



Research Paper

# What leads to Financial Literacy in North India's B-School Graduates? A Structural Equation Approach

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## Abstract

The study is to analyze financial literacy amongst youngsters in the B-school of India and identify the variables which influence the financial literacy. The construct of the theoretical framework of the study is based on the secondary sources such as research papers, articles, magazines and OECD reports. Exploratory and Confirmatory Factor Analysis has been used to extract the factors that influence financial literacy and its further dimensions. Five factors have been extracted from twenty variables which influence financial literacy construct among the youngsters of B-School of India. It is also concluded that the construct of financial literacy like Financial knowledge, behavior, attitude, training and access to financial markets depends on various socio-demographic variables. Hence, the present study also validates the significance of socio-demographic factors in influencing the financial literacy and its dimensions.

**Key Word:** Financial Literacy, Factor Analysis and Financial Behavior.

## I. Introduction

Financial literacy have huge contribution for the well-being of the society as it refers to the usage of money as an mode of expressing one's social views and beliefs ( Lucey, Agnello and Laney, 2015). Financial literacy programs aim to help in financial planning, promote savings habits. Financial literacy enables to plan ahead needs in the life and help them to find out solutions to unexpected emergencies without resorting to debt traps. It leads to economic security, evaluating financial options, control over financial matters, adopting banking habits.

Financial literacy is a very relevant concept in today's world where the financial markets are growing each day. The integration of payment systems, e wallets, bank accounts, financial instruments, financial services, real assets, and other economic concepts (e.g. Inflation, interest rates etc.) is happening at such a fast pace that it is need of the hour to understand the nitty gritty involved behind the daily finance so that the total well-being (in financial as well as societal terms) can be maintained.

Financial products are becoming more complex and this complexity requires more clarity of the younger generation for the basic financial concepts so that they can get into a position to understand the economic world surrounding them (Mitchell and Lusardi, 2015). Inability to understand the financial and economic world can lead the persons to the economic troubles which have the capacity to spill over as crisis to their families as well as the economy.

### Conceptual Background:

Financial literacy is an evolving concept and as such has not been defined in a standardized form (Moore, 2003; Huston, 2010; Nicolini,; Remund, 2010; Cude & Chatterjee, 2013; Mihalcova, Csikosova & Antosova, 2014; Schuhen & Schurkmann, 2014 ; Aren & Aydemir, 2014; Amoah, 2016). In simple terms, Financial literacy refers to the ability of an individual to operate in the real financial world. It enables an individual to take right decisions in order to utilize the given resources in the most appropriate way.

Huston 2010 attempted to define the concept of financial literacy by conducting a literature review. He elaborated the construct of financial literacy as a composition of two dimensions

i.e. financial knowledge and financial application, which are essential for the financial well-being of an individual. Though financial knowledge is considered as an integral dimension of financial literacy but is not equivalent or more than application dimension. Financial literacy involves at-least four distinct content areas i.e. money basics, borrowing, investing and protecting resources.

The construct of financial literacy has been suggested to involve more dimensions in it so that the measurability of the construct can be improved (Chen and Volpe, 1998; Cohen and Nelson, 2011; Atkinshon & Messy, 2012; Amoah, 2016;; OECD, 2016).

Remund ,2010, tried to explicate the concept of financial literacy under the conceptual and operational definitions. Conceptual definitions describe the concept in the concrete terms whereas operational definitions attempt to capture the concept in more measurable terms. According to Remund ,2010, the conceptual definition of financial literacy is suggested to fall into “five categories i.e. knowledge of financial concepts, ability to communicate about financial concepts, aptitude in managing personal finance, skill in making appropriate financial decisions and confidence in planning effectively for future financial needs”. Further, he elaborates that the operational definition of financial literacy circumvents around four categories i.e. budgeting, saving, borrowing and investing.

Basically, financial literacy refers to the art of managing money effectively. It also involves integration of awareness, knowledge, skill, attitude, behavior requisite to take financial decisions for attaining financial well-being (Remund, 2010; Jang, Halm and Park, 2014; Firli, 2017; Mahapatra, Alok & Raveendran , 2016;). Financial well-being leads to the circumstances where an individual is in capacity to fulfill its financial obligations and pursue its day to day expenses.

Financial literacy has also been attempted to be measured through financial awareness, attitude, behavior and knowledge. OECD/INFE has provided a working definition of the financial literacy which states that it “is a combination of awareness, knowledge, skill, attitude and behavior necessary to make sound financial decisions and ultimately achieve individual financial well-being” OECD, 2016. Lusardi & Mitchell ,2015, even suggested that the willingness of consumers to attain financial literacy was to such an extent that they were ready to give away three percent of their lifetime consumption in order to enhance their well-being via financial knowledge.

