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Financial literacy of students at Thainguyen University of Technology - A literature review

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Abstract: *Many countries have seen the importance of financial education by making financial education a national strategy. In Vietnam, although the National Strategies for Inclusive Financial Education has been proposed since 2017 and officially included in the National Financial Inclusion Strategy in 2020, however, financial education is still quite new, and many people are not aware of the necessity of financial literacy in particular and financial education in general for their personal life, economy, and financial inclusion. The article generalizes the basic concepts, roles, and trends in the world for financial education as well as the current state of financial literacy in Vietnam in general and proposes a research framework for empirical research to assess the financial literacy of students at Thainguyen University of Technology in the near future.*

Keywords – *Financial education; financial knowledge; financial literacy; student, university .*

I. INTRODUCTION

The work on national strategies for financial education was launched in 2009 as an integral part of the OECD project on financial education, as a complement to financial consumer protection and inclusion measures with a view to strengthening financial stability and development. It was particularly meant as a new policy tool to counter some of the lasting effects of the 2008 global financial crisis, while offering solutions to governments designing and implementing financial education policies (OECD 2015).

In October 2013, the World Bank (WB) launched a global target on people's right to access and use basic financial services, so that, people everywhere have the right to access and use financial services they need to capture opportunities and reduce vulnerability.

In Vietnam, the National Strategy on Financial Inclusion Education has been developed since 2017, when the Ministry of Finance together with the State Bank of Vietnam selected the topic of financial inclusion as one of priority the topics for discussion, towards common actions in the APEC Forum. One of the three pillars of the national financial inclusion strategy is financial education and consumer protection. The goal of this pillar is to form financial consumers who are able to use and evaluate financial products and services and establish a regulatory system to ensure that consumers are treated fairly in financial transactions and have access to necessary information about financial products/services. By 2020, this proposal has been officially approved in the National Financial Inclusion Strategy to 2025, with a vision to 2030.

However, up to now, after 3 years of applying the strategy, financial education is still quite new, and many people are not aware of the necessity of financial literacy in particular and financial education in general for their personal life, economy, and financial inclusion.

The article generalizes the basic concepts, roles, and trends in the world for financial education as well as the current state of financial literacy in Vietnam in general and proposes a research framework for empirical research to assess the financial literacy of students at Thainguyen University of Technology in the near future.

II. METHOD

Desk research referring to secondary data is used to synthesize, analyze, compare, and evaluate contents and experiences of assessing the financial literacy of adults in general and students in particular. The data is collected from: 1. Reports of national and international organizations, and governments on related problems in assessing financial literacy; 2. Results of project-related problems in assessing financial literacy; 3. Previous theoretical and empirical research, and articles in assessing financial literacy.

III. RESULTS - LITERATURE REVIEW

1. Financial education and Importance of financial education

Financial education

According to OECD (2005), Financial education can be defined as "the process by which financial consumers/investors improve their understanding of financial products, concepts and risks and, through information, instruction and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being". Financial education thus goes beyond the provision of financial information and advice, which should be regulated, as is already often the case, in particular for the protection of financial clients (i.e. consumers in contractual relationships).

According to CYFI (2016), financial education provides knowledge, skills and confidence, in which: "Knowledge" means having understanding of personal financial matters; "Skill" means the ability to apply financial knowledge to manage personal finances; "Confident" means being able to make independent and confident decisions regarding personal finances.

Importance of financial education

Financial education is increasingly important, not only just for investors but also for the family trying to decide how to balance its financial budget to buy a home, fund the children's education and ensure an income when the parents retire. Because of the development of financial markets, consumers have to make a difficult choice between a variety of complex financial instruments for borrowing and saving, with a large range of options. At the same time, the responsibility and risk for financial decisions will have a major impact on an individual's future life, both when they are young and old, especially when human life expectancy increases and they enjoy longer periods of retirement.

A survey on people's access to finance conducted by OECD/INFE (2012) with many countries concluded that there is a lack of knowledge about the characteristics and conditions of using different types of financial services. This situation leads to a lack of confidence, a lack of access and a distrustful attitude towards financial services in the formal financial market, then, increases the number of people who have difficulty in accessing banking products, and promotes the emergence of informal financial services (black financial market). Financial education can provide the people with necessary knowledge about formal financial services, creating trust and confidence to actively access services available in the formal market, limiting the expansion of informal financial markets, directly promoting financial inclusion in each country.

