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**các nhân tố ảnh hưởng đến mức độ hiểu biết tài chính của người trẻ tại việt nam**

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**Tóm tắt**

Bài nghiên cứu nhằm xác định mức độ hiểu biết tài chính của người trẻ tại Việt Nam và các nhân tố ảnh hưởng (bao gồm yếu tố nhân khẩu học, yếu tố cá nhân và các ảnh hưởng từ mối quan hệ xã hội). Dữ liệu sơ cấp được thu thập qua một khảo sát với bộ câu hỏi được xây dựng dựa trên nghiên cứu nổi tiếng của Lusardi và Michell. Sau quá trình thu thập, có 401 người tham gia khảo sát đáp ứng đủ những điều kiện sau: là người Việt Nam trẻ tuổi (từ 18 đến 25 tuổi), đang học hoặc đã tốt nghiệp đại học dưới 3 năm. Nghiên cứu đưa ra hai kết luận chính. Thứ nhất, hiểu biết tài chính của người trẻ tại Việt Nam là ở mức thấp. Thứ hai, nghiên cứu chỉ ra rằng mức độ hiểu biết tài chính chịu ảnh hưởng nhiều nhất bởi các yếu tố cá nhân, tiếp đó là các yếu tố xã hội và cuối cùng là yếu tố nhân khẩu học. Cụ thể, mô hình hồi quy cho thấy các yếu tố cá nhân có ảnh hưởng đáng kể là nhận thức tri thức, ngành và năm học, sự độc lập tài chính và sự tự tin tài chính. Đối với yếu tố xã hội, những người có hiểu biết tài chính cao thường đến từ những gia đình có kế hoạch hưu trí rõ ràng, trong khi đó, yếu tố tương tác xã hội của gia đình (family social interactions level) và thị hiếu theo thời gian của bạn bè (peers’ time preference) lại cho thấy mối quan hệ ngược chiều với biến phụ thuộc này. Bên cạnh đó, dù không được công nhận trong mô hình hồi quy nhưng cũng có sự khác biệt đáng kể giữa các nhóm giới tính và tình trạng hôn nhân.

**Từ khóa:** mức độ hiểu biết tài chính, người trẻ tại Việt Nam, yếu tố cá nhân, yếu tố xã hội.

**DETERMINANTS OF FINANCIAL LITERACY LEVEL AMONG YOUNG ADULTS IN VIET NAM**

**Abstract**

The study aims at discovering financial literacy level of young adults in Vietnam and its determinants (including demographic characteristics, personal factors, and social influences). The primary data was collected using a survey, including financial literacy questions based on Lusardi and Michell’s study. There are 401 respondents taking part in this study, they are young Vietnamese adults, aged from 18 to 25; currently studying or graduated less than 3 years from universities. Two important findings emerge from this study. First, financial literacy level is low among young Vietnamese adults. Second, personal factors are found to have most connection with financial literacy, followed by social influences, and lastly is demographic characteristics. Among personal factors, financial literacy is positively linked with respondent’s cognitive ability, field of study, year of study, financial independence, and financial confidence. As for social influences, whether respondents’ family have retirement plan is confirmed to have a positive relationship with financial literacy, while family social interactions level and peers’ time preference is proved to have an inverse correlation with financial literacy level of young Vietnamese adults. Demographic factors were not confirmed by the regression model but descriptive analysis revealed a considerable gap in financial literacy level among genders and marital status.