The concept of financial literacy is still in the evolving stage and thus, the current study focuses on finding the answer to the question that what comprises the financial literacy in context of the youngsters of North India.

## **II. Literature Review**

Firli (2017) attempted to propose a framework for the financial literacy with four variables such as personal socio demographic characteristics, financial knowledge, financial behavior, financial attitude and financial training. Shusha ,2017, studied the financial risk tolerance among Egyptians. Financial literacy was found to have moderating effects on demographic features of individuals and their likelihood of taking risk. Draz ,2016 ,stated that financial literacy refers to inculcating knowledge concerning risk-return composition of financial products w.r.t. users and providers of the services. Financial behavior of students did not vary on the basis of any demographic variables, whereas on the basis of financial literacy, socio demographic variables cause variance in the financial literacy level. Amoah ,2016, assessed the financial knowledge levels for the African American employing with the planned behavior theory, self-determination theory and transtheoretical theory. He employed a sample of 382 African Americans of Columbus, Ohio to conclude that education and formal programmes leading to development of formal financial knowledge had a positive impact on the knowledge of personal finance and better decisions. Gomez & Villagomez measured financial literacy among high school teenagers in Mexico by employing the instrument developed by OECD and Mitchell. Results of the study revealed that one fifth of the students were not well versed with the basic concepts (e.g. Inflation, interest, risk , return etc. ). Belas, Nguyen, Smrcka, Kolembus and Cipovova (2016) emphasized on the usage of advanced teaching methods in order to improve application skills of students.

Mahapatra, Alok and Raveendran ,2016 analysed the status of financial literacy of college students in India on three identified parameters i.e. socio-demographic characteristics, parental influence and attitude towards financial planning. It was found that behavior related to savings and borrowing is significantly influenced by parent's education, family income and profession. Mitchell and Lusardi 2015 found the widespread financial illiteracy in well developed financial markets like Canada, Germany, the Netherlands, Russia, Romania, Switzerland, Sweden, Japan, Italy, France, Australia, and New Zealand. Mitchell and Lusardi ,2015, analysed financial literacy among high school students from around 18 countries. Results suggested that more than one third of the US wealth inequality could be attributed to the differences in financial knowledge. Vyvyan, Blue and Brimble ,2014, tried to provide an understanding of financial capability, by exploring the factors that facilitate and hinder the financial capabilities of an individual. The study also suggested that background factors ( upbringing, employment, location, life events, income, gender, access to credit) attitude ( money management, risk appetite, desire for change, planning horizon, money consciousness, spending) normative influences ( Influence of a partner, family, mentor, social expectations), perceived behavioral control (self-confidence, belief- future change and prosperity); Skills and Knowledge (Cash flow, planning and goal setting, numeracy and research skills, knowledge) influence the financial literacy. Cameron, Caldewood, Cox, Lim and Yamaoka ,2014, stated that financial literacy was lowest among the students with poorer financial background. Such students were also found to have lower mathematical abilities. Jang, Halm and Park ,2014, compared the level of high school student's financial literacy between Korean and US high school students by considering a sample of 1478 students belonging to 40 high schools. They found that Korean students had shown relatively strong

