0.0773)		(0.0755)		(0.0648)	
Other Faculties	0.2852		-0.3374		-0.5759	**	-0.5456	**
	(0.3715)		(0.2635)		(0.2582)		(0.2272)	
Controls								
Already Paid Work	-0.0221		-0.0263		-0.0025		0.1690	***
	(0.0699)		(0.0548)		(0.0530)		(0.0448)	
Already Internship	0.1550	*	-0.0421		0.0842		0.1254	**
	(0.0814)		(0.0636)		(0.0615)		(0.0524)	
Gender	Yes		Yes		Yes		Yes	
Age	Yes		Yes		Yes		Yes	
Nationality	Yes		Yes		Yes		Yes	
Current Degree	Yes		Yes		Yes		Yes	
Parent 1 Degree	Yes		Yes		Yes		Yes	
Parent 2 Degree	Yes		Yes		Yes		Yes	
Constant	1.0221	***	0.3167	*	1.0821	***		
	(0.2455)		(0.1901)		(0.1784)			
Observations	7,121		7,121		7,121		7,121	
Pseudo R²	0.0644		0.0446		0.0339		0.0374	
LR Chi²	409.23	***	403.5600	***	320.16	***	905.20	***
Log likelihood	-2974.9664		-4326.9006		-4559.3237		-11648.256	

Table 4: Definition of groups of confidence

Group	Definition	Confidence
Objective Low/Subjective Low	Objective FL <3 and Subjective FL <=3	*Well-calibrated*
Objective Low/Subjective High	Objective FL <3 and Subjective FL>3	*Overconfident*
Objective High/Subjective Low	Objective FL=3 and Subjective FL <=3	*Underconfident*
Objective High/Subjective High	Objective FL=3 and Subjective FL>3	*Well-calibrated*

Table 5: Multinomial logit for students' confidence in financial literacy

To compare the confidence in financial literacy of students, we use a multinomial logit model. We use students that are *Well-Calibrated* in their confidence in financial literacy as the basis for comparison. Therefore, we use for each model the whole sample of students. Moreover, as we use a single multinomial logit model, only one log-likelihood, pseudo-R², and LR Chi² is reported. In Model 1, we compare the likelihood of students being overconfident in their financial literacy rather than being well-calibrated, according to their faculty of study. We control for *Age*, *Gender*, *Nationality*, the current level of degree of the student (*Current Degree*), parents' degree (*Parent 1 Degree*, *Parent 2 Degree*), and if the student already had a paid job (*Already Paid Job*) or did an internship (*Already Internship*).

Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) Overconfident vs Well-Calibrated		(2) Underconfident vs Well-Calibrated	
Independent variables				
Economics and Business	-0.0404		0.0005	
	(0.1112)		(0.1079)	
Natural Sciences	-0.5292	***	0.1139	
	(0.1472)		(0.1152)	
Formal Sciences	-0.2558	**	0.0786	
	(0.1225)		(0.1101)	
Humanities	-0.3450	***	-0.0724	
	(0.0937)		(0.0879)	
Life Sciences	-0.5026	***	0.3109	***
	(0.1067)		(0.0855)	
Other Faculties	-0.3052		0.1699	
	(0.3647)		(0.3065)	
Controls				
Already Paid Work	0.2076	***	-0.0641	
	(0.0695)		(0.0619)	
Already Internship	0.0494		0.0211	
	(0.1300)		(0.0719)	
Gender	Yes		Yes	
Age	Yes		Yes	
Nationality	Yes		Yes	
Current Degree	Yes		Yes	
Parent 1 Degree	Yes		Yes	
Parent 2 Degree	Yes		Yes	
Constant	-1.0408	***	-0.7008	***
	(0.2207)		(0.2324)	
Observations	7,121			
Pseudo R²	0.0224			
LR Chi²	303.52	***		
Log likelihood	-6619.0899			

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Table 6: Effects of the faculty of study on students' financial literacy

In Model 1, we specify an ordered logit model to compare the scores of objective financial literacy among the different faculties of the University. We chose an ordered logit model as the dependent variable *Objective FL* is a score ranging from 0 to 3, with 0 being the lowest score and 3 the highest score. We use as independent variables the faculty of study of students. We control for *Age*, *Gender*, *Nationality*, the current level of degree of the student (*Current Degree*), parents' degree (*Parent 1 Degree*, *Parent 2 Degree*), and if the student already had a paid job (*Already Paid Job*) or did an internship (*Already Internship*). In Models 2 and 3, we add *Selective Faculty* as an additional control variable. In Model 3, we use the variable *Subjective FL* as the dependent variable. As *Subjective FL* is a score ranging from 1 to 7, we specify an ordered logit model.

Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) Objective FL (ologit)		(2) Objective FL (ologit)		(3) Subjective FL (ologit)	
Independent variables						
Economics and Business	0.7258	***	0.6894	***	0.7298	***
	(0.0844)		(0.0869)		(0.0781)	
Natural Sciences	-0.1168		-0.1387		-0.5571	***
	(0.0902)		(0.0911)		(0.0864)	
Formal Sciences	0.0541		0.0775		-0.2370	***
	(0.0843)		(0.0854)		(0.0811)	
Humanities	-0.5212	***	-0.4960	***	-0.6267	***
	(0.0643)		(0.0659)		(0.0633)	
Life Sciences	-0.0088		0.0068		-0.7094	***
	(0.0671)		(0.0677)		(0.0654)	
Other Faculties	-0.3371		-0.3110		-0.5402	**
	(0.2342)		(0.2347)		(0.2276)	
Controls						
Already Paid Work	-0.0252		-0.0183		0.1704	***
	(0.0473)		(0.0474)		(0.0450)	
Already Internship	0.0732		0.0726		0.1255	**
	(0.0546)		(0.0546)		(0.0524)	
Selective Faculty			0.1178	*	0.0239	
			(0.0678)		(0.0636)	
Gender			Yes		Yes	
Age			Yes		Yes	
Nationality			Yes		Yes	
Current Degree			Yes		Yes	
Parent 1 Degree			Yes		Yes	
Parent 2 Degree			Yes		Yes	
Observations	7,121		7,121		7,121	
Pseudo R²	0.0378		0.0380		0.0374	
LR Chi²	649.60	***	652.63	***	905.34	***
Log likelihood	-8269.7509		-8268.2349		-11648.185	

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Appendix A: Definition of variables

Variables	Measure	Use in the model	Type of variable	Source
Objective FL	Added scores for the Big Three questions (*FL Interest* for interest rate, *FL Inflation* for inflation rate, and *FL Risk* for financial risk)	Dependent variable	Categorical	Lusardi and Mitchell (2014), adapted in French by Arrondel (2017)
Subjective FL	Self-assessment on a 7-point Likert's scale	Dependent variable	Categorical	Allgood and Walstad (2016)
Faculty	Dummy for each Faculty: Social Sciences Economics and Business Natural Sciences Formal Sciences Humanities Life Sciences Other Faculties	Independent variable	Dummies	Sarigül (2014), adapted to the French academic system
Gender	=0 if Male =1 if Female =2 if Other	Control variable	Categorical	Chen and Volpe (2002)
Nationality	=1 if French =2 if Other European nationalities =3 if Outside EU nationalities	Control variable	Categorical	Lusardi and Mitchell (2011)
Age	2021-Year of birth	Control variable	Continuous	Lusardi and Mitchell (2008)

Continued on next page

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Current Degree	=1 if First-year Bachelor =2 if Second-year Bachelor =3 if Third (last) year Bachelor =4 if First-year Master =5 if Second (last) year Master =6 if Ph.D.	Control variable	Categorical	Chen and Volpe (1998)
Parent 1 and Parent 2 degrees	=1 if Less than Baccalaureate =2 if Baccalaureate or equivalent =3 if Technical degree =4 if Bachelor degree or equivalent =5 if First-year master or equivalent =6 if Second-year master or equivalent =7 if Ph.D. or equivalent	Control variable	Categorical	Brau et al. (2019)
Already Paid Work	=0 if the student never had a paid job =1 if the student already had a paid job	Control variable	Dummy	Brau et al. (2019)
Already Internship	=0 if the student never did an internship =1 if the student already did an internship	Control variable	Dummy	Brau et al. (2019)