The OECD (2005) recommended that teaching financial literacy should begin as early as possible and should be incorporated into school instruction as part of the curriculum framework. Financial education is a lifelong process. Financial education at an early age helps children grasp the knowledge and skills to take responsibility for their spending behavior.

For financial education to be truly effective, financial education in schools should be part of a national financial strategy with a learning framework that sets out objectives, outcomes, content, and approaches, resources, and an assessment plan.

Today almost 60 economies are implementing national strategies for financial education worldwide, compared to a handful in 2009 (OECD, 2015). The impressive increase in the number of governments which have strategies and policies for financial education testifies to its significance.

2. Financial literacy

Up to now, a common definition of "financial literacy" has not been agreed upon, which is often adjusted or changed depending on each research, implementation program of each international organization or country. However, the OECD concept can be used because it reflects the basic elements of financial literacy. Accordingly, financial literacy is defined as the totality of financial knowledge, skills, attitudes and behaviors necessary to be able to make sound financial decisions and ultimately benefit from financial literacy (OECD, 2012).

Robb, Babiarz, and Woodyard (2012) argue that financial literacy is related to the ability to understand financial information and make effective decisions using that information, while financial education is an important tool to provide financial literacy again.

Measure the financial literacy

In the literature, financial literacy has been mostly measured by the survey-based method with the scales created by questions true/false, multiple-choice, or based on a 5-point Likert scale relating to personal finance (income, money management, saving, spending, etc); macro factors and financial market (inflation, interest, risk diversification, bond, stock, etc).

Financial literacy are conceived of as the areas of knowledge and understanding that must be drawn upon in order to perform a particular financial task. The four content areas for PISA (2012) financial literacy are: money and transactions, planning and managing finances, risk and reward, and financial landscape.

Financial knowledge helps individuals compare financial products and services and have greater confidence in financial matters and react to news and events that may have implications for their financial well-being so that they can make appropriate, well-informed financial decisions. OECD (2020) looks at the levels of basic financial knowledge, focusing on responses to seven questions designed to test different aspects of knowledge that are useful for individuals to make financial decisions: 1) Time value of money; 2) Understanding interest paid on a loan; 3) Simple interest calculation; 4) Understanding correctly both simple and compound interest; 5) Understanding risk and return; 6) Understanding the definition of inflation; 7) Understanding risk diversification.

The Financial behavior score is computed as a count of the number of "financially savvy" behaviors relating to: 1) budgeting; 2) active saving; 4) avoiding borrowing to make ends meet; 5) choosing products; 6) keeping watch on financial affairs: 7) striving to achieve goals; 8) making considered purchases; 9) paying bills on time.

The OECD/INFE definition of financial literacy recognizes that even if an individual has sufficient knowledge and ability to act in a financially prudent way, their attitudes will influence their decision of whether or not to act. Therefore, The OECD/INFE Toolkit uses three attitude statements to gauge respondents' attitudes toward money and planning for the future and the respondents who exhibit more positive attitudes toward the long-term and towards saving are given the higher score.

The 2022 version adds questions to measure digital financial literacy, developed by the OECD/INFE Working Group on Digital Financial Literacy, these questions also cover the three components of behavior, attitudes, and knowledge (OECD, 2022).

3. Financial literacy of student

International situation

Until the assessment of financial literacy in PISA (2012) was conducted, there were few data collection efforts aimed to measure the levels of financial literacy among young people, and none that could be compared across countries. The availability of such data is essential for understanding how well today's youth are prepared to face new and changing financial environments. Four process categories have been defined In PISA financial literacy: identify financial information; analyze information in a financial context; evaluate financial issues; and apply financial knowledge and understanding. Identify financial information: This category is used to assess student abilities in individual searches and access to sources of financial information and identifies or recognize their relevance. Analyse information in a financial context: This category is used to assess student abilities in doing a wide range of cognitive activities undertaken in financial contexts, including interpreting, comparing and contrasting, synthesizing, and extrapolating from information that is provided. Evaluate financial issues: This category is used to assess student abilities in recognizing or constructing financial justifications and explanations, drawing on financial knowledge and understanding applied in specified contexts. Apply financial knowledge and understanding: This category is used to assess student abilities in taking effective action in a financial setting by using knowledge of financial products and contexts and understanding financial concepts.