**Key words:** financial literacy, young Vietnamese adults, personal factors, social influences.

1. **Introduction**

OECD (2012) stated that “Poor financial decisions can have a long-lasting impact on individuals, their families and society”. In Vietnamese contexts, the need to establish an understanding of population financial literacy is heightened by its specific economics and socio characteristics. Financially literate citizens are demonstrated as the motivation to any country’s development, especially the economic growth of emerging economies (Beck, Demirgüç-Kunt, and Levine 2009; Naoyuki *et al.,* 2015; Faboyede *et al.*, 2015). The Standard & Poor’s Ratings Services Global FinLit Survey (2014) found that Viet Nam is one of the countries with the lowest rate of financial literacy among 148 participating countries. The Mastercard Financial Literacy Index Reports with the participation of 16 countries across Asia Pacific, also showed that Viet Nam was at 12th and 11th position in 2013 and 2014, respectively. International Labor Organization (ILO) has published its Financial Forecasting Pension Fund at the request of the Vietnamese government, which stated clearly that Vietnam's pension fund is facing a radical crisis. Rising life expectancies and falling fertility rates are straining employer-sponsored pensions and Social Security systems. If there is no timely reform, by 2021, the total revenues of the Viet Nam Social Insurance (VSS) will be equivalent to the cost. As the result, the entire pension fund will be exhausted by 2034. In other words, with the current system design, all Vietnamese men under 39 years old and women workers under 34 years old will face the risk of not receiving any benefits after they reach their retirement. Only current pensioners and workers close to retirement are entitled to a full monthly pension until death. According to the National Economics University, Retirement benefits account for more than one-third of retirees' household income. If this income is drained, poverty will arise. Therefore, it is important to examine Vietnamese people, especially young adults who shortly joined the workforce, to see whether they are equipped to manage this increasing financial responsibility.

Young adults are among vulnerable groups when it comes to financial issues. Young adults are one of two age groups that displayed lower financial literacy among others (OECD, 2005; Lusardi and Tufano, 2009; van Rooij *et al.*, 2009; Lusardi *et al.*, 2010; Lusardi and Mitchell, 2011; Allgood and Walstad, 2013; Jariwala, 2013). The OECD’s Programmes for International Student Assessment (PISA) stressed that financial literacy should be recognized as a skill essential for participation in today’s economy. Many young people acknowledged the necessity of financial literacy and wish they had more financial knowledge. In a 2009 survey on credit card usage among undergraduate students, 84% of students said they needed more education on financial management topics, 64% would have liked to receive information about financial management topics in high school and 40% would have liked to receive such information as college freshmen (Sallie Mae 2009). Agarwalla *et al.* (2013) also found that almost half of the working youth of India were displaying positive attitudes towards financial planning. These studies address the high demand for financial education among the young, as well as their willingness to improve their financial literacy. Furthermore, Lusardi (2010) stated that understanding financial literacy among young people is of critical importance for policymakers in several areas. In her study, she stressed the need to protect financially vulnerable groups of the population and the potential value of early financial education. Lusardi (2010) also argued that updated evaluations of the young’s financial literacy level can aid those who wish to devise effective financial education programs targeted at young people as well as those writing legislations to protect younger consumers.

For the above reasons, the author conducted this study to examine financial literacy among Vietnamese young people. To be more specific, the author would like to understand their current financial literacy level and its determinants, as well as their implications for financial education. The research questions are:

(1) How knowledgeable Vietnamese young people are in financial matters?

(2) What are the determinants of financial literacy of these young people?

This study is conducted in two months (from 24th November 2020 to 18th January 2021) targeting young Vietnamese adults aged from 18 to 25, currently studying or graduated less than 3 years from universities. The survey is available online (via Google Form) in one month period (from 1st to 30th, December 2020) and includes 401 respondents.

1. **Literature review on financial literacy and its determinants** 
   1. ***Financial literacy of young adults***

There are various financial literacy definitions developed by researchers. In the simplest sense, financial literacy is referred to as knowledge of finance (Hilgert, Hogarth & Beverley 2003). To be more specific, it is the knowledge of basic financial principles, such as the compounding of interest, the difference between nominal and actual values, and the basics of diversification of risk (Lusardi 2008a, 2008b).

UNESCO defined “Youth is best understood as a period of transition from the dependence of childhood to adulthood’s independence and awareness of our interdependence as members of a community”.

