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Exploring Financial Literacy  
An Empirical Framework for Lebanese-  
Armenian Minority Students

DOCTORAL DISSERTATION SUMMARY

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## **Abstract**

Understanding the best ways to manage one's financials has been an imperative phenomenon from the day money was introduced to civilization. In contemporary times, research works found that financial literacy which is the knowledge, behavior, and attitude in making sound financial decisions, plays a significant role in shaping people's financial well-being. This raised its importance to become a frequently discussed topic in academia.

Nonetheless, most of the research works conducted in this field have focused on the adult populations such as those nearing retirement, those employees receiving defined contributions to their retirement plans from their employers, and those who would like to either invest in the financial markets or save money differently. Most of the works are also focused on well-developed countries with established financial markets such as the United States of America, the United Kingdom, and the Netherlands. Similarly, most research works have used financial literacy as an independent variable to explain different financial decisions people undertake.

Unlike conventional research works, this study delves into understanding the financial literacy antecedents of Lebanese-Armenian high school students. By doing so, I enrich the academic literature with information about the financial literacy of a minority group in a developing country and make it clearer to understand the main antecedents of this population segment's younger generations' financial literacy formation.

Through providing financial literacy pieces of training, and asking the students to fill out the questionnaires, financial literacy is positively related to financial knowledge and cognition. I also find that knowledge-based financial education could not make much of a difference in the Lebanese-Armenian youth's financial knowledge by noting that they already possess a reasonable amount of such knowledge. Hence, there is a need for different sorts of interventions to elevate their total financial literacy levels. In addition, the research

framework turns out to be highly significant, with cognition mediating the relationship between financial knowledge and financial literacy, and confidence moderating this relationship.

This study provides practical recommendations to policymakers and researchers who would like to explore the research question further.

## Research Aim

The primary aim of this research is to understand the financial literacy antecedents of the Lebanese Armenian youth and to find the framework connecting all these antecedents. Although there is not a single work concentrated on this segment of the population, to the best of my knowledge, I resort to the results of other research works conducted in Lebanon and in foreign countries to grasp the possible antecedents. I explain throughout this work, that this kind of research is of much importance because minorities have been found to exhibit lower financial literacy and because the financially well-preparedness of the youth is the key to sustainable finance in the future. Therefore, the research question that this research addresses could be consolidated into one sentence as follows:

*Research Question: What are the significant antecedents of the Lebanese-Armenian high-school students' financial literacy, and how are they connected?*

This research question is answered through a set of 10 hypotheses divided into 4 groups. These are presented below:

*H1a: Financial education increases the Lebanese-Armenian high schoolers' financial knowledge.*

*H1b: Financial education increases the Lebanese-Armenian high schoolers' financial literacy.*

*H1c: Different contents of different financial education programs do not have a changing influence on financial knowledge.*

*H1d: Different contents of different financial education programs do not have a changing influence on financial literacy.*

*H2a: The more financial knowledge a Lebanese-Armenian high school student has, the more financially literate he/she is.*

*H2b: The higher the cognitive abilities of a Lebanese-Armenian student, the higher his/her financial literacy rate is.*

*H3: The cognition of Lebanese-Armenian students mediates the relationship between their financial knowledge and financial literacy.*

*H4a: Math anxiety moderates the relationship between the cognition of Lebanese-Armenian high school students and their financial literacy.*

*H4b: Confidence moderates the relationship between the financial knowledge of Lebanese-Armenian high school students and their financial literacy.*

*H4c: Confidence moderates the relationship between the financial knowledge of Lebanese-Armenian high school students and their cognition.*

Apart from H1, the set hypotheses are presented in this research's framework in Figure 1.

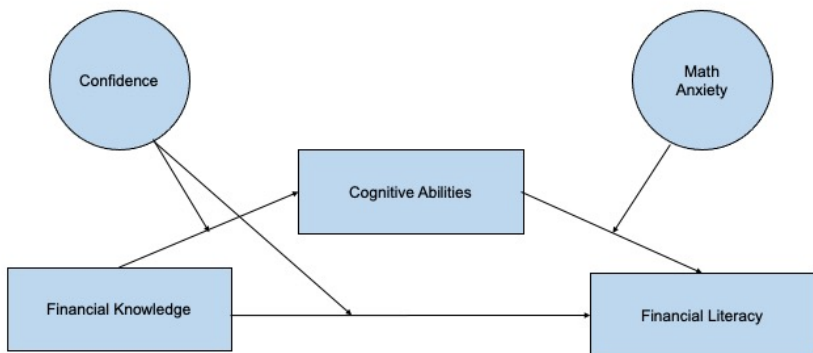


Figure 1 Research Framework  
Source: Author's Preparation

## Research Methodology

### *Sample*

The high school student population in the Armenian cultured schools in Lebanon is estimated to be 540, which requires a sample size of 225 students for a margin of error of just 5%. From the total 14 schools, I target the 12 schools that are located in the Greater Beirut area and succeed to include 9 of them. This results in a total sample of 302, but after cleaning the data, this number is reduced to 288.

