The Importance of Financial Literacy: A Literature Review

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Abstract: Financial literacy, along with its shortest definition, is the ability of individuals to use money rationally. Today, young individuals' infrastructure and kits are not enough to understand finance and make the right decisions in the modern financial world. Young university students, young adults, and women need to have sufficient financial literacy to who have a high tendency to consume and are the individuals who will go into business life soon. In this study, we dive deep into the literature to take attention to the importance of financial literacy in the 21st century. Underlying the unique findings and pointing to the multi-disciplinary structure of financial literacy enable us to define scaling methods of financial literacy in the literature.

Keywords: Financial Literacy; Financial Knowledge; Financial Behavior; Financial Attitudes; Systematic Review.

1. INTRODUCTION

Nowadays, it is predicted that the individualization of production and consumption habits will shed light on the management of individuals' participation in the market by examining the financial behavior and attitudes of individuals in line with their financial and economic knowledge. Current studies in this field have highlighted the long-term positive and negative effects of economic and financial decisions, both individually and socially. To determine how to limit the adverse effects that arise, it is first necessary to reveal the current situation of the individuals, which means determining their financial literacy level.

Financial products that rapidly evolve and differentiate with technology, on the one hand, enable derivatives of financial products, and on the other hand, this complexity affects market participants negatively. The rapid change of information and problems in access affect investors. In other words, it affects the demand side of the financial market. Financial literacy establishes the demand side of the use of financial instruments and financial inclusion. The efforts of consumers to build capacity against the rapid increase in financial supply and to catch the supply and adapt to it, return to investors as additional costs. In addition, individuals' perception of trust in financial markets, abundance, and complexity of information negatively affect their participation in financial markets.

In today's demand-side financial environment, early-age consumers face the issue of making complex financial decisions, and the costs of early wrong financial decisions are high. Students can often hinder their ability to measure their purchasing power due to early financial constraints such as student loans, credit card debts, and similar early financial restrictions.

In this context, the financial literacy levels of young adults, senior executives, and many other individuals from different levels are measured starting from the high school level. It is aimed to enlighten policymakers, educational institutions, and decision-makers by evaluating the data. Young adults with university education from household members are the decision-makers of the future. Whether the consumption habits, financial behavior, and financial attitudes of young adults since childhood are determinants for their future financial well-being has been asked and investigated in the literature. Within this context, most of the financial literacy measurement studies in the literature contain university students. There is a consensus among researchers, both nationally and internationally, on the preparation of young adults for economic and financial life.

This paper continues with a Literature review in section two, we investigate the definitions of financial literacy in the studies in the second subsection of section two we investigate the scaling methods of financial literacy in section three.

2. LITERATURE REVIEW

2.1. DEFINITION OF FINANCIAL LITERACY

The concept of literacy, which is a socio-cultural phenomenon, turns into the concept of financial literacy when individuals carry their theoretical finance knowledge to practical application areas in terms of managing their income. Remund (2010) classifies the financial literacy definitions as conceptual definitions and operational definitions. Financial literacy was conceptually defined for the first time in the "JumpStart Survey of Financial Literacy Among High School Students" published in 1997. The study defines financial literacy as "the ability to use knowledge and skills to effectively manage personal financial resources throughout the lifetime" (Hastings *et al*., 2012: 5). When it comes to the operational definition of financial literacy it refers to financial product knowledge (e.g. what are stocks and bonds, what is the difference between fixed and floating mortgage rates); financial concepts knowledge (inflation, compound interest calculations, derivatives, credit score); mathematical skills or numeracy required for effective financial decision making, and to perform activities such as financial planning (Hastings *et al*., 2012: 5). One of the most common financial literacy definitions developed by the OECD (2012); "It is a combination of awareness, knowledge, skills, attitudes, and behaviors necessary to make financial decisions and ultimately achieve individual financial well-being. Since 1997, authorities suggest financial literacy as a valid tool for being financial well-being. Financial literacy, in its shortest definition, is the ability of individuals to use money rationally. Hence, the financial landscape has changed constantly over time. The last decade witnessed the most impressive improvements in financial markets. Thus financial literacy updates its definition as like other literacies depending on the order of the day.