financial literacy at the cognitive level of knowledge, but weak financial literacy at higher cognitive levels of comprehension and application. Lusardi, Mitchell & Curto 2014 evaluated financial sophistication in the American population. Financial sophistication employed few aspects like knowledge of capital markets, risk diversification, knowledge of fees, numeracy to create a financial literacy index. They found that older respondents lacked hold on the financial sophistication. Mihalcova, Csikosova & Antosova 2014 suggested that financial literacy must be determined through indicators that could be employed as benchmark to analyse what essentially must be known to the consumers for management of the finances. Management of finances, planning of financial income and expenses, choice of suitable banking products, database of product providers were the major indicators identified for the financial literacy. Jorgensen & Taylor, 2014 stated that financial concerns had a major contribution in the distress situation in families especially marital affairs. Financial literacy could be one of the plausible solution for this problem which can be solved through the collaboration between mental health practitioners, financial planners and financial counselors. Nicolini & Chatterjee 2013 analyzed the difference in financial literacy across four countries (Canada, Italy, UK and US) to compose a financial literacy index. Results further indicated that inconsistencies in socio-demographic variables had influence on the differing levels of financial knowledge across the four countries. Atkinson & Messy 2012 highlighted the lack of financial knowledge among all the 14 countries undertaken in OECD's study 2017. Positive association between attitudes and behavior is linked with financial literacy level. Beutier & Gudmunson 2012 analyzed the attitude towards money and introduced two new money-attitude scales, which are entitlement (i.e. responsibility of parents to provide all the money to students) and conscientiousness (i.e. personal responsibility to manage the money). Entitlement focused on everyday needs, spending money, extras, college education, deserve things; and Conscientiousness stressed on thrifty and frugal, paying parents back, cautiousness, responsibility. Robb 2011 provided evidence on the credit card usage behavior among the college students and its association with financial knowledge. Emphasis on the development of a consistent, universal measure of financial knowledge was suggested. Gutter studied the dynamics between financial behavior and financial health with demographic, financial characteristics, financial education and financial dispositions as controlling variables. Calamato (2010) studied whether the undergraduate students with higher levels of financial literacy had parents with better financial knowledge. Wastad, Rebeck & MacDonald 2010 revealed that financial education had the capacity to enhance the financial knowledge among the high school students. Results indicated that a well specified, structured and properly implemented program had the capacity to significantly improve the financial knowledge of high school students. Kindle 2010 found that how the financial education is going to be accepted by the individuals depend on the awareness of the financial. Results indicated that income level, education and workplace activities had impact on financial literacy. Shim, Barber & Serido 2009 studied 2098 first year students in USA to test a conceptual financial socialization process model which specified four levels connecting young adult's current financial learning to their financial attitudes and their financial behavior. Results of the study also suggested that students should be taught sound financial practices, and parent's better understanding of finances could lead to positive financial behavior. Allen, Edwards, Hayhoe & Leach 2007 explored the relevance of concept of imagined interactions in relation to credit and money attitudes. Imagined interaction activity, a mental activity in which the candidate imagine himself interacting with others, has a positive relation with pleasantness and reflect a positive attitude towards money (i.e. spending money and credit card use). Medina, Saegert and Gresham (1996) compared different dimensions of a money attitude scale by Yamauchi and Templer (1982). Results suggested that consumer behavior can be influenced by enhancing the financial education and shifting the attitude of consumers towards spending of money. Bailey and Lown (1993) analysed the Furnham's British study (1984) by employing Money in the Past and Future Scale (MPFS) between America and Britain. Results suggested that the difference in the scores of MPFS could be attributed to cultural differences due to family and society.

### **III. Theoretical Framework**

Financial literacy plays a positive role while contributing in the sustainable economic growth (Gomez & Villagomez, 2016; Jang, Halm & Park, 2014). Financially literate individuals ultimately turn out to be better contributors in the financial system by acting as efficient savers, investors, participants and labor force. The economics of the social structures and family units assumes that financially literate individuals make up more informed, effective and right decisions (Brown & Graf, 2013; Chen & Volpe, 1998; Calamato, 2010; Gomez & Villagomez, 2016; Jang, Halm & Park, 2014) whereas financial illiteracy has the capacity to translate itself into costly economic behavior and flat financial mistakes (Agarwal, Drisoll, Gabaix & Laibson, 2009; Anderloni & Vandone, 2010; Lusardi, Mitchell & Curto, 2009; Mahapatra, Alok & Raveendran, 2016; Mitchell & Lusardi, 2015; Palauri & Mehra, 2016). Taking up bad loans, paying excessive interest rates, getting into the debt traps, inability to pay off the bills in time, engaging resources in lesser earning investment avenues are the few examples of financial mistakes. The cost of financial mistakes is high. Financial mistakes may stem up out of wrong opinions and incorrect financial decisions (Anderloni & Vandone, 2010; Chen & Volpe, 1998; Potrich,

Vieira & Silva, 2016).

The literature review suggests that the constitution of the financial literacy as a measurable concept is still debatable and needs to be explored. It has its foundations laid on five basic pillars i.e. Financial knowledge, financial behavior, financial attitudes, financial training and culture.

Financial literacy as a concept dwells on the continuum of abilities which varies on the range of variables such as age, sex, race, ethnicity, culture, educational background, family, income and residence (Anderloni & Vandone, 2010; Gutter & Copur, 2011; Lusardi, Mitchell & Curto, 2009; Lusardi, Mitchell & Curto, 2014; Lusardi & Mitchell, 2007; Mihalcova, Csikova & Antosova, 2014; Shults, 2012). In a family, the one, who ( i.e father or mother, wife or husband) takes the major expenditure and saving decisions shapes the financial decision making capability of an individual. It , thus, reflects on the financial culture. The acuteness of the financial literacy is sensitive across the values of sex of the subject (Edwards, Allen & Hayhoe, 2007; Lusardi, 2017; Lusardi & Mitchell, 2015; Nicolini, Cude & Chatterjee, 2013). Access to banks and other financial institutions opens up the doors for the financial inclusion and comprise a part of the financial culture.

