

The Effect of Financial Literacy on Financial Behavior and its Impact on Financial Decisions – The Case of Lebanese University Students

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Abstracts: Financial literacy is the comprehension of finance and attitudes toward financial opportunity and financial behavior. Financial acquaintance is crucial for making responsible financial decisions. In this challenging financial environment, we are living in, young people, particularly university students, must make challenging financial decisions that will impact their financial behavior. This study aims to examine the relationship between financial behavior and financial decision-making among Lebanese university students. The study is significant because it raises serious questions regarding the long-term effects of financial literacy on financial behavior and its impact on financial decision-making. The study adopted a quantitative methodology to accomplish its key goals. Students from various Lebanese universities were given a questionnaire. Using a convenience sampling method, a sample of five hundred ninety-eight participants was obtained. SPSS was used to analyze the data, namely Pearson correlation and regression analyses. The study's conclusions demonstrated the beneficial influence of financial literacy on financial behavior. Additionally, they demonstrated the beneficial effects of financial conduct on the financial judgments of university students in Lebanon. Thus, it is strongly advised that college students become financially literate so they may make wise financial decisions. Moreover, for Lebanon to be among the top countries with the highest financial literacy the Lebanese Ministry of Education and Higher Education should include within the curriculum of the intermediate and secondary classes some financial educational programs, workshops, and seminars. This will let students have exposure to basic financial knowledge and learn its significance and need in their financial decision-making.

Keywords: Financial Behavior; Financial Decision-Making; Financial Literacy; Lebanon; University Students.

1. INTRODUCTION

Today's financial environment is getting more and more complex with the density of financial products; thus, it is impossible to exist without knowing how to manage money (Wagner, 2015). Consumer credit products, including loans, credit cards, and mortgage loans, are widely available in the financial markets. Customers who finance their purchases with credit must have an understanding of the costs of those purchases and other related information. Financial literacy is the comprehension of financial instruments, and the ability to understand financial data and make knowledgeable choices and decisions on asset investments, financial planning, pensions, and debt (Lusardi & Mitchell, 2014).

Standard and Poor's Global Financial Literacy Survey (April 2022) classified the top ten countries with the highest financial literacy (Klapper et. al, 2015).

Denmark (71%): Despite having a high level of consumer debt, Danish households often maintain substantial assets. Danish employees are already prepared to think about their future finances because they also receive pension plans that account for between 10% and 15% of their pay and accrue interest. Additionally, a financial literacy course is required for 7th through 9th graders.

Norway (71%): Norway has a high rate of financial literacy, which may be ascribed to state-sponsored youth financial education programs. These programs offer interactive learning materials on personal finance-related topics to help people reach financial milestones like home ownership.

Sweden (71%): Sweden's high level may date back to the late 1800s. Augustin Chaurand de Malarce, a French economist, launched the school savings movement in Europe in 1873 as a result of the Vienna World Exhibition. The Swedish Savings Bank Association launched a program in 1901 to advance financial education in classrooms. Math, financial literacy, and life skills like how to buy a house and prepare for retirement are now taught to students.

Canada (68%): The National Research Plan for Financial Literacy was established by Canada as part of a deliberate effort to address the issue of diminishing financial literacy. To increase financial literacy, this program involves the public, business, and non-profit sectors. The objectives are to encourage Canadians to manage their finances and debt, save money and make plans, and guard against fraud and other financial abuse.

Israeli Entity (68%): Financial literacy levels vary among the genders and between socioeconomic status in the Israeli Entity where men are more financially knowledgeable than women and the wealthy are more financially knowledgeable than the poor. Additionally, the nation teaches its high school students through "Financial Education Month in the School System," a collaboration between the Ministry of Education and the central bank that introduces financial topics like banking, investing, and general economics.

United Kingdom (67%): Despite having a financial literacy rate of 67%, the UK still finds gaps and has been working to address them. It became mandatory to teach personal finance in schools in 2014.

Germany (66%): Germany takes its financial literacy very seriously since it believes that it is directly related to societal and individual financial well-being. All private and public employees are covered by a robust pension system that is prevalent in Germany. Men had somewhat higher financial literacy than women, and persons with minor educational levels, in general, had lower levels of financial literacy, highlighting glaring socioeconomic disparities.

Netherlands (66%): The Dutch government is a firm believer in providing customers with financial education and empowerment. They may have a higher-than-average percentage of financial literacy since they have passed numerous regulations that aid in educating customers about their choices and battling debt.

Australia (64%): Due to its wide socioeconomic disparities, Australia has attempted to increase young people's financial literacy by including it in elementary and secondary education. Australian pupils outperform the average of the top 10 financially literate nations. In Australia, 79% of 15-year-old pupils have a bank account, and these adolescents perform better on tests of financial literacy than their non-banking counterparts. The MoneySmart Teaching initiative, which covers financial literacy for teachers, was launched by the Australian Securities and Investments Commission in 2012.

Finland (63%): Finland places a high value on teaching financial literacy to schoolchildren. In the seventh grade, Finnish students take classes in Mathematics and home economics. In the ninth grade, they take another session in financial literacy in their social science coursework. Students from Australia reported having the most financial literacy tasks in school.