2.2. SCALING OF FINANCIAL LITERACY

After the 2008 global crisis, studies on financial literacy have intensified. The first studies generally aim to determine the level of financial literacy, targeting different segments of the societies. Studies to determine the level of financial literacy have deepened by making comparisons based on socio-demographic characteristics. Later on, studies spread to areas such as retirement plans, financial participation, personal financing, financial education, decision-making processes, financial consultancy, and concentrated on the studies on the causality of financial literacy.

A structure that focuses on measuring consumers' ability to make effective financial decisions is needed to measure and improve current financial literacy levels. Huston (2010) lists a successful financial literacy scale as consisting of item contents parallel to the definition, being able to reveal choices that reduce financial well-being, and offering favorable outcomes to financial educators. Moreover, the measurements should provide results showing which outcomes indicate a lack of financial knowledge and skills. Studies focusing only on participation in financial markets can not examine the factors that determine the financial information of those who do not participate in financial markets. However, the fact that an individual does not invest in a financial instrument does not mean that the individual does not know that financial instrument (Bönte and Filipak, 2012: 3402). Fernandes *et al*. (2014) classify the financial literacy measurements in the literature under two main headings. The studies in the first group include experimental and quasi-experimental studies of the effects of regulations in financial education. The studies in the second group are those that explain financial literacy, the level of financial literacy as measured by the percentage of correct answers in financial knowledge tests, and the predicted financial behavior, correlational and econometrically. The authors call these two group studies "manipulated financial literacy" and "measured financial literacy".

In the measurement of financial literacy, there is no single measurement method with consensus in the literature. Despite this, academics, researchers, policymakers, and non-governmental organizations address the necessity of determining the level of financial literacy of the population. Financial literacy measures focus on different segments of society such as students, occupational classes, households, and educators, and address the disruptions in the functioning of financial policies and financial markets and their reflection on society. Fernandes *et al*. (2014) suggest for both financial education and financial literacy to prepare the structure tailor- made. In line with the same needs, scale development efforts continue. The scales differ according to the parts of the society addressed, the subject of efforts continue. The scales differ according to the parts of the society addressed, the subject of the study, and the intercultural change. Lusardi and Mitchell (2006, 2008, 2010, 2011) applied a three-item questionnaire which includes the interest rate, inflation, risk diversification to different segmentations of the society such as high school students, young adults, women, and old-age individuals. Hence, Grable and Rabbani (2020) expand the sample of the scale applied in the study by criticizing the results of Lusardi and Mitchell's studies. They emphasize that the results are positive compared to 2004, but the alpha coefficient of the scale applied was 0.50, and this scale does not reflect the real financial literacy levels of American citizens. Besides, they emphasize that financial literacy helps the development of cash flow and equity position of households, thus referring to the effect of family balance sheet on gross domestic product, it has a role in 75% of national economic growth.

Cull and Whitton (2011) apply a 21-item scale on 472 students in Western Sydney University to investigate the determinants of individual financial literacy levels among a sample of university students in various fields of study such as business, education, arts, humanities, and science. As a result of the findings, they find that the rate of correct answers given by the students of the business administration department to the items except the ones related to taxation was lower than the correct answer rate of the other department students. They also state that there is no statistically significant relationship between gender and financial literacy level. This study highlights that college students, even business students, cannot be assumed to be exempt from financial ignorance.

Sarıgül (2015) conduct an application on university students to develop a measurement tool to measure individuals' financial attitudes and behaviors. While developing the scale, an item pool of 43 items is created by reviewing the literature. The item pool was submitted to expert opinion and the number of questions was reduced to 27 items. The pre-application is continued with a total of 28 questions including 7 demographic questions. A pilot study is conducted on 69 students, and it is predicted that the obtained returns could be used in reliability and validity tests with the form of the questionnaire. The main study is applied to 407 students at Mevlana University. First, the reliability and internal consistency Cronbach alpha coefficient are calculated, and it is obtained as 0.75 in the 21-question survey. Then, the item-test correlation coefficient is calculated and the items below 0.20, which are accepted as the limit, are excluded from the scale. Kaiser Mayer Olkin (KMO) coefficient and Barlett test are applied and it is determined that the questionnaire is sufficient for explanatory factor analysis. At the end of the test, the unnecessary items are removed and it is observed that 14 items are gathered under 5 factors. An alpha coefficient of 0.72 is obtained by performing the reliability and internal consistency test again. Factor analysis results reveal that five factors are explained with 49.24% of the variance. He suggests that the scale, developed in line with the findings, can make reliable measurements for both factors and overall, and it is possible to say that it is a valid and reliable scale that can be used in determining the financial attitudes and behaviors of individuals.