Previously published literature reported low to medium levels of financial literacy among young people and students. Chen & Volpe (1998) was one of the first authors to highlight the deficiency ofpersonal finance knowledge among college students. The young are among the least financially literate and a very small number of them are familiar with basic financial concepts such as inflation, interest rate, and risk diversification (Beal & Delpachitra, 2003; Lusardi *et al.*, 2010). Similarly, Indian young workers showed a lack of some simple numeracy and basic money-related principles (Agarwalla *et al.*,2013). The OECD’s Programmes for International Student Assessment (PISA) in 2017 reported that approximately 22% of 15-year-old students scored lower than an average level across 15 OECD countries. Ergün (2018) recorded medium results when examining the financial literacy of university students in eight European countries.

Limited financial literacy level is found to have a connection with some burning issues faced by young adults and students. Much research attributed credit card-related debts of college students to their lack of financial knowledge (Norvilitis, *et al.,* 2006; Xiao, Tang, Serido, & Shim, 2011). Likewise, highly financial literacy is associated with greater income and savings rate (Danes) and students should learn to master personal finance and financial products to achieve a prosperous future (Jorgensen, 2007). Chen and Volpe (1998) warned that students with low levels of financial literacy are likely to have negative attitudes towards financial subjects and tend to make bad decisions with their money. According to American College Health Association (ACHA), 33.7% of students admitted they had traumatic experiences with their finances or faced difficulties managing it within the past 12 months. In general, 70% of college students had stresses relating to personal finances and this figure is rising (Heckman *et al.* 2014; Ross *et al.* 1999). Mukherjee *et al.* in their 2017 study noted that, higher financial stress and lower financial well-being will hurt students’ confidence in their ability to complete college, and this was even stronger for employed college students than for non-employed college students.

An effective way to raise the financial literacy of vulnerable groups, such as students and young adults, is to develop financial education programs. According to the research of Jamie Wagner in 2015 based on data from the 2012 National Financial Capability Study (NFCS), financial education is positively correlated with a person’s financial literacy score. Lusardi *et al.* (2009) reported that low-income people and women benefited from such retirement saving program which focuses on increasing its participants' financial literacy. The Center for Economic Education in the UIC Department of Economics proved that the After School Matters Financial Literacy Program (ASMFL) is effective at enhancing students' financial literacy. In order to successfully establish quality education services, determinants of financial literacy should be well addressed.

* 1. ***Determinants of financial literacy***
     1. *Demographic characteristics*

There was rich evidence showed that males more financially literate compared to females, from Volpe *et al.,* 1996; Goldsmith & Goldsmith, 1997b; Chen & Volpe, 1998; Bernhein, 1998, to more recent works such as Lusardi and Mitchell, 2006, 2008; Mandell, 2008; Cole *et al.,* 2008; Guiso and Jappelli, 2008; Agarwal *et al.,* 2009; Tanga and Peter, 2015. Financial literacy of men was additionally found to be increasingly faster than that of women (Atkinson and Messy, 2012).

In a contrast trend, Wagland and Taylor (2009) did a pilot study to explore the validity of the research outcomes of Chen and Volpe (2002) in an Australian context. They concluded that gender was not a significant factor among Australian students and females to be slightly more financially literate than males in their descriptive analysis. Ludlum *et al.* (2012, p. 29) also agreed that gender did not make a difference in financial literacy while marital status was a significant factor. Before that, Lusardi and Tufano (2009) found that lower financial literacy was more prevalent among divorced, widowed or separated individuals.

* + 1. *Personal factors*

Antonietti (2016) argued that being informed about financial topics does not to be the key to make sound efficient choices, but the way the human mind processes information is. Lusardi (2010) revealed that correct response rates increased substantially with the armed services vocational aptitude battery (ASVAB), commonly used as an indicator of cognitive ability. Muñoz-Murillo *et al.* (2020) found that individuals with higher cognitive abilities are more financially literate and this result holds even after controlling for some other factors.