Although certain nations may have high rates of financial literacy, these numbers might differ among socioeconomic classes and can highlight injustices and imbalances. Although the United States still needs to do a lot to increase financial literacy, doing so could be advantageous, particularly for younger generations. Previous studies have shown that children are better prepared to manage their resources responsibly as adults the sooner financial education is taught to them.

Banks et al. (2010), Bernheim (1998), Clark et al. (2011), Guiso et al. (2009), Haliassos et al. (1995), Hastings et al. (2011), Jappelli (2010), Jappelli et al. (2011), Lusardi et al. (2007), van Rooji et al. (2011), Yoong (2011), and other empirical research on financial literacy found that people who engage in financial markets demonstrate, on average, a better comprehension of fundamental financial concepts pertinent to those markets than people who do not. Such studies were conducted to inspect the effect of financial literacy on financial market participation and the financial decision-making of individuals. They found that the variation in the levels of financial literacy affects

individual financial decisions and market choices. Financially literate people have better investment decisions and better-diversified portfolios.

On the other hand, low-income individuals who are involved in simple financial purchases and transactions are a different case. Their financial literacy is important to guide their financial behaviors and decisions. Governments play a significant role in customer protection for low-income people with little financial literacy. Those consumers should be protected through consistent terminology in disclosure, transparency, and complaint units. Therefore, governments should play their role in ensuring that financial institutions do not systematically undercut consumer protection by leveraging their advantages in information, knowledge, and power.

Building financial capability is important in all countries. To exercise their rights, consumers must be aware of them. These rights include the ability to comprehend available product options and the freedom to select the services that best suit their needs. Customers/clients should be financially literate to fulfill this function effectively. Governments can assist in overcoming obstacles including those related to education, regulation, and finances so that consumers are better equipped to use financial services and take an active role in their safety.

To discuss the idea of consumer financial competence, three overlapping concepts are employed. The first concept is financial education, which is a vital instrument for developing financial knowledge and capacity when combined with experience utilizing financial services. It educates people on sensible methods for earning, spending, saving, borrowing, and investing money. The second concept is financial literacy, which refers to the capacity to comprehend fundamental details about financial services and products. The third concept is financial competency, which is the capacity to use knowledge, make wise choices, and take effective action concerning the management of money both now and in the future.

Wagner (2015) believed that it is critical to be monetarily educated to make effective financial choices. Moreover, Vieira (2012) found that financial literacy, defined as the capacity to apprehend financial concerns and the competence and motivation to act on that data, leads to more informed financial decisions.

Based on previous research, the notion of financial literacy and its effect on financial conduct and financial decision-making is noteworthy. The significance of the research is embedded in its serious questions concerning the long-term effect of financial literacy on students' financial behavior and decision-making. Education programs in finance can be made more effective by determining whether and how financial literacy influences financial behavior and decisions to better prepare young people, particularly university students, for the workforce and the beginning of their careers as skilled personal financial managers (Kumar et al., 2017). Today, there is a far wider variety of financial goods available than in the past, and making financial decisions has a substantial impact on the well-being of individuals (Lusardi, 2019). Therefore, it is important to investigate the impact of financial literacy on financial behavior and financial decisions to develop more educational programs that are finance-based to prepare young university students for success in the financial markets, knowledge, and financial decisions. The research questions are as follows:

1. How does financial literacy affect the financial behavior of Lebanese university students?
2. How does the financial behavior of Lebanese university students affect their financial decisions?

2. LITERATURE REVIEW

This part includes the theoretical background and previous research related to the main concepts of this research.

2.1. FINANCIAL LITERACY

Financial literacy is necessary for protection against financial issues (Ariante, 2018). In daily life, having a basic comprehension of finances and the capability to handle one's finances are essential (Arianti, 2018). According to Lusardi & Mitchell (2007), financial literacy is an individual's acquaintance with financial tools and instruments like savings, investments, and insurance. It can also be described as having the financial know-how to flourish

financially. Financial literacy keeps people out of financial difficulty, according to Krishna et al. According to Sabri (2011), having a basic understanding of finances is essential for success. To reach this fundamental understanding, it is necessary to recognize and comprehend the complex concepts of spending, saving, and investing. As stated by the Financial Services Authority (2013), financial literacy is an assembly of procedures or actions intended to enhance the customer's and the general public's knowledge, abilities, and confidence so that they can better manage their financials.

Huston (2009) believed that the concept of financial literacy has two dimensions which are understanding and using financial information. Financial literacy, as stated by Huston (2010), is the input used to simulate the requirement for financial education. She found that to comprehend the impacts of education and the difficulties of wise financial decision-making, it is crucial to explain and quantify financial literacy. The numerous metrics to measure financial literacy that has been studied over the past ten years are summarized in her article.

Furthermore, Huston (2010) concluded there was a connection between behavior, education, well-being, and financial literacy. The practical application of information specifically about personal finances is known as financial literacy. The degree of financial literacy an individual possesses depends on how gifted and educated they are overall. For instance, someone's level of financial literacy will surely be impacted if they struggle with math. As opposed to numeracy skills, which may be remedied by calculators and computer software, data directly related to efficiently managing personal finances is more suitable to emphasize in a financial literacy test. Financial literacy is a part of human capital that can be used to upsurge predicted life benefits from expenditure, which entails acts that boost financial well-being. Factors such as behavioral bias, cognitive bias, self-control issues, pressures from family and acquaintances, and economic and institutional pressures influence financial behaviors and financial safety. Because of these additional factors, a financially literate individual could not display the expected behaviors or improvements in financial well-being. Financial learning is a tool to improve individuals' financial knowledge and financial literacy. Using a clever financial literacy tool that precisely captures one's financial understanding and application, an individual finds it feasible to obtain a vision of how effective financial education creates the human capital necessary to act in ways that will promote financial well-being.