Potrich *et al*. (2015) examine the scale they develop on 534 state and private university students in Southern Brazil with structural equation modeling. They adapt the items they obtain from the literature review of the scale to Brazilian conditions. Descriptive statistics and multivariate analysis techniques are applied to the collected data and analyzed with the AMOS program. Since there is no integrated model for measuring financial literacy in the literature, they develop three models and test the suitability of these models one by one. The model they obtain as a result of the analysis reveals that financial knowledge and attitude affect financial behavior positively and that these results are consistent with conceptual models except for the expectation regarding the correlation between knowledge and attitude.

Kılcan and Ergür (2019) develop a financial attitude scale and applied it to 357 middle school students. After the data are collected, they examine the values of the Kaiser-Meyer Olkin (KMO) and Bartlett's Test of Sphericity and observe that the scale is suitable for factor analysis.

Then, the loadings of each item in the scale are analyzed using the Varimax rotation technique. The explanatory factor analysis method is used and items with item loadings below 0.40 are excluded from the scale. It is found that the scale is composed of five factors and 29 items. Item consistency and Cronbach's alpha test is applied and the confidence level is determined with an alpha coefficient of 0.80.

Güvemli and Meydan (2019) conduct an application on 400 students in the Trakya University Faculty of Economics and Administrative Sciences to determine the financial attitude and financial behavior of university students. As a result of Cronbach's alpha test, the α coefficient is obtained as 0.778. They apply a t-test to measure the effects of age and gender on financial attitude and financial behavior, ANOVA to investigate the relationship between parental education level and financial literacy, and Pearson correlation test to measure the relationship between financial attitude and financial behavior. They state that there is no significant difference between students' financial behavior and gender. Again, no significant difference is found between parental education level and financial behavior. They state that there is a weak but positive relationship between financial attitude and financial behavior. They also find that financial attitudes determine financial behavior.

3. METHODOLOGY

Authors prefer to use a systematic literature review. Gough *et al*. (2013) define systematic review as "a review of research literature using systematic and explicit, accountable methods." Through the definition, the authors used "financial literacy level", "financial literacy measurement", "measure financial literacy" and, "financial literacy scale" keywords on the web of science. The date range is defined as 2010 to 2020. The authors collected 124 articles on the web of science in total, respectively; 82, 8, 22, and, 6.

Then each article is classified by its measurement method. The authors decided to focus on the questionnaire-type scaling method. The authors then narrowed the angle of the study on the questionnaire structures. Each study's questionnaire was examined for defining the layers and identifying the aim of the measurement.

4. FINDINGS

Figure **1** shows the item distribution of scales on selected articles. The most used titles when scaling financial literacy are numeracy, budgeting, savings, investments, borrowing, inflation, risk and profit relation, diversification, time value of money, insurance, banking, pension, financial behaviors, financial attitudes.