### *Intervention*

I have conducted 18 training sessions on personal finance in the different participating schools during Q1 of 2022 to gather the necessary data. These training sessions were of very distinctive features, having been conducted during the Covid-19 pandemic and a financial crisis. There were two different topics that I presented to different groups of students, one on investments and the other on sources of funds.

### Data Gathering

To gather the necessary data, I distributed a survey to the students and asked them to fill them out after the intervention. I have similarly asked a group of students to fill out the surveys before the intervention so that I have a control group.

### Survey Design

To prepare the survey, I have used and prepared different constructs to quantify my research variables. Exceptionally for financial knowledge, as there's no specific instrument for it in this socioeconomic setting, I have used a rich list of different questions and ended up forming a reliable construct of 5 questions of which 2 are from "The Big Three"<sup>1</sup> questions and 3 from my own preparation. For financial literacy, I have used 8 out of 10 questions from OECD's

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<sup>1</sup> The most common questions used to check financial literacy (over time, this has been clarified that it's better to use it to calculate financial knowledge with a clearer understanding of a more complex financial literacy)

Programme for International Student Assessment's International Network on Financial Education survey. The 2 questions were left out because they were too focused on banks, a topic that wasn't suitable to be discussed during a banking crisis. For confidence, I have used the Hogan-Personality Inventory test's lower-level subscale on overconfidence. For cognitive abilities, I have combinedly used the Berlin Numeracy Test to check the statistical numeracy and risk literacy of students and the Cognitive Reflection Test to test time preference and risk preferences. As for math anxiety, I have used the scale proposed by Carey et al. (2017).

### *Statistical Method*

To run the necessary tests, I have used IBM SPSS and PROCESS macro. The different tests I used were independent samples t-tests, ANOVA, regressions, and post hoc analysis. Prior to all this, I found 1 outlier as I calculated the Mahalanobis Distance. So I removed it from my sample. I also checked for multicollinearity. Furthermore, I have run a principal component analysis for financial knowledge and found 4 components. Yet, the only one with acceptable Cronbach's alpha was "Money management" which included a total of 5 questions (compound interest, inflation, standard of living, exchange rate, and cryptocurrencies). I have also checked the internal consistency of the other constructs and received the alphas within the acceptable range.

## Research Findings

I have started the research findings with a deep concentration on the descriptive data. That's because a good amount of research works on this topic have similarly focused on understanding the differences through such means. I found that male students have higher financial knowledge, cognition, confidence, and less math anxiety than female students. I have also found that while some life interventions increase financial knowledge (e.g. financial socialization, parental education, and previous related courses to economics) other interventions increase their financial literacy in total, primarily their behavior and attitude (e.g. work experience and receiving allowance). I similarly found that both financial knowledge and financial literacy increase with a higher class level.

The tests also showed that there are significant differences between schools in the same community. Having grouped them based on their religious affiliations, I have found that the students attending Evangelical schools have higher cognition and financial knowledge, whereas the students attending Catholic schools have better psychological preparation. The least prepared on knowledge and psychological scales are the students of Orthodox schools.

I also found that the average rates for financial knowledge and financial literacy are above average yet remain low. The students showed a very low cognition with only 7.6% of them answering above average, whereas for math anxiety and confidence, the situation is better with average scores of 53% and 67.5%.

Table 3 summarizes the results of the the hypothesis testing. Out of 10, I succeed in supporting 5 of them. I similarly succeed in drawing a reliable framework, which is represented in Figures 2 and 3.



<i>Hypo.</i>	<i>Details</i>	<i>Test</i>	<i>Significant?</i>	<i>Result</i>
<i>H1a</i>	Financial education increases the Lebanese-Armenian high schoolers' financial knowledge.	Logistic Regression	No	
<i>H1b</i>	Financial education increases the Lebanese-Armenian high schoolers' financial literacy.	ANOVA	No	
<i>H1c</i>	Different contents of different financial education programs do not have a changing influence on financial knowledge.	ANOVA	Yes	The content of financial education programs does not matter
<i>H1d</i>	Different contents of different financial education programs do not have a changing influence on financial literacy.	ANOVA	No	
<i>H2a</i>	The more financial knowledge a Lebanese-Armenian high school student has, the more financially literate he/she is.	Simple Linear Regression	Yes	Financial knowledge increases students' financial literacy
<i>H2b</i>	The higher the cognitive abilities of a Lebanese-Armenian student, the higher his/her financial literacy rate is.	Simple Linear Regression	Yes	Cognition increases students' financial literacy
<i>H3</i>	The cognition of Lebanese-Armenian students mediates the relationship between their financial knowledge and financial literacy.	Mediation (Model 4)	Yes	Cognition mediates financial knowledge and financial literacy
<i>H4a</i>	Math anxiety moderates the relationship between the cognition of Lebanese-Armenian high school students and their financial literacy.	Moderated Mediation (Model 14)	No	
<i>H4b</i>	Confidence moderates the relationship between the financial knowledge of Lebanese-Armenian high school students and their financial literacy.	Moderated Mediation (Model 5)	Yes	Confidence moderates financial knowledge and financial literacy
<i>H4c</i>	Confidence moderates the relationship between the financial knowledge of Lebanese-Armenian high school students and their cognition.	Moderated Mediation (Model 7)	No	