However, several studies, including one by Mandell (2005), suggest that financial learning does not ominously raise students' test results in financial comprehension. Initiatives for financial learning are more costly than they would be advantageous, according to Willis' (2008) research.

Nevertheless, some investigations, including Fox et al. (2005) and Lusardi (2003), discovered a direct connection between financial learning, financial literacy, and favorable financial results.

These contradictory results may indicate that some programs related to financial literacy are more successful than others and that many factors influence financial distress. The objective of the current study is to inspect how financial literacy affects financial behavior among Lebanese university students.

2.2. Financial Behavior

For the past thirty years, consumer economists have investigated financial behavior. Between 1970 and 1990, a fair overview of the financial behavior studies was given by Fitzsimmons, Hira, Bauer, and Hafstrom in 1993. Studies on financial habits in various contexts have increased recently such as studies done by Hilgert et al. (2003), Hogarth et al. (2002), Hogarth et al. (2003), Muske et al. (2001), O'Neill et al. (2003) and Xiao (2006).

Xiao (2008) believed that financial conduct or behavior refers to any human activity that is related to money management, credits, savings, or any other sorts of common financial activities. In his study, Xiao (2008) covered the use of behavioral theories in the study of financial behavior. The author believed that any individual conduct that is pertinent to managing money can be categorized as financial behavior. According to Xiao (2008), some things need to be made clear to define human or financial behaviors which are whether the focus is on conduct or results, whether the focus is on a specific action or a group of acts, how the aimed behavior is measured, and whether the data used is from self-reports or observations.

2.3. Financial Decisions

People make better choices as they become more financially aware. The less financially savvy one is, though, the easier it is to make decisions that negatively affect their well-being and socioeconomic standing (Lusardi, 2019).

Individuals often govern their economic and financial transactions using their cognitive abilities. However, sometimes transactions are complex and exceed individuals' ability to manage their finances effectively. Therefore, it is essential to have the necessary financial knowledge to improve decision-making in these domains.

Financial decisions are described as choices or a set of options made with the use of financial literacy skills. The ongoing struggle between the marketplace's production of goods and services and an individual's restricted resources to purchase them has a substantial impact on financial decisions (Remund, 2010).

Individuals' purchase decisions mainly include two choices which are the choice of the product and the choice of the financing tool. Only a few individuals use financial information before deciding upon a certain purchase or an investment. The decision of purchase or investment; in other words, the financial decision, tends to be right or wrong based on the information collected about it and the financial literacy of an individual.

2.4. Previous Research

Many widely held studies on financial literacy and its effect on financial behavior have indicated that financial literacy does influence financial conduct. Others have shown a causal or even a connection between financial literacy, financial behavior, and financial decision-making.

Sadalia et al. (2017) investigated the impact of the behavior of financial management on financial performance. The authors employed quantitative and qualitative approaches using a sample of small and medium-sized enterprise owners in Medan. They concluded that a person's money management behavior and financial literacy are related.

In their 2005 study, Perry and Morris looked at the impact of consumer financial acquaintance, locus of control, and revenue on financial behavior. According to the results, financial behavior is influenced by customers' perception of how much control they have over consequences, as well as their acquaintance and monetary resources. There is conflicting evidence of racial and ethnic modifiers. The authors concluded that poor money management practices can have significant long-term social and societal repercussions.

Green et al. (2013) discussed the effect of financial knowledge on students' financial decisions using a questionnaire and concluded that there is no substantial association between the two.

In their study, Gross et al. (2005) studied the negative effects of being financially illiterate. They mentioned that its major negative effects are high debt levels and sudden defaults. The sample of their study was law students who were offered financial literacy education and collected their responses using a questionnaire to measure their financial literacy. The researchers concluded that financial education may alter students' awareness, attitudes, and actions related to finance, expediting their management of these matters throughout college and beyond graduation.

More significantly, Mandell (2006) used surveys to measure financial literacy from 1997 to 2006 of high school seniors. The author discovered that financially literate high school seniors, compared to their counterparts, had a minor check bounce rate and a greater checkbook balance rate. The results showed that students from households with superior financial incomes have higher financial literacy levels than students from families with lower financial incomes. Moreover, students who took finance courses did not have a raise in their financial literacy levels related to those who did not take such courses.

Furthermore, de Bassa Scheresberg (2013) examined financial literateness and conduct in 4,500 young adults. According to his findings, people who are more financially literate or confident in their mathematical or individual finance abilities had superior financial results. They're more probable to save for emergencies or retirement and less probable to employ high-cost borrowing strategies.

Additionally, Ameer and Khan (2020) examined whether financial literacy is linked to financial behavior in a cross-sectional New Zealand sample of individuals using survey data. Adults with a finance and economics degree have stronger financial literacy and self-confidence in handling their funds. Moreover, persons who are assertive in their capability to manage their money but do not have the necessary financial literacy are more susceptible to engaging in hazardous financial conduct.