The variables which compose the financial literacy also involve various behavioral aspects as well.

Financial literacy revolves around few key areas like Income, money management, savings, investment, spending, credit (Agarwalla, Barua, Jacob & Varma, 2015; Amoah, 2016; Atkinson & Messy, 2012; Chen & Volpe, 1998; Gomez & Villagomez, 2016; Lusardi, Mitchell & Curto, 2014; Potrich, Vieira & Silva, 2016) which reflect the financial behavior of the individual.

Many important events like marriage, retirement, acquisition of homes, children education compel an individual to take certain decisions which involves money outlays. Knowledge and right attitude towards money can enable an individual to drive through such situations smoothly. Financial literacy had strong relation with retirement planning, financial market and indebtedness (Amoah, 2016; Brown & Graf, 2013; Mahapatra, Alok & Raveendran, 2016). Planning the outlays for different events of life can enable an individual to exhibit a better financial behavior. Enhancement in the financial knowledge not only influences the financial literacy, it also benefits in the form of better credit card behavior (Robb, 2011).

Financial attitude tries to capture the outlook of an individual w.r.t. different aspects related to money. Whether a person gives priority to savings in comparison to immediate purchase, or gives preference to short term wants in comparison to the long term goals reflects a person's outlook for making good use of money. Prioritizing, influence of friends and family shape the financial attitude of an individual.

Family is an important unit of the society and it shapes the individual's behavior in the society. Family structure and dynamics of the family also influence the decision-making process while dealing with money. Cohabiting in a joint and large families leads to better consultations during decision making and improved financial decision making. The way parent's take decisions have positive impact on the financial literacy (Servan & Kanester, 2008; Calamato, 2010; Mahapatra, Alok & Raveendran, 2016)

Financial knowledge is an important pillar of the financial literacy. Awareness regarding the few basic concepts like inflation, interest rates, time value of money, return etc., comprise the ability of an individual to understand the financial products and the value of money. Knowledge of the financial products and way to put money to the best possible use can help an individual to seek more freedom. Literature suggests that acquiring appropriate financial knowledge varies across the gender of an individual. Lack of financial knowledge is more in case of women in comparison to men. Robb (2011) also suggested that when it comes to the credit card behavior, females do not tend to indulge in risky credit card behavior and are more inclined towards making only minimum payments. Possible reasons behind this may lie in the traditional family structures across the globe.

Low financial literacy could lead to more debts, low participation in financial markets and accessing funds with higher fees. Investment decisions are significantly affected by the financial literacy of the individuals .

The concept has its ramifications for the students who grow up to comprise the workforce. It is interesting to note that how a person manages its finances ultimately reflects his level of satisfaction with the given salary and finally the efforts he would like to put in the assigned tasks at his workplace. Lower levels of financial literacy may have dear consequences impacting the productivity of the workers at their workplaces (Chen & Volpe, 1998). Financial training through some formal education program can come to rescue the situation. Inculcating the financial education as part and parcel of the education system can help people attain better literacy levels at an earlier stage. Lusardi, Mitchell and Curto (2009) also indicated that the young people lack basic financial knowledge. Integrating financial knowledge into the curriculum in the form of well-structured course can help high school students to gain financial literacy (Walstad, Rebeck & MacDonald, 2010). Financial knowledge led individuals to take better financial decisions including the capacity to differentiate between varying financial choices, financial issues and plans for future (Calamato, 2010; Lusardi and Mitchell, 2007; Mahapatra, Alok and Raveendran, 2016).

Financial knowledge, behavior, training, attitude and culture are the main dimensions of the financial literacy.

#### IV. Research Methodology:

A comprehensive study has been conducted to understand student's expectations and knowledge. The theoretical foundation of the survey is based on secondary sources such as research papers, articles, magazines and articles on Financial Literacy, for this purpose databases like EBSCO, ProQuest and paper from the journals which are listed in ABDC list was used. The Study is both exploratory and descriptive in nature.