There was considerable evidence that students who major in business or economics are more likely to financially literate than non-business or non-economics students (Volpe *et al.*, 1996; Chen & Volpe, 1998; Peng *et al.*, 2007; Lusardi and Mitchell, 2007; Mandell, 2008a; Alessie *et al.*, 2008; Robb & Sharpe, 2009; Atkinson and Messy (2012). Year of study was pointed out to have significant impacts in various studies (Jones, 2005, Menton *et al.*, 2005, 2006; Samy M. *et al.*, 2008; Noor Azizah Shaari *et al.*, 2013). Work-experience is also an important factor affecting financial literacy. Ansong and Gyensare (2012) revealed that work-experience positively affects financial literacy level when they conducted a survey among 250 university students of Cape Coast.

Young adults are assumed to be more financially literate if they interact well with other people. Hong, Kubik and Stein (2004) showed that churchgoers are more likely to invest in stocks and therefore, should prosses sufficient financial knowledge. Likewise, Lusardi *et al.* (2010) considered attending church regularly as a proxy for social interactions (in the case of nonfamily members).

Time preference is also an interesting factor that may affect financial literacy. Researchers have hypothesized that those who discount the future more heavily may be less willing to invest resources in acquiring financial knowledge because such an investment has a delayed payoff. For instance, a recent study found that there is a correlation between those who are patient and those who self-select into financial education programs (Meier and Sprenger, 2007). As a proxy for time preference in this study, the author used an indicator of whether a respondent had ever smoked. Prior research has reported that impatience is associated with higher rates of smoking (Fuchs, 1982), and current smokers discount the value of delayed hypothetical monetary outcomes more than a comparison group (Bickel, Odum and Madden, 1999). Benjamin, Brown, and Shapiro (2006) also used smoking as a proxy for time preferences in their examination of NLSY79 data.

Next, previous studies also suggest that there is a substantial difference between peoples’ self-assessed knowledge versus their actual knowledge. The self-reports method was used by Jappelli (2010) when comparing financial literacy levels in 55 countries around the world. OECD (2005) found that consumers often think that they know more than they actually do. In the 2009 U.S. Financial Capability Study, 70 percent of respondents gave themselves a score of 4 or higher (out of 7), but only 30 percent of the sample could answer the factual questions correctly (Lusardi, 2011). Similar findings were reported in other U.S. surveys and in Germany and the Netherlands (Bucher-Koenen *et al.* 2012). Likewise, Agnew and Szykman (2005) found correlations between actual and perceived financial knowledge that ranged from .10 to .78 across demographic groups (the median correlation was .49 across 20 categories).

Some studies have also attempted to discover the interrelationship between financial sophistication and financial literacy. Financial sophistication is the ability to use and manage financial tools and instruments (such as saving account, stocks, bonds, mutual funds, pension funds, etc.) to support one’s well-being. Peng, Bartholomae, Fox and Cravener (2007) discovered higher investment knowledge scores at respondents who had a bank account before they turned 18. Klapper *et al.* (2012)’s research with a dataset from Russia had reached the same conclusion. Van Rooij *et al.* (2009) identified a significant positive relationship between financial knowledge and retirement planning among households of the Netherland. Huang *et al.* (2013) reported that having a child development account positively affects respondent’s financial knowledge. Hilgert, Hogarth and Beverly (2003) stressed the two-way relationship between financial behaviors and financial knowledge, stating that personal financial experience is clearly the single most important source of knowledge.

Many previous studies concluded that personal income is an important factor in financial literacy (Clercq*et al.*, 2009; Merwe, 2011) and high income is suggested to associate with a high level of financial literacy (Hastings and Mitchell, 2011; Atkinson and Messy, 2012; Aand Sekar.M and Gowri. M, 2015). However, for young adults who are in the transition from financial dependence on their parents to financial self-sufficiency, the focus should not be on how much they make but whether they are able to make this change. Nguyen (2017) found the financial dependence rate of Vietnamese students on their families significantly affected their financial literacy at both basic and advance level. As university students, they are exposed to real-world financial issues (Lyons, 2004; Hayhoe *et al.*, 2005; Wang and Xiao, 2009; Brougham *et al.*, 2011; Xiao *et al.*, 2011b; Lachance, 2012), therefore should have high demand for financial knowledge. This study included financial dependency to explore how important demand is to young adults’ acquiring financial knowledge.