Bellofatto et al., (2018) researched the financial literacy of investors and its link to their financial trading behavior. They discovered that financially literate investors invest smarter regardless of their age, trading experience, and education. Also, financially literate investors have better capabilities in diversifying their portfolios than those who lack financial literacy.

Gathergood and Weber (2017) examined the association between financial literacy and financial decisions made by households related to mortgages. They believed that mortgages are the most important financial decisions made by households and that the current financial market provides complex mortgage products. Their study was based in the United Kingdom. They concluded that low financial literacy raises the probability of selecting alternative mortgage products rather than choosing adjustable-rate mortgages where they can circumvent paying the term premium of fixed-rate mortgages. Thus, they found that financial literacy enhances financial decisions related to mortgages.

Christelis et al. (2010) and van Rooij et al. (2011) concluded that advanced literacy in investors can help them predict stock market changes and enhance their financial decisions.

Almenberg & Dreber (2015) looked into how financial literacy affected men's and women's stock market decisions and the variances in the levels of financial acquaintance between the genders. Their study was conducted in Sweden and their sample was a random sample of 1,300 persons representing the Swedish population. They found that females participate less than males in financial stock markets and have inferior levels of financial literacy. Their lower financial literacy levels did not allow them to participate well in financial stock markets. From this, the authors concluded that financial literacy is significant in financial decisions and when women become more financially literate, their involvement in financial markets will upsurge.

Disney and Gathergood (2013) studied the association between financial literacy and consumer credit portfolios which reflects their financial decisions. Their research was conducted on households in the United Kingdom. They revealed that borrowers with low financial literacy held a greater proportion of high-interest debt than borrowers with higher financial literacy. Moreover, they found that when analyzing credit terms, the confidence of individuals with poor financial literacy is lower than the confidence of those with high financial literacy. Individuals with low financial literacy are confused over financial terms and are less probable to engage in financial behavior which might aid them in improving their awareness of the financial market.

Shim et al. (2009) inspected the financial socialization of students in their first years of college and they considered the role of parents, work, and education. Their study included a sample of 2,098 college students in their first years. They found that the role of parents, education, and work is very important in the financial learning of pupils, their financial behaviors, and their financial decision-making. Additionally, the authors discovered a relationship between early financial socialization and financial education, which in turn is linked to financial attitudes and ultimately, financial conduct. They concluded that college students' financial habits developed throughout their higher education years are likely to affect their future decisions.

Mandel and Klein (2009) investigated the effect of financial literacy on the financial behavior of pupils. They believed that because financial conduct has an impact on financial safety, it is necessary to emphasize the

significance of financial decision-making. To achieve their research objective, they took a sample of 79 high school students and divided them among those who took the financial management course and those who did not. They discovered that there is no linkage between financial literacy and taking this course and even there is no link between financial behavior and taking this course. Important questions are raised by this study concerning the usefulness of high school financial literacy courses in the long term.

Assad (2012) discussed experimental finance research and emphasized how having access to financial information affects financial choices. The author reviewed psychological literature that reveals how the bounds of human cognition influence financial decision-making. Experiments in financial research in the lab also show a relationship between participant expectations and conduct. Neuroscience research identifies the part of the brain that controls particular behaviors, and empirical data from the entire market sheds light on the overall influence of individual decision-makers. Making better financial decisions will be made possible by all of this knowledge. The author concluded that a person's conduct determines whether they use cash, credit, or savings, and that literacy and perceived awareness related to financial aspects have an impact on these choices.

Karakurum-Ozdemir et al. (2019) believed that knowledge related to financial matters considerably boosts financial well-being. They carried out their research in Turkey, Mexico, Lebanon, Uruguay, and Colombia. Their main purpose was to identify public policies to increase financial literacy levels among citizens of the studied countries. They found that when the educational levels of individuals increase, their financial literacy scores will consequently increase. Moreover, they found that not only the number of education years matters but the quality matters too. They suggested the necessity of financial inclusion.

Alaaraj and Bakri (2020) examined the impact of financial knowledge on investor decision-making. The study covered the geographical region of South Lebanon. The authors used a quantitative approach and employed a questionnaire to collect data. The convenience sampling method was used and 150 participants responded to the questionnaire. The questionnaire was directed to clients of four diverse banks in the area. SPSS was used to conduct the data analysis. The authors resolved that there is a positive noteworthy association between investment decision-making and financial literacy. The authors recommended that future studies include other districts in Lebanon in a different and wider time horizon and that they consider other variables.

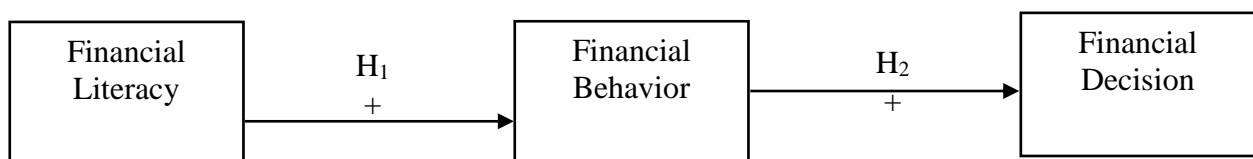
2.5. Hypotheses Development

Many research papers discussed the influence of financial literacy on financial decisions but a gap in the literature was found regarding the influence of financial behavior on financial decisions. In addition, no studies tackled this influence specifically in Lebanon. After surveying the literature and based on previous research, the succeeding hypotheses were developed:

H₁: Financial literacy has a positive impact on the financial behavior of university students in Lebanon.