##### Nature of Data:

For this study convenience and random sampling were implemented. To start with initially, the respondents were chosen on the convenience sampling. Further from responses collected from preliminary respondents then referrals were taken from them. Source of Data and Period of Analysis:

Out of 415 questionnaires, a total of 379 responses were received after circulation. Incomplete responses were excluded from the study. Therefore 358 were used for further analysis. This study was conducted during the months of March to May, 2021. Samples were taken from leading private and government B-Schools of India.

Responses were collected from the students during their college time as well as online questioners were sent via various communication channel of social media and through emails.

##### Data analysis and results:

A questionnaire containing five factors i.e. Financial Knowledge, Financial Behavior, Financial or Professional Training, Financial Attitude and Financial Culture was prepared based upon standard OCED report and responses were measured on a 5 point Likert scale.

Questions related to demographics, financial product knowledge, awareness and their take on investments were also included in the questionnaire. The internal consistency indices of this scale calculated using Cronbach's alpha at 0.912, and on individual basis, Cronbach's alpha was higher than the minimum cutoff of 0.70 (Nunnally, 1978; Nunnally and Bernstein, 1994).

To address the described objectives, tools and technique used were Exploratory Factor Analysis Confirmatory Factor Analysis to confirm and validate the factors, and then Structural Equation Modelling (SEM) was to measure the influence.

##### Exploratory Factor Analysis(EFA)

The purpose of using EFA was to check whether the items are correctly loaded on their corresponding factors and to conform the number of factors extracted by Eigen values (Hair et al., 1998). Total twenty-two variables were used, which were identified from the existing researches, which resulted in eight factors accounted for 66.8 % of total variance. All factor loadings for items measuring the same construct were statistically significant and were greater than 0.30, which confirmed the convergent validity of the model (Roy et. Al ,2013).

##### Confirmatory Factor Analysis(CFA)

Measurement model was set to have five factors. Amos gave a standardized solution, twenty-two variables were loaded on their corresponding factors (latent variables) which confirm the unidimensionality of the constructs and provides a strong empirical confirmation of their validity. Bagozzi and Yi 1988 recommended that CR should be equal to or greater than .60 and AVE should be equal to or greater than 0 .50. The measurement model and the standardized loadings along with critical ratios (t values) are presented in Table 1 and Table 2.

**Table 1:** Results of the final model

Parameter	Values
P value	.000
GFI	.87
AGFI	.83
CFI	.90
RMSEA	0.42

The high value of t(CR) for loading shows Ample convergent validity.

Table 2: CFA results

Factors	Final standardized loadings	Composite Reliability	Construct Average Extracted	Variance
Factor 1— Financial Knowledge				
FK1	0.74			
FK2	0.85	0.87	0.61	
FK3	0.69			
FK4	0.68			
FK5	0.65			
Factor 2— Financial Behaviour				
FB1	0.84			
FB2	0.65			
FB3	0.63	0.84	0.51	
FB4	0.75			
FB5	0.7			
Factor 3— Financial or Professional Training				
FP1	0.7			
FP2	0.79	.81	.52	
FP3	0.76			
FP4	0.72			
Factor 4— Financial Attitude				
FA1	0.71			
FA2	0.72	.80	.57	
FA3	0.78			
FA4	0.79			
Factor 5— Financial Culture				
FC1	0.71			
FC2	0.78	.79	.54	
FC3	0.73			
FC4	0.81			

### Structural Equation Modeling (S.E.M)

Structural equation modeling, a multivariate technique, is employed in this research to study the relationship between factors affecting Financial literacy and Financial knowledge of students of B-School. Arbuckle (2010), Structural Model specifies the how latent variables are related to each other. The fitness of hypothesized model was evaluated by analyzing Goodness-of-fit indices (Business, 2013).

The result from the table 3 shows the factor Financial Knowledge having composite reliability of 0.87 has the highest influence in Financial literacy of the students of B-School followed by Financial Behavior (.84), Financial training (0.81), Financial attitude (.80) and Financial Culture (0.79) respectively.

## V. Conclusion and Interpretation

The youngsters of B-Schools in India are being prepared in such a way that they get into the capacity to contribute to the economy by acting as an efficient workforce. Financial literacy plays a very critical role in the defining the growth and status of an economy.

The results of the study indicate that financial knowledge has significant influence on their financial literacy for the B-school graduates, as the curriculum of B-schools imbibe the basic concepts so deep in the

thinking pattern of the students that they get the capability of analyzing financial aspects of life. Investments, making payments on time etc. are the reflections of a mature financial behavior, and financial knowledge also contributes in developing a good financial behavior. As the students of B-Schools are the next generation of the workforce and future of the nation, this financial behavior will shape up their financial attitude. It includes evaluation of financial products, taking professional advice, keeping oneself updated about the progress in the surroundings. This financial attitude has also influenced by their financial culture, which is developed by family, friends and peer.