* + 1. *Social influences*

**Family influences** Gudmunson and Danes (2011) proposed family financial socialization theory. The theory’s main principle is that ‘what children learn (and do not learn) about money from their parents will be associated with children’s financial wellbeing both concurrently and throughout the life course’ (LeBaron and Kelley, 2020). Danes and Haberman (2007)’s research stated that children learn about the meaning of the adult financial world first through their family experiences, skills, and values. Shim *et al.* (2010) discovered that the role played by parents is significantly greater than the role played by working experience and high school financial education of young adults. Their research in 2013 once again confirmed this. A research by Edwards *et al.* (2007) inferred that parents’ influence can be the reason behind the difference in financial literacy levels among demographic groups, notably, gender. Because parents expect their sons to be financially independent while linked their daughters with regular financial supports, parents are more likely to have a financial conversation with sons rather than with daughters (Edwards *et al.*, 2007).

Specifically, research by Bowen (2002) and Lusardi, Mitchell and Curto (2010) provided evidence strongly linking young adults’ financial knowledge to parents’ financial sophistication. Li (2009) found that one’s likelihood of entering the stock market within five years was 30% higher if their parents or children had entered the market in the previous five years. Interestingly, the finding that children are more likely to invest in stocks if the family of origin invested in stocks holds true even among minorities (Chiteji and Stafford, 1999). Parents’ investing experience was associated with their children’s investing decisions (Gouskova *et al.,* 2010) and was also positively associated with emerging adults’ financial knowledge, especially for those who had less financial education in college (Tang and Peter, 2015). This research also looks at long-term financial plans, such as retirement plan or savings, to examine the financial sophistication of the respondent’s family.

There is more literature on how financial socialization differs by socioeconomic status, with children from high socioeconomic backgrounds experiencing better financial socialization (Shim *et al.,* 2010; Luhr, 2018; Friedline and Rauktis, 2014; Kim *et al.*, 2011). A family’s socioeconomic status is often evaluated based on the household income, earners' education, and occupation to see family's economic and social position in relation with others. In particular, Mandell (2008) reported that financially literate high school students were disproportionately related with those whose parents had college degrees. Lusardi, Mitchell, and Curto (2010) also concluded that maternal educational is highly correlated with financial literacy. Likewise, wealth is found to positively effect on financial knowledge level by Monticone (2010)’s research. This study will investigate parents’ education attainment, wealth, and social involvement to see how family socioeconomic characteristics influence on young adults’ financial literacy.

**Peers’ influences** While many studies focus on family relationship in financial socialization, there are other socialization agents beyond parents. Although parents have much influence on their children at the information-gathering stage, peers become more influential at the product evaluation stage (John, 1999). Harris (1995) explained that the increasing peers’ influence came as a natural result of young adults spending more time with their friends. Discussions about financial matters with family were found to decline when people get older but increase in the case with peers (Hee, Hyun & Grable, 2012).

According to research by Brown *et al.* (2008) and Hong, Kubik, and Stein (2004), peers play an important role in information and financial advice. Maurer *et al.* (2011) found that students learn from peer financial counselling as much as in the traditional classroom. In the United States, peers were one of the key contributors to retirement savings decisions of university employees and (Duflo and Saez, 2003 and 2004). Similar conclusions were made by Lusardi and Mitchell (2006) and van Rooij *et al.* (2007) as most of their respondents admitted consulting with friends and colleagues when it comes to making financial decisions.

Similarly, with family, this study will explore peers as a social influencing agent through their educational attainment, social involvement, and additionally, time preference. Time preference was added because a significant link was found between young adults’ smoking habit and their peers’, rather than their parents’ (Oygard *et al.,* 1995).