H₂: Financial behavior has a positive impact on the financial decision of Lebanese university students.

Consequently, the study's hypotheses can be summarized in the below model:



3. METHODOLOGY

3.1. Approach

The research approach is a quantitative research approach to gain a clear understanding from a sample of participants. The study employed a quantitative approach since it emphasizes precise statistical numerical data.

3.2. Instrumentation

A questionnaire was prepared using numerous measures according to the recommendations of Podsakof et al. (2003) to ensure contribution and reduce the probability of common method biases. The questionnaire was translated from the original English into Arabic using the back translation method (Brislin, 1970). The total number of questions was twenty-three questions. Participants were first requested to reply to various demographic inquiries, including age, marital status, university, and faculty since demographic characteristics of participants are supposed to have explanatory value in the research (Geronimus et al., 1996). Formerly, Financial Literacy (FL) was measured by using a blend of five multiple-choice financial questions adapted from the scales of Lusardi and Mitchell (2011) and Rieger (2020). Financial Behavior (FB) was measured based on the model proposed by Potrich et al. (2016) by using a five-point Likert scale and it comprised eight questions. Finally, a developed form made up of five questions by the Department of Econometrics and Business Studies at Monash University (2006) was used to assess the financial decision (FD).

3.2. Population and Sample Selection

The questionnaire was distributed to undergraduate students at several Lebanese universities; public and private, from March 2022 to August 2022. Convenience sampling was used as an effective technique for its simplicity, low cost, less effort, and can be facilitated in a short time (Bell et al., 2022). The significance here is that this study considered the public and all the private universities in Lebanon. Students were contacted to fill out a structured questionnaire via a link developed by an online survey website (Google Forms). Nine hundred eighty-two participants from different Lebanese universities were approached through a private message. Of those, 598 were included in the analysis, indicating a 60.89 % response rate. Confidentiality and anonymity of participants were provided.

3.3. Variables

Based on the hypotheses, the research includes the following variables:

For H₁, Financial Behavior (FB) is the dependent variable and Financial Literacy (FL) is the independent variable.

For H₂, the dependent variable is Finance Decision (FD) and the independent variable is Financial Behavior (FB).

4. FINDINGS

4.1. Sample Profile

Table 1 shows the sample profile including the demographics of the respondents which are age, marital status, university, faculty, and business major (in case the faculty is Business).

Table 1: Sample Profile

Age	17-20 (25%), 21-24 (28%), 25-28 (20%), 29-30 (16%), 33-36 (8%), 37 and above (3%)
Marital Status	Single (65%), Divorced/Separated (1%), Married (34%)
University	Public (21%), Private (79%)

Faculty	Business (55%), Medicine (11%), Health Sciences (2%), Engineering (6%), Architecture (5%), Arts and Sciences (6%), Agriculture and Food Sciences (15%)
Business Major	Finance (32%). Accounting / Audit (40%), Management (15%), Marketing (4%), MIS (7%), HR (2%)

It shows that the majority are between the ages of 17 and 24. In addition, the majority are single and study in private universities in Lebanon. Moreover, the majority of the students are studying in the faculty of business and mainly in finance and accounting emphasis. This in turn shows that those students have taken financial courses which might affect their financial literacy.

4.2. Responses to Questions Measuring Financial Literacy

Five questions were inquired to assess the financial literacy (FL) of the participants. The responses are found in Table 2.

Table 2: Responses to Questions Measuring Financial Literacy

	Correct Answers	Incorrect Answers	Total Responses
FL1	436	162	598
FL2	485	113	598
FL3	461	137	598
FL4	410	188	598
FL5	377	221	598

Table 2 shows that 73% of the participants got correct answers to FL1, 81% got correct answers to FL2, 77% got correct answers to FL3, 69% got correct answers to FL4, and 63% got correct answers to FL5.

4.3. Responses to Questions Related to Financial Behavior

Eight questions were asked to investigate the financial behavior of those who participated in the study.

Table 3: Frequency Distribution for FB1

FB1					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	307	51.3	51.3	51.3
	Agree	291	48.7	48.7	100.0
	Total	598	100.0	100.0	

Table 3 shows that 51.3% of the participants strongly agreed and 48.7% agreed that they pay their credit cards on time to avoid extra charges. Thus, the majority have wise financial behavior and pay their financial obligations on time.

Table 4: Frequency Distribution for FB2

FB2					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	84	14.0	14.0	14.0
	Agree	153	25.6	25.6	39.6

	Undecided	147	24.6	24.6	64.2
	Disagree	58	9.7	9.7	73.9
	Strongly Disagree	156	26.1	26.1	100.0
	Total	598	100.0	100.0	

Table 4 shows that 14% of the participants strongly agree, 25.6% agree, 24.6% have an undecided response, 9.7% disagree, and 26.1% strongly disagree that they worry about how best to manage their money. This illustrates that the majority of the participants (39.6%) consider money management as an important concern.