### Limitations and Future Scope

As this study has been conducted in B-Schools of India, so geographical constraints in one of the limitation of the study. It can include other parts of the nation. As this study has been conducted in the months of March to May 2017, a pre GST era, so similar study could be conducted in the post GST era also.

### Reference

- [1]. Agarwal, S., Driscoll, J.C., Gabaix, X., and Laibson, D. (2009). The Age of Reason: Financial Decisions over the Life-cycle with Implications for Regulation. *Brookings Papers on Economic Activity*, 2, 51-117.
- [2]. Agarwalla, S. K., Barua, S. K., Jacob, J., & Varma, J. R. (2015). Financial Literacy among Working Young in Urban India. *World Development*, 67(2013), 101-109. <https://doi.org/10.1016/j.worlddev.2014.10.004>
- [3]. Akram, S., Abbas, A., & Draz, U. (2016). Impact of Demographics Variables on the Level of Financial Literacy Among the University Students of Punjab Pakistan. *American Journal of Business and Society*, 1(3), 166-175.
- [4]. Allen, M. W., Edwards, R., Hayhoe, C. R., & Leach, L. (2007). Imagined Interactions, Family Money Management Patterns and Coalitions, and Attitudes toward Money and Credit. *Journal of Family and Economic Issues*, 28(1), 3-22. <https://doi.org/10.1007/s10834-006-9048-1>
- [5]. Amoah, R. (2016). Assessing the Level and Impact of Financial Literacy on African Americans. (Doctoral Dissertation, Walden University). Retrieved from : <http://scholarworks.waldenu.edu/dissertations>.
- [6]. Anderloni, L., & Vandone, D. (2011). Risk of Over-indebtedness and Behavioural Factors. In *Risk tolerance in financial decision making* (pp. 113-132). Palgrave Macmillan UK
- [7]. Arbuckle, J. L. (2010). IBM SPSS Amos 19 user's guide. Crawfordville, FL: Amos Development Corporation, 635.
- [8]. Aren, S., & Aydemir, S. D. (2014). A literature Review on Financial Literacy. *Finansal Araştırmalar ve Çalışmalar Dergisi*, 6(11).
- [9]. Atkinson, A., & Messy, F.-A. (2011). Assessing Financial Literacy in 12 countries: an OECD/INFE international pilot exercise. *Journal of Pension Economics and Finance*, 10(4), 657-665. <https://doi.org/10.1017/S1474747211000539>
- [10]. Atkinson, F. and Messy, A. (2012). Measuring Financial Literacy. Measuring Financial Literacy: Results of the OECD/International Network on Financial Education (INFE) Pilot Study", OECD Working Papers on Finance, Insurance and Private Pensions, No.15, OECD Publishing, Paris. <http://dx.doi.org/10.1787/5k9cfs90fr4-en>
- [11]. Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74-94.
- [12]. Bailey, W. C., & Lown, J. M. (1993). A Cross-cultural Examination of the Aetiology of Attitudes towards Money. *Journal of Consumer Studies & Home Economics*, 17(4), 391-402. <https://doi.org/10.1111/j.1470-6431.1993.tb00181.x>
- [13]. Belás, J., Nguyen, A., Smrcka, L., Kolembus, J., & Cipovová, E. (2016). Financial Literacy of Secondary School Students. Case Study of the Czech Republic and Slovakia. *Economics & Sociology*, 9(4), 191. <https://doi.org/10.14254/2071-789X.2016/9-4/12>