**Figure 1.** Theoretical framework

1. **Research methodology and data collection**
   1. ***Data collection***

This research is conducted with the survey-based method. Primary data was collected by distributing online survey questionnaires to the target group. The survey was distributed from 1st to 30th, December 2020. There are total of 401 respondents satisfied the requirements of the subject group. This research focused on young adults aged from 18 to 25 and currently studying or graduated less than 3 years from universities.

The survey comprised of two sections: Factors questions and financial literacy questions. Financial literacy questions are based on studies by Lusardi, Mitchell (2004) and Van Rooij, Lusardi, Alessie (2011). Particularly, they measure the ability to perform simple calculations (Q1), the understanding of how compound interest works (Q2), and the effect of inflation (Q3), assess the knowledge of time discounting (Q4), whether respondents suffer from money illusion (Q5), managing risks (Q6) and knowledge of key financial assets (Q7 and Q8). These concepts lie at the basis of basic financial transactions, financial planning, and day-to-day financial decision-making.

* 1. ***Research method***
     1. *Measuring financial literacy*

Financial literacy level is computed based on the number of correct answers. For each question answered correctly, the respondent is given one mark (no negative marking is done for any incorrect answer). The Sum of correct answers is named *Score*.

Huston (2010) summarized various financial literate grading systems. According to Volpe, Chen, and Pavlicko (1996), a respondent with an investment IQ score of 70 or better was investment literate (i.e., mastered the investment basics). Another study used an A to F grading system but did not indicate which grade level represented financial literacy (Bankrate, 2003). In the Jump$tart survey, a student fails with a score below 60% (Mandell, 1997). Also, according to Mandell (2009), students are financially literate if they score 75% or more.

Based on these studies, the author set a grading system that follows Mandell (2009). In other words, in this study, a respondent who has at least 6 correct answers out of 8 questions is considered to be financial literate.

* + 1. *Regression model*

The author uses logistic regression with a binary dependent variable. For this study, logistic regression has more advantages than linear regression model. Firstly, this model considers the benchmark score that identifies whether a person is financial literate. The benchmark is set at 6 correct answers out of 8 questions. Because target respondents are generally literate (respondents are university students or higher), they are expected to have acquired some knowledge on finance. However, this amount of knowledge may not be sufficient to help them score up to 6/8. Therefore, it is more meaningful to discover which factors that directly attribute to the respondents’ passing the benchmark score. Secondly, logistic model is a better fit for this set of data because most of the items are collected in binary value (yes/no questions). Hence, a dependent variable also estimated in binary value, which is generated by logistic model, is a desirable outcome. Considering the two reasons above, the author decides to do regression analysis with logistic model.

The logistic model is as follows

|  |  |
| --- | --- |
| *y*∗=**x***β* + *ε*, y= { | 1 if *y*∗> 0 |
| 0 if else |

where *y*∗ is an unobservable characteristic: a respondent’s propensity to answer a financial literacy question correctly, and *y* is a binary outcome variable indicating that a respondent gave the correct response if his propensity to respond correctly was above zero. The vector **x** contained respondent characteristics that depend on the specification, *β* is a vector of parameters to be estimated, *ε* is a continuously distributed variable independent of **x**, and the distribution of *ε* is symmetric about zero.

1. **Results and Discussion**
   1. ***Analysis on financial literacy level***

On average, respondents scored 5.27 out of 8 questions. This result is below the benchmark proposed by Mandell (2009) where at least 75% (score 6 out of 8) should be acquired to pass the test. Among 401 respondents, 228 scored above 6/8 while 173 is below that benchmark.

The author then used T-test to further examine this result. T-test shows that Pr(|T| > |t|) = 0.0000 < 0.05 (5%). Hence the test rejects null hypothesis against the alternatives that the mean is less than 6 (left test) and greater than 6 (right test). Moreover, Pr(T < t) = 0.0000, which represents hypothesis Ha: mean < 6, is also < 0.05 (5%). Therefore, the hypothesis Ha: mean < 6 is accepted (the mean is smaller than 6).