Table 5: Frequency Distribution for FB3

FB3					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	239	40.0	40.0	40.0
	Agree	198	33.1	33.1	73.1
	Disagree	161	26.9	26.9	100.0
	Total	598	100.0	100.0	

Table 5 displays that 40% of the participants strongly agree, 33.1% agree and 26.9% disagree that they take notes and control their expenses. This shows a keen financial behavior among the majority of the respondents.

Table 6: Frequency Distribution for FB4

FB4					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	193	32.3	32.3	32.3
	Agree	107	17.9	17.9	50.2
	Undecided	244	40.8	40.8	91.0
	Disagree	54	9.0	9.0	100.0
	Total	598	100.0	100.0	

Table 6 displays that 32.3% of the respondents strongly agree, 17.9% agree, 40.8% have undecided responses, and 9% disagree that they establish financial targets for the long term which influences their expense management. The responses show that the majority of the respondents (50.2%) set financial goals for the future to monitor their expenses which shows wise financial behavior.

Table 7: Frequency Distribution for FB5

FB5					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	196	32.8	32.8	32.8
	Agree	253	42.3	42.3	75.1
	Disagree	149	24.9	24.9	100.0
	Total	598	100.0	100.0	

Table 7 shows that 32.8% of the respondents strongly agree, 42.3% agree, and 24.9% disagree that they pay their bills without delay. Thus, the majority of the respondents (75.1%) pay their obligations on time to avoid extra charges.

Table 8: Frequency Distribution for FB6

		FB6			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	238	39.8	39.8	39.8
	Undecided	216	36.1	36.1	75.9
	Disagree	144	24.1	24.1	100.0
	Total	598	100.0	100.0	

Table 8 shows that 39.8% of the respondents agree, 36.1% have undecided responses, and 24.1% disagree that they save monthly. Saving is wise financial behavior to have some money in case of any emergencies.

Table 9: Frequency Distribution for FB7

		FB7			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	362	60.5	60.5	60.5
	Agree	144	24.1	24.1	84.6
	Disagree	92	15.4	15.4	100.0
	Total	598	100.0	100.0	

Table 9 shows that 60.5% of the respondents strongly agree, 24.1% agree and 15.4% disagree that they compare prices when buying something. The majority of the respondents (84.6%) compare prices when they are purchasing which is wise financial behavior.

Table 10: Frequency Distribution for FB8

		FB8			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	362	60.5	60.5	60.5
	Agree	144	24.1	24.1	84.6
	Disagree	92	15.4	15.4	100.0
	Total	598	100.0	100.0	

Table 10 shows that 60.5% of the respondents strongly agree, 24.1% agree and 15.4% disagree that they analyze their financial situation before a major purchase. Being financially wise requests checking the financial situation of an individual before conducting any purchase. The majority of the respondents (84.6%) behave in a financially wise manner before purchasing.

4.4. Responses to Questions Related to Financial Decision

Five questions were asked to reflect the financial decisions made by the 598 university students in Lebanon who constitute the study's sample.

Table 11: Frequency Distribution for FD1

		FD1			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A moderately low-risk taker	53	8.9	8.9	8.9

	An average risk taker	284	47.5	47.5	56.4
	A high-risk taker	261	43.6	43.6	100.0
	Total	598	100.0	100.0	

Table 11 shows that 8.9% of the respondents are moderately low-risk takers, 47.5% of the respondents are average risk takers, and 43.6% of the respondents are high-risk takers.

Table 12: Frequency Distribution for FD2

		FD2			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	25	4.2	4.2	4.2
	Agree	267	44.6	44.6	48.8
	Undecided	151	25.3	25.3	74.1
	Disagree	68	11.4	11.4	85.5
	Strongly Disagree	87	14.5	14.5	100.0
	Total	598	100.0	100.0	

Table 12 shows that 4.2% of the participants strongly agree, 44.6% agree, 25.3% have undecided answers, 11.4% disagree, and 14.5% strongly disagree that they are more comfortable putting their money in a bank account than in the share market. The majority of the participants take the financial decision to choose a safer investment.

Table 13: Frequency Distribution for FD3

		FD3			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	335	56.0	56.0	56.0
	Undecided	118	19.7	19.7	75.8
	Disagree	145	24.2	24.2	100.0
	Total	598	100.0	100.0	

Table 13 shows that 56% of the respondents agree, 19.7% are undecided, and 24.2% disagree that the best way to reduce financial risk is to diversify. This is a keen financial decision since diversification lowers the risk.

Table 14: Frequency Distribution for FD4

		FD4			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Undecided	87	14.5	14.5	14.5
	Disagree	212	35.5	35.5	50.0
	Strongly Disagree	299	50.0	50.0	100.0
	Total	598	100.0	100.0	

Table 14 shows that 14.5% of the participants are undecided, 35.5% disagree and 50% strongly disagree that during times of higher inflation, it can be more expensive to borrow money due to higher interest rates.

Table 15: Frequency Distribution for FD5

		FD5			
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		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	57	9.5	9.5	9.5
	Agree	88	14.7	14.7	24.2
	Undecided	99	16.6	16.6	40.8
	Disagree	316	52.8	52.8	93.6
	Strongly Disagree	38	6.4	6.4	100.0
	Total	598	100.0	100.0	

Table 15 indicates that 9.5% of the participants strongly agree, 14.7% agree, 16.6% are undecided, 52.8% disagree, and 6.4% strongly disagree that they can recognize a good financial investment. The majority of the respondents can not recognize a good investment.