- [14]. Beutler, I. F., & Gudmunson, C. G. (2012). New Adolescent Money Attitude Scales: Entitlement and Conscientiousness. *Journal of Financial Counseling and Planning*, 23(801), 18-3
- [15]. Brown, M., & Graf, R. (2013). Financial Literacy and Retirement Planning in Switzerland. *Numeracy*, 6(2), 6.
- [16]. Byrne, B. M. (2001). Structural equation modeling: Perspectives on the present and the future. *International Journal of Testing*, 1(3-4), 327-334.
- [17]. Calamato, M. P. (2010). Learning Financial Literacy in the Family. *ProQuest*, 1(December), 1- 19. <https://doi.org/10.1017/CBO9781107415324.004>
- [18]. Cameron, M. P., Calderwood, R., Cox, A., Lim, S., & Yamaoka, M. (2014). Factors Associated with Financial Literacy among High School Students in New Zealand. *International Review of Economics Education*, 16, 12-21. <https://doi.org/10.1016/j.iree.2014.07.006>
- [19]. Chen, H., & Volpe, R. P. (1998). An Analysis of Personal Financial Literacy among College Students. *Financial Services Review*, 7(2), 107-128.
- [20]. Cohen, M., & Nelson, C. (2011). Financial Literacy: A Step for Clients towards Financial Inclusion. *Global Microcredit Summit. Commissioned Workshop Paper*, 14-17.
- [21]. Edwards, R., Allen, M. W., & Hayhoe, C. R. (2007). Financial Attitudes and Family Communication about Students' Finances: The Role of Sex Differences. *Communication Reports*, 20(2), 90-100. <https://doi.org/10.1080/08934210701643719>
- [22]. Firli, A. (2017, March). Factors that Influence Financial Literacy: A Conceptual Framework.
- [23]. In IOP Conference Series: Materials Science and Engineering (Vol. 180, No. 1, p.012254). IOP Publishing.
- [24]. Gómez, A. E. O., & Villagómez, F. A. (2016). Financial Literacy among Mexican High School Teenagers. *International Review of Economics Education*, 24, 1-17. <https://doi.org/10.1016/j.iree.2016.10.001>
- [25]. Gutter, M., & Copur, Z. (2011). Financial Behaviors and Financial Well-Being of College Students: Evidence from a National Survey. *Journal of Family and Economic Issues*, 32(4), 699-714. <https://doi.org/10.1007/s10834-011-9255-2>
- [26]. Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). *Multivariate data analysis* (Vol. 5, No. 3, pp. 207-219). Upper Saddle River, NJ: Prentice hall.
- [27]. Hassan Al-Tamimi, H. A., & Anood Bin Kalli, A. (2009). Financial Literacy and Investment Decisions of UAE Investors. *The Journal of Risk Finance*, 10(5), 500-516.
- [28]. Hastings, J. S., Madrian, B. C., & Skimmyhorn, W. L. (2013). Financial Literacy, Financial Education, and Economic Outcomes. *Annual Review of Economics*, 5(1), 347-373. <https://doi.org/10.1146/annurev-economics-082312-125807>
- [29]. Huston, S. J. (2010). Measuring Financial Literacy. *The Journal of Consumer Affairs*, 44(2), 296-316. <https://doi.org/10.1111/j.1745-6606.2010.01170.x>
- [30]. Jang, K., Hahn, J., & Park, H. J. (2014). Comparison of Financial Literacy Between Korean and U.S. high school students.