PISA (2012) also found that for each country and economy, the degree to which various demographic and socioeconomic factors presented above are associated with financial literacy. Besides social, economic, and cultural status, PISA also found gender, school location, as well as immigrant status, and home language, can make differences in financial literacy. Among the components of socioeconomic status, parents' occupation explains a larger proportion of the variation in performance in financial literacy than parents' education. On average across OECD countries and economies, immigrant background and language spoken at home jointly account for about 1% of the total variation in performance in financial literacy; school location explains about 1% of performance variation in financial literacy, and gender explains less than 1% of the performance variation in financial literacy.

The findings of many earlier studies show that university students are not knowledgeable about personal finance and their financial skills need improvement.

Diana & Sarath (2003) surveyed a wide cross-section of the student population of a regional Australian university with a substantial external-student enrolment. The research has found that the financial literacy of students is not high and this, no doubt, stems from the lack of financial skills education in high schools. Of the five identified areas of financial skill or knowledge, decision-making skills and knowledge of insurance appeared to be the least well-developed. Financial literacy improved with work experience and income. This suggests that people learn financial skills through trial and error, to some degree. Additionally, financial experience tends to impact tolerance to risk. Thus, those people indicating higher tolerance to risk (less risk averse) are probably those with more exposure to the financial markets and more experience in financial management and investment. Finally, students undertaking business studies, even if they were in their first year at university, scored better.

Lantara and Kartin (2016) investigate the level of financial literacy among undergraduate and graduate students and the association between the students' demographic factors and their financial literacy level through a survey with 348 undergraduate and graduate students of Gadjah Mada University, Indonesia. The findings show that on average 45.39 percent of the respondents answered the questions correctly, which is relatively low compared to what other studies found in other countries, such as Chen and Volpe (1998) in the US (52.87 percent), or Diana & Sarath (2003) in Australia (53 percent). It also seems that male students, students with economics and business majors, and those with higher incomes, and more work experience have a higher financial literacy rate. Research also shows that education levels and academic disciplines are positively associated with the financial literacy rate.

Hahn, J. et al (2019) examines what factors influence the level of financial literacy possessed by Korean high school students. The research achieves some results: 1) a student's intention to select economics is the most influential factor in both economic attitude and financial attitude, with the student being the second influential one; 2) economic attitude is more influential than financial attitude in determining financial literacy; 3) the effect of financial attitude on financial literacy changes dramatically depending on the assumptions; 4) The descriptive statistics show that financial attitude has positive effects on financial literacy, while its effects become insignificant in the simple regression model and the benchmark model. However, if we incorporate the heterogeneity; of financial attitude explicitly among latent variables, the effects become negative and significant; 5) financial literacy has positive effects on financial behavior in all models.

Sirli Mändmaa (2020) analyzed the survey results of 536 university students at Tallinn University of Technology (Estonia) to assess financial literacy, the impact of educational and demo graphical characteristics on the participants' financial literacy, and the students' financial opinions and choices. The research shows that the financial literacy of students at Estonian universities was low and that the interest of students in long-term planning was not remarkably high. Results of regression analysis showed that statistically significant impact on financial literacy had factors: academic discipline, level of education, gender, nationality, age, and the choices to have a current account, a debit card, and investment services.

Melinda Verano Abichuela (2020) conducted a survey with 199 third-year students about their financial literacy. From the interview of the respondents, on the financial literacy programs. It was found that the majority of those knowledgeable in personal finance are students related to finance majors. The financial literacy programs needed by CSU students in the Philippines are (a) personal finance, (b) budgeting, (c) bookkeeping, (d) savings, (e) investment, (f) credit management, and (g) pension planning.

Situation in Vietnam

Some studies on financial literacy show that adults in general and Vietnamese students, in particular, have a much lower level of financial literacy than people in the world and in other countries in the region.