4.5. Descriptive Statistics

As previously mentioned, the questionnaire included 5 socio-demographic questions, 5 questions to measure the financial literacy of students in universities in Lebanon, 8 questions related to financial behavior, and 5 questions related to financial decision-making. Thus, based on the responses to the questions, the following variables were created to test the two hypotheses of the study:

- FL: is the financial literacy score where the five questions to measure financial literacy were graded and a score out of 5 was obtained.
- FB is the average of all eight questions that measure financial behavior.
- FD is the average of all the five questions related to financial decision-making.

The minimum, maximum, mean, standard deviation, and kurtosis for each variable are shown in Table 16.

Table 16: Descriptive Statistics

Descriptive Statistics							
	N	Minimum	Maximum	Mean	Std. Deviation	Kurtosis (Statistics / Std. Error)	
FL	598	.00	5.00	3.6271	1.78953	-.770	.200
FB	598	1.50	3.25	2.1739	.46609	-.574	.200
FD	598	2.40	4.60	3.4027	.45427	.000	.200
Valid N (listwise)	598						

4.5.1. H₁ Results

Table 16 shows that the means for FL and FB are 3.62 and 2.17 respectively. Thus, the average score of the questions measuring financial literacy is 3.62 out of 5. The average scale for the questions related to financial behavior is 2.17; which is close to “agree”. This means that the average response to all questions related to financial behavior was “agree”. The standard deviations for FL and FB are low; 1.78 and 0.46 respectively. This shows that there is a low dispersion among the values of the variables FL and FB.

To test H₁ and investigate the effect of FL on FB, the Pearson correlation is used. Table 17 shows a significant positive correlation between FL and FB since the Pearson coefficient is 0.136; which is weak but still significant with a p-value of 0.001 which is less than 0.01.

Table 17: Correlation between FL and FB

		FL
FL	Pearson Correlation	1
	Sig. (2-tailed)	

	N	598
FB	Pearson Correlation	.136**
	Sig. (2-tailed)	.001
	N	598

** . Correlation is significant at the 0.01 level (2-tailed).

After finding out that the variables are correlated, a regression analysis is conducted where the independent variable is FL and the dependent variable is FB.

Table 18 shows an R squared of 1.9% which reveals that 1.9 % of the variability observed in the target variable is explained by the regression model. However, small R-squared values do not mean that the result is not reliable and conclusions about the relationships between the variables can't be drawn. What mostly matters here is the statistical significance of the result. As noted in Table 18, the outcome is significant since the p-value is 0.001 which is less than 0.01. In addition, Table 18 shows that the values of R squared and Adjusted R squared is close to each other; 0.019 and 0.017 respectively which means that there are no missing variables.

Table 18: Regression Analysis for FL and FB

Model Summary						
Model	R	R Squared	Adjusted R Squared	Std. Error of the Estimate		
1	.136 ^a	.019	.017	.46213		
a. Predictors: (Constant), FL						
ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.412	1	2.412	11.294	.001 ^b
	Residual	127.282	596	.214		
	Total	129.694	597			
a. Dependent Variable: FB						
b. Predictors: (Constant), FL						
Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.045	.043		47.850	.000
	FL	.036	.011	.136	3.361	.001
a. Dependent Variable: FB						

Table 18 shows the coefficients of the linear regression for the independent variable FL and dependent variable FB. The p-value is 0.001 which means that the result is significant at level 1%.

Based on the analysis, H₁ is supported and it can be concluded that financial literacy has a positive influence on the financial behavior of university students in Lebanon.

4.5.2. H₂ Results

Table 16 shows that the means for FB and FD are 2.17 and 3.40 respectively. Thus, the average scale for the questions related to financial behavior is 2.17; which is close to “agree”. The average scale for the questions related to the financial decision is 3.40; which is close to “undecided”. The standard deviations for FB and FD are low; 0.46 and 0.45 respectively. This shows that there is a low dispersion among the values of the variables FB and FD.

To test H₂ and investigate the effect of FB on FD, Pearson correlation is used. Table 19 shows a positive and significant correlation between FB and FD. The Pearson coefficient is 0.415; which is moderate but significant with a p-value of 0.001 which is less than 0.01.

Table 19: Correlation between FB and FD

Correlations			
		FB	FD
B	F		
	Pearson Correlation	1	.415**
	Sig. (2-tailed)		.000
	N	598	598
D	F		
	Pearson Correlation	.415**	1
	Sig. (2-tailed)	.000	
	N	598	598

** . Correlation is significant at the 0.01 level (2-tailed).

After finding out that FB and FD are correlated, a regression analysis is conducted where the independent variable is FB and the dependent variable is FD. Table 20 shows an R squared of 17.2% which reveals that 17.2 % of the variability observed in the target variable is explained by the regression model. In addition, Table 20 shows that the values of R squared and Adjusted R squared is close to each other; 0.172 and 0.171 respectively which means that there are no missing variables. As noted previously, a low value of R squared does not mean that conclusions can't be drawn from the result. What matters most is the significance of the result. Table 20 shows that F-statistic is significant at a significance value of 1% with a p-value of 0.000.