Table 3 Hypothesis Testing Summary Results  
Source: Author's Preparation

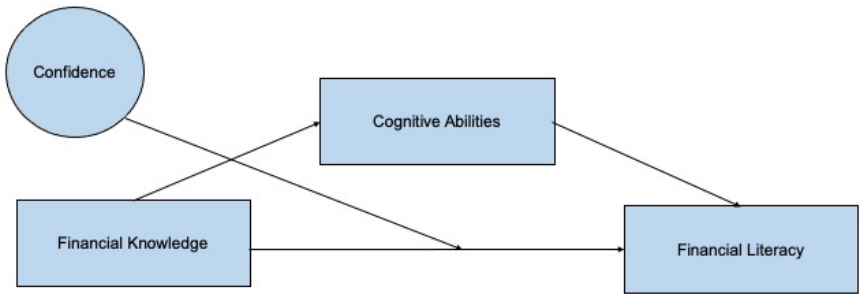


Figure 2 Final Conceptual Framework  
Source: Author's Preparation

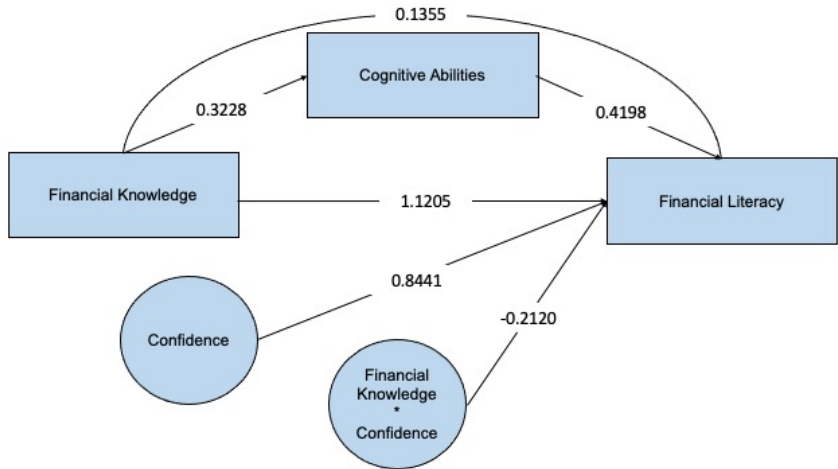


Figure 3 Final Statistical Framework  
Source: Author's Preparation

## Publications

### *Journal Articles*

- DerMesrobian, R. M. (2022) *A Model for Financial Literacy Education in Lebanon*, Journal of International Scientific Publication: Economy and Business, 16, 399-406.
- DerMesrobian, R. M. (2023) *An Overview of Framing Behaviors in Financial Decisions*, International Journal of Research in Commerce and Management Studies, 5(2), 54-66. <https://doi.org/10.38193/IJRCMS.2023.5205>
- DerMesrobian, R. M. (2023) *Financial Literacy, Financial Behaviors, and Financial Crises: The Case of Lebanon*. Journal of Applied Economic Sciences, 18(1/79), 39-49. [https://doi.org/10.57017/jaes.v18.1\(79\).05](https://doi.org/10.57017/jaes.v18.1(79).05)
- DerMesrobian, R. M. (2023) *Exploring Trends of Financial Literacy Research: A Bibliometric & Topic Modeling Approach*. International Journal of Economics and Finance Studies, 15(2), 246-277. <https://doi.org/10.34109/ijefs.20231521>
- DerMesrobian, R. M. (2023) *Financial Literacy as a Solution for Bank Marketing Myopia*, Journal of Finance and Business Digital, 2(2), 209-218. <https://doi.org/10.55927/jfbd.v2i2.3462>

### *Conference Proceedings*

- DerMesrobian, R. M. (2021), *FiLiX: A National Composite Financial Literacy Index*, In: Horváth, Bálint - Földi, Péter (szerk.) III. International Conference of Economics PhD Students and Researchers in Komarno: Conference Proceedings, Budapest, Magyarország, Komárno, Szlovákia : Association of Hungarian PhD and DLA Students, Téka (2021), 81-90

### *Conference Presentations*

- DerMesrobian, R. M. (November 2021), *FILIX: A National Composite Financial Literacy Index*, III. International Conference Of Economics Ph.D. Students And Researchers In Komarno, Association Of Hungarian Ph.D. And DLA Students, Komarno, Slovakia
- DerMesrobian, R. M. (July 2022), *The Financially Literate Hedonist: When Living a Lavish Life Is Better Than Saving for Retirement*, Armenian Economic Association, The 12th Annual Meetings.
- DerMesrobian, R. M. (August 2022), *A Model for Financial Literacy Education in Lebanon*, International Scientific Events 22<sup>nd</sup> International Conference On Economy & Business, Burgas, Bulgaria
- DerMesrobian, R. M. (July 2023), *The Financially Literate Hedonist: When Living a Lavish Life Is Better Than Saving for Retirement*, Armenian Economic Association, The 13th Annual Meetings.