The 2014 Standard & Poor's survey on financial literacy (Klapper L. et al, 2015) shows that Vietnam is in a much lower position than other countries in the region because only 25% of the adult population has financial literacy capacity. Nguyen Truc Le (2018) noted that "Vietnam's financial inclusion index only reaches 21.28 points, ranking 112/176 worldwide and 22/37 in the group of developing countries in Asia. The financial literacy limitations of the majority of the population have directly affected access to products and their financial services" (Quoted from Le Hoang Anh et al, 2018).

Nguyen Thi Hai Yen (2015), applies the objective test to measure the financial literacy level of higher education students in Vietnam with the data collected by randomly selecting 435 students from various majors in the college and universities within Vietnam. The results show that Vietnamese students in higher education do not financially literate, even at a very basic level. The results indicate that gender, place of residence, field of study, work experience, the financial dependence rate of students on their families, and the demand of students on financial education, student income, and the professional of their parents are found to significantly affect their financial literacy at all levels. Otherwise, the financial literacy of students is not impacted by their year of study at a basic level.

Results from the preliminary survey of Le Hoang Anh et al. (2018), show that students' financial literacy is quite good (average of 14/25 correct answers), which is somewhat inconsistent with previous statements on financial literacy in Vietnam. The results of data analysis show that most students are financially literate, women have better financial literacy scores than men, and students who work part-time have lower financial literacy scores than those who do not. not yet employed, finance-trained students have better financial knowledge than students of other disciplines. However, this research uses only 47 answers from university students in Hanoi city, the results are not generalizable to the characteristics of students across the country.

IV. RESEARCH FRAMEWORK

1. Framework

The OECD financial literacy assessment model with 20 indicators related to 3 aspects of financial knowledge, financial skills, and attitudes toward financial issues has been used as framework of empirical research to assess financial literacy of students at Thainguyen University.

Financial literacy are conceived of as the areas of knowledge and understanding that must be drawn upon in order to perform a particular financial task. The four content areas for PISA (2012) financial literacy are: money and transactions, planning and managing finances, risk and reward, and financial landscape.

Financial knowledge testing indicators include: 1) Time value of money; 2) Understanding interest paid on a loan; 3) Simple interest calculation; 4) Understanding correctly both simple and compound interest; 5) Understanding risk and return; 6) Understanding the definition of inflation; 7) Understanding risk diversification.

The Financial behavior testing indicators include: 1) budgeting; 2) active saving; 4) avoiding borrowing to make ends meet; 5) choosing products; 6) keeping watch on financial affairs: 7) striving to achieve goals; 8) making considered purchases; 9) paying bills on time.

Attitude to financial literacy testing indicators include: 1) attitude toward money and planning for the future; 2) attitudes toward the long-term financial; 3) attitude towards saving; 4) attitude toward Digital Financial Literacy.

2. Hypothesis

As pointed out in the review section: Personal factors (school major, part-time job, degree of family dependency,...), family factors (parent's occupation, income level,...), and social factors (national financial education programs, local circumstances, etc.) have varying degrees of influence on students' financial literacy. So, some hypothesis can be verified in the empirical research to assess financial literacy of students at Thainguyen University.

Hypothesis 1: There is an association between gender and the financial literacy score of students at the basic/advanced/accumulative level.

Hypothesis 2: There is an association between place of residence and the financial literacy score of students at the basic/advanced/accumulative level.

Hypothesis 3: There is an association between the field of study and the financial literacy score of students at the basic/advanced/accumulative level.

Hypothesis 4: There is an association between work experience and the financial literacy scores of students at the basic/advanced/accumulative level

Hypothesis 5: There is an association between the financial dependence rate and the financial literacy score of students at the basic/ advanced/ accumulative level.

Hypothesis 6: There is an association between parents' professional and financial literacy scores of students at the basic/advanced/accumulative levels.

V. CONCLUSION

An overview of students' financial literacy shows that financial literacy should be considered under three dimensions: financial knowledge, financial skills, and attitudes toward financial issues. The OECD financial literacy assessment model with 20 indicators related to 3 aspects of financial knowledge, financial skills, and attitudes toward financial issues has been used by many researchers in many empirical studies assessing the financial literacy of students in many countries. Personal factors (school major, part-time job, degree of family dependency,...), family factors (parent's occupation, income level,...), and social factors (national financial education programs, local circumstances, etc.) have varying degrees of influence on students' financial literacy.

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