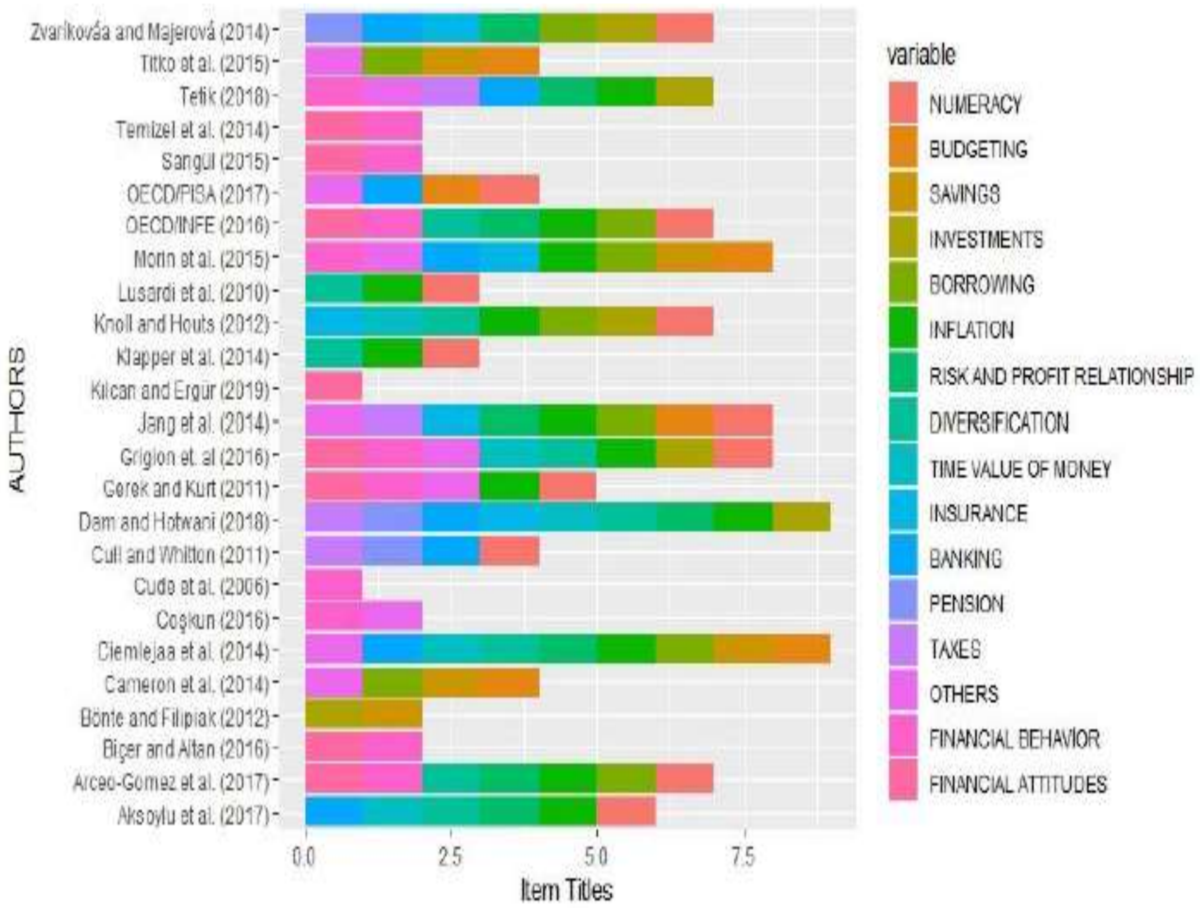

Figure 1: Financial Literacy Scale-Item Distribution.

5. FUTURE RESEARCH AND CONCLUSION

The devastating financial crises experienced in recent years and the increasing financial frauds, low savings rates have highlighted the need to determine the financial literacy levels of countries and to increase the level of conscious financial literacy of economic agents. Many studies have been carried out on what kind of changes financial education leads to individuals' behavior patterns and financial preferences in the context of financial literacy. In the vast majority of these studies, serious and important findings have been reached that financial education has an improving and positive effect on individuals' behavior patterns and investment preferences. Considering the practices in the world, children and young adults are the primary target groups that are given importance in these educational programs with the main theme of financial literacy.

In this paper, we shed light on the vast majority of financial literacy studies that are entitled as behavioral finance, clinical pathology, corporate management, decision making, financial advice, financial crisis, financial education, financial ınstruments, financial knowledge, financial literacy level, financial literacy's structure, financial market, financial risk, gender, retirement, personal financing, household wealth, property ownership, online shopping, urban class.

The number of studies condenses on financial literacy levels, financial education, and the gender gap. Since the incompleteness of a common definition and a common scaling method, we assume that future studies would lean on to discover these issues. Literature needs variety; psychological aspects of financial literacy such as financial anxiety, sociological aspects of financial literacy such as divorcing numbers, and financial literacy levels of couples. Nonetheless, the importance of financial literacy would perceive each part of individuals' daily life.

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