Table 20: Regression Analysis for FB and FD

Model Summary				
Model	R	R Squared	Adjusted R Squared	Std. Error of the Estimate
1	.415 ^a	.172	.171	.41371

a. Predictors: (Constant), FB

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.189	1	21.189	123.799	.000 ^b
	Residual	102.007	596	.171		
	Total	123.196	597			

a. Dependent Variable: FD

b. Predictors: (Constant), FB

Coefficients ^a				
Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.

		B	Std. Error	Beta		
1	(Constant)	2.524	.081		31.251	.000
	FB	.404	.036	.415	11.127	.000

a. Dependent Variable: FD

Table 20 shows the coefficients of the linear regression for the independent variable FB and dependent variable FD. The p-value is 0.000 which means that the result is significant at level 1%.

Based on those results, it can be decided that H_2 is true and that financial behavior has a positive influence on the financial decision-making of university students in Lebanon.

Table 21 shows the final regression results for both hypotheses. The results are similar to the findings of Assad (2012), Gross, Ingrahm, and Matazar (2005), Green (2013), Mandell (2006), de Bassa Scheresberg, (2013), and Ameer & Khan (2020).

Table 21: Final Regression Results for H_1 and H_2

Hypothesis	B values	T statistics	P values	R^2	Results
H_1	0.136	3.361	0.001	0.019	Supported
H_2	0.415	11.127	0.000	.172	Supported

CONCLUSIONS

Based on the main purpose of this research, two hypotheses were developed. The first hypothesis states that financial literacy has a positive influence on the financial behavior of university students in Lebanon. The second hypothesis states that financial behavior has a positive influence on the financial decision of Lebanese university students. To test those hypotheses, a questionnaire composed of 23 questions was distributed to students in numerous universities in Lebanon, and convenience sampling was used. The obtained sample was 598 students. Based on the analysis of the findings, both hypotheses were supported. The results are similar to the findings of Sadalia et al. (2017), Perry & Morris (2005), Gross, Ingrahm, and Matazar (2005), Mandell (2006), de Bassa Scheresberg (2013), Ameer and Khan (2020), Bellofatto et al., (2018), Gathergood & Weber (2017), Christelis et al. (2010), van Rooij et al. (2011), Almenberg & Dreber (2015), Disney & Gathergood (2013), Shim et al. (2009), Mandel and Klein (2009), Assad (2012), Karakurum-Ozdemir et al. (2019), and Alaaraj & Bakri (2020). Only a few studies had contradictory findings, such as Green et al. (2013) who found no link between financial literacy and financial decisions.

IMPLICATIONS

The research filled the gap in the literature attaining the objective of finding the relationship between financial literacy, financial behavior, and financial decision-making in the Lebanese context. The results implied the significance of financial literacy and its effectiveness on the financial behavior of students in public and private universities in Lebanon. Also, the results indicated the importance of financial behavior and its effect on the financial decisions of students in universities in Lebanon. Thus, it is highly recommended that university students educate themselves financially to have wise financial behaviors and make sound financial decisions. The study suggests that one way to lessen the financial issues and avoid financial problems that individuals and university students deal with in Lebanon specifically is to generate financial education programs that are anticipated to enhance financial literacy.

Moreover, for Lebanon to be among the top countries with the highest financial literacy the Lebanese Ministry of Education and Higher Education should include within the curriculum of the intermediate and secondary classes some financial educational programs, workshops, and seminars. Additionally, they can bring experts to speak to

students and inspire them about the importance of financial literacy. This will let students have exposure to basic financial knowledge and learn its significance and need in their decision-making.

Youth financial education programs which are interactive learning resources on financial concepts should also be supported by the Lebanese central bank to educate students about financial services and instruments.

By doing so, students will be well-educated on how to manage their finances and savings which will in turn improve their financial decision-making.

CONTRIBUTIONS

The findings of this research showed the importance of financial literacy and its effect on financial behavior and in turn the latter's effect on financial decision-making among students in universities in Lebanon. Based on these results, universities including all faculties should include some simple courses which educate students on financial concepts and services to help them in their financial conduct and decision-making. Currently, Lebanon has been facing a severe economic and financial crisis. Students in universities in Lebanon should benefit from financial knowledge and education to participate in financial markets. This in turn would help them earn passive income from financial trading and investments.

LIMITATIONS

The first limitation is the non-responsiveness of students in universities in Lebanon to whom the questionnaire via Google Forms was sent. This led to a sample size that was under expectations although a lot of efforts were made to spread the questionnaire and motivate responsiveness. The second limitation of the study is that it was done in Lebanon where financial instability prevails. The financial decisions of students might have been affected by the economic crisis that has been hitting the country and the devaluation of the Lebanese pound. Also, the findings can't be generalized to other countries since this study only considers Lebanese university students.

RECOMMENDATIONS FOR FUTURE STUDIES

Future research is recommended to include a larger sample size in addition to conducting focus groups including representatives from several universities. Moreover, it is recommended that a simple finance course or workshop is addressed to the students to examine its effects on their financial competence by comparing the pre and post.

Further research is recommended to extend this study to other countries and do the necessary comparison among them. In addition, other variables can be included in the study to investigate if they have any effect on financial competence. An example of those variables is socio-demographic variables such as level of income, work experience, and risk tolerance.

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