Appendix A continued

Appendix B: Complementary Descriptive Statistics

Standard deviations in parentheses

	N=	Mean of *Objective FL*	Mean of *Subjective FL*	Mean of *FL Interest*	Mean of *FL Inflation*	Mean of *FL Risk*
Faculty:						
Social Sciences	2,042	2.1396	3.1611	0.8418	0.6690	0.6288
		(0.9000)	(1.3738)	(0.3650)	(0.4707)	(0.4832)
Economics and Business	779	2.4814	3.8601	0.8973	0.7997	0.7843
		(0.7490)	(1.3336)	(0.3038)	(0.4004)	(0.4115)
Natural Sciences	571	2.2102	2.8932	0.9089	0.7180	0.5832
		(0.8216)	(1.3301)	(0.2880)	(0.4503)	(0.4935)
Formal Sciences	746	2.2466	3.1676	0.8660	(0.7252)	0.6555
		(0.7042)	(1.3689)	(0.3409)	(0.4467)	(0.4755)
Humanities	1,575	1.8387	2.7530	0.7486	0.5663	0.5238
		(0.9901)	(1.3604)	(0.4340)	(0.4957)	(0.4996)
Life Sciences	1,344	2.1429	2.6362	0.8444	0.6577	0.6406
		(0.8861)	(1.3180)	(0.3625)	(0.4746)	(0.4800)
Other Faculties	64	1.9219	2.7500	0.8594	0.5781	0.4844
		(0.9479)	(1.3214)	(0.3504)	(0.4978)	(0.5037)
Selective Faculty:						
Yes	1,319	2.3268	3.2570	0.9060	0.7544	0.6664
		(0.8022)	(1.4211)	(0.2920)	(0.4306)	(0.4717)
No	5,802	2.0803	2.9707	0.8199	0.6477	0.6127
		(0.9271)	(1.3881)	(0.3843)	(0.4777)	(0.4872)
Whole sample	7,121	2.1260	3.0237	0.8358	0.6675	0.6227
		(0.9103)	(1.3986)	(0.3704)	(0.4712)	(0.4848)

Appendix C1: Bonferroni group comparison: Objective FL by Faculty

For ordered logit models, the Bonferroni pairwise comparison reports the coefficients for each comparison. Therefore, the first column of Appendix B1 is similar to the results of Model 2 of Table 6. Coefficients represent the likelihood to have a higher score of objective financial literacy. For instance, the first coefficient is interpreted as so: students in Economics and Business faculty have higher chances to have a higher score of objective financial literacy than Social Sciences students.

Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

	Social Sciences		Economics and Business		Natural Sciences		Formal Sciences		Humanities		Life Sciences	Other Faculties
Social Sciences	-											
Economics and Business	0.6894 (0.0869)	***	-									
Natural Sciences	-0.1387 (0.0911)		-0.8282 (0.1086)	***	-							
Formal Sciences	0.0775 (0.0854)		-0.6119 (0.1088)	***	0.2162 (0.1103)		-					
Humanities	-0.4960 (0.0659)	***	-1.1855 (0.0954)	***	-0.3573 (0.0983)	***	-0.5735 (0.0867)	***	-			
Life Sciences	0.0068 (0.0677)		-0.6827 (0.0957)	***	0.1455 (0.0970)		-0.0707 (0.0888)		0.5028 (0.0714)	***	-	
Other faculties	-0.3110 (0.2347)		-1.0004 (0.2451)	***	-0.1723 (0.2454)		-0.3885 (0.2411)		0.1850 (0.2348)		-0.3178 (0.2357)	-

Appendix C2: Bonferroni group comparison: Subjective FL by Faculty

For ordered logit models, the Bonferroni pairwise comparison reports the coefficients for each comparison. Therefore, the first column of Appendix B2 is similar to the results of Model 3 of Table 6. Coefficients represent the likelihood to have a higher score of subjective financial literacy. For instance, the first coefficient is interpreted as so: students in Economics and Business faculty have higher chances to have a higher score of subjective financial literacy than Social Sciences students.

Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

	Bonferroni Comparison: *Subjective FL* by Faculty											
	Social Sciences		*Economics and Business*		*Natural Sciences*		*Formal Sciences*		*Humanities*	*Life Sciences*	*Other faculties*	
Social Sciences	-											
Economics and Business	0.7298 (0.0781)	***	-									
Natural Sciences	-0.5571 (0.0864)	***	-1.2869 (0.0997)	***	-							
Formal Sciences	-0.2370 (0.0811)	*	-0.9668 (0.0999)	***	0.3201 (0.1041)	**	-					
Humanities	-0.6266 (0.0633)	***	-1.3564 (0.0873)	***	-0.0695 (0.0931)		-0.3896 (0.0827)	***	-			
Life Sciences	-0.7094 (0.0654)	***	-1.4392 (0.0883)	***	-0.1523 (0.0920)		-0.4725 (0.0850)	***	-0.0828 (0.0687)	-		
Other Faculties	-0.5402 (0.2276)		-1.2700 (0.2359)		-0.0169 (0.2371)	***	-0.3032 (0.2336)		0.0864 (0.2279)	0.1692 (0.2284)	-	