- International Review of Economics Education, 16, 22–38. <https://doi.org/10.1016/j.iree.2014.07.003>
- [31]. Jorgensen, B. L., Rappleyea, D.L. & Taylor, A. C. (2014). Understanding Financial Literacy and Competence : Considerations for Training , Collaboration , and Referral for MFTs Understanding Financial Literacy and Competence : Considerations for. *Journal of Financial Therapy*, 5(1), 1–18. <https://doi.org/10.4148/1944-9771.1062>
- [32]. Kindle, P. A. (2010). Student Perceptions of Financial Literacy: Relevance to Practice. *Journal of Social Service Research*, 36(5), 470–481. <https://doi.org/10.1080/01488376.2010.510951>
- [33]. Lucy, T. A., Agnello, M. F. & Laney, J. D. (2015). *A Critically Compassionate Approach to Financial Literacy*. Sense Publishers, Rotterdam/Boston.
- [34]. Lusardi, A. (2015). Financial literacy: Do People Know the ABCs of Finance? *Public Understanding of Science*, 24(3), 260–271. <https://doi.org/10.1177/0963662514564516>
- [35]. Lusardi, A. (2017). *Financial Capability and Financial Literacy among Working Women : New Insights \* Executive Summary*, (129).
- [36]. Lusardi, A., Mitchell, O. S., & Curto, V. (2014). Financial Literacy and Financial Sophistication in the Older Population. *Journal of Pension Economics and Finance*, 13(4), 347–366. <https://doi.org/10.1017/S1474747214000031>
- [37]. Mahapatra, M. S., Alok, S., & Raveendran, J. (2016). Financial Literacy of Indian Youth: A Study on the Twin Cities of Hyderabad–Secunderabad. *IIM Kozhikode Society & Management Review*, 6(2), 132–147. <https://doi.org/10.1177/2277975216667096>
- [38]. Medina, F. J., Saegert, J., & Gresham, A. (1996). Comparison of Mexican-American and Anglo-American Attitudes toward Money. *The Journal of Consumer Affairs*, 30(1), 124–145.
- [39]. Mihalčová, B., Csikósová, A., & Antošová, M. (2014). Financial Literacy – The Urgent Need Today. *Procedia - Social and Behavioral Sciences*, 109, 317–321. <https://doi.org/10.1016/j.sbspro.2013.12.464>
- [40]. Mitchell, O. S., & Lusardi, A. (2015). Financial Literacy and Economic Outcomes: Evidence and Policy Implications. *SSRN Electronic Journal*, (January), 13. <https://doi.org/10.2139/ssrn.2568732>
- [41]. Nicolini, G., Cude, B. J., & Chatterjee, S. (2013). Financial literacy: A comparative study across four countries. *International Journal of Consumer Studies*, 37(6), 689–705. <https://doi.org/10.1111/ijcs.12050>
- [42]. Nunnally, J. (1978). *Psychometric methods*.
- [43]. Nunnally, J. C. (1994). Bernstein. *IH* (1994). *Psychometric theory*, 3.
- [44]. OECD INFE. (2011). *Measuring Financial Literacy: Core Questionnaire. Measuring Financial Literacy: Questionnaire and Guidance Notes for Conducting an Internationally Comparable Survey of Financial Literacy*, 31. Retrieved from <https://www.oecd.org/finance/financial-education/49319977.pdf>
- [45]. OECD. (2017). *G20/OECD INFE report on Adult Financial Literacy in G20 countries*. Paluri, R. A., & Mehra, S. (2016). *Financial Attitude based Segmentation of Women in India: An Exploratory Study*. *International Journal of Bank Marketing*, 34(5), 670–689.
- [47]. Potrich, A. C. G., Vieira, K. M., & Kirch, G. (2015). Determinants of Financial Literacy: Analysis of the Influence of Socioeconomic and Demographic Variables. *Revista Contabilidade & Finanças*, 26(69), 362–377. <https://doi.org/10.1590/1808-057x201501040>
- [48]. Remund, D. L. (2010). Financial Literacy Explicated: The Case for a Clearer Definition in an Increasingly Complex Economy. *Journal of Consumer Affairs*, 44(2), 276–295. <https://doi.org/10.1111/j.1745-6606.2010.01169.x>
- [49]. Robb, C. A. (2011). *Financial Knowledge and Credit Card Behavior of College Students*. *Journal of Family and Economic Issues*, 32(4), 690–698. <https://doi.org/10.1007/s10834-011-9259-y>
- [51]. Roy, A., Vyas, V., & Jain, P. (2013). Relationship between distinctive competence activities and export performance: a study of Rajasthan SMEs. *International Journal of Entrepreneurship and Small Business*, 20(2), 165–183.
- [52]. Schuhen, M., & Schürkmann, S. (2014). Construct Validity of Financial Literacy. *International Review of Economics Education*, 16, 1–11. <https://doi.org/10.1016/j.iree.2014.07.004>
- [53]. Shim, S., Barber, B. L., Card, N. A., Xiao, J. J., & Serido, J. (2010). Financial Socialization of First-year College Students: The Roles of Parents, Work, and Education. *Journal of Youth and Adolescence*, 39(12), 1457–1470. <https://doi.org/10.1007/s10964-009-9432-x>
- [54]. Shults, S. D. (2012). *Financial Literacy of High School Seniors* (Doctoral dissertation, University of Georgia).
- [55]. Shusha, A. A. (2017). Does Financial Literacy Moderate the Relationship among Demographic Characteristics and Financial Risk Tolerance? Evidence from Egypt, 11(3), 67–86. <https://doi.org/10.14453/aabfj.v11i3.6>
- [56]. Vyvyan, V., Blue, L., & Brimble, M. (2014). Factors that Influence Financial Capability and Effectiveness: Exploring Financial Counsellors' Perspectives. *Australasian Accounting, Business and Finance Journal*, 8(4), 3–22. <https://doi.org/10.14453/aabfj.v8i4.2>
- [57]. Walstad, W. B., Rebeck, K., & MacDonald, R. A. (2010). The Effects of Financial Education on the Financial Knowledge of High School Students. *Journal of Consumer Affairs*, 44(2), 336–357. <https://doi.org/10.1111/j.1745-6606.2010.01172.x>
- [58]. Yamauchi, K. T. & Templer, D. I. (1982). The Development of a Money Attitude Scale, *Journal of Personality Assessment*, 4: 522–528.
- [59]. Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2013). *Business research methods*. Cengage Learning.