**Table 1.** One-sample t test for Score

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Obs** | **Mean** | **Min** | **Max** | **St. Err.** | **t-value** | **p-value** |
| **Score** | 401 | 5.272 | 0 | 8 | .099 | -7.381 | 0 |
| Ha: mean < 6 Ha: mean = 6 Ha: mean > 6  Pr(T < t) = 0.0000 Pr(|T| > |t|) = 0.0000 Pr(T > t) = 1.0000 | | | | | | | |

**Source**: The calculation results from software

This finding indicates that young Vietnamese adults have **low financial literacy**. In other words, they are found to lack of necessary financial knowledge for daily and future financial needs.

This result is in line with various previous studies around the world. OECD (2005), Lusardi *et al.* (2009, 2010, 2011), Van Rooij *et al.* (2009), Allgood and Walstad (2013), Jariwala (2013) all reported that young adults displayed a low financial literacy level. Similarly, a vast majority of U.S. high school students (Mandell, 2008; National Council on Economic Education, 2005) and college students (Chen and Volpe, 1998; and Shim *et al.*, 2010) receive a failing financial literacy grade. In Viet Nam, Nguyen (2017) also recorded such low financial literacy rate among Vietnamese students. By examining 435 students from various majors in the college and universities within Vietnam, she concluded that Vietnamese students do not financially literate at both basic and advanced level.

**Table 2**.Financial literacy level by questions

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Code | Question | Correct | Incorrect | DK | Refuse | Total |
| Q1 | Numeracy | 346 | 24 | 13 | 18 | 401 |
| Q2 | Interest Compounding | 296 | 67 | 24 | 14 | 401 |
| Q3 | Inflation | 275 | 66 | 37 | 23 | 401 |
| Q4 | Time value of money | 284 | 56 | 41 | 20 | 401 |
| Q5 | Money illusion | 271 | 87 | 21 | 22 | 401 |
| Q6 | Risk diversification | 341 | 35 | 11 | 14 | 401 |
| Q7 | Stock return | 128 | 206 | 49 | 18 | 401 |
| Q8 | Bond price | 173 | 142 | 70 | 16 | 401 |
|  | **Total** | **2114** | **683** | **266** | **145** | **3208** |
|  | **Total in percentage** | **65.90%** | **21.29%** | **8.29%** | **4.52%** | **100.00%** |

**Source**: The calculation results from software

Table 2 summarized the answers received on each question in more details. Among eight questions, numeracy (Q1) and risk diversification (Q6) have the highest number of respondents answering right. In contrast, respondents seem to struggle with the last two questions. In Question 7, only 31.9% respondents (128 respondents) were correct in identifying the most profitable financial asset, while about 51% (206 respondents) picked out the wrong answer. This may suggest that respondents are familiar with the general concept of different financial assets but lack or uncertain of necessary knowledge to use them. Interestingly, for the last question (Question 8), the number of ‘don’t know’ is significantly higher than all other questions. The author suspected that for bond price questions, more respondents lack of basic ground to make a choice (even randomly) among given answers.

* 1. ***Analysis on determinants of financial literacy*** 
     1. *Descriptive analysis*

Based on the Number of correct answers (Score), a binary dependent variable is generated for regression model (Financial literacy level). Mandell (2009)’s benchmark is applied to divided respondents into financially Non-literates and Literates.

Descriptive statistics showed that married respondents scored the highest in all sub-groups (6.08 on an average). Visible difference was also found among fields of study and year of study. Non-economics (Linguistics, Journalism, Medicine, and Tourism/Airlines) are among the lowest scores. First-year students are also recorded as low as 3.29 while graduated students scored much higher (5.68). These findings are as anticipated and expected to be proven significant by the regression model.

**Table 3**.Descriptive statistics

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  | | --- | --- | --- | --- | | **Financial literacy level** | **Count** | **%** | **Score** | | Non-literate | 173 | 43.14 |  | | Literate | 228 | 56.86 |  | | Total | 401 | 100% | 5.27 | | **Demographic characteristics** | **Count** | **%** | **Score** | | Gender |  |  |  | | Female | 315 | 78.55% | 5.2 | | Male | 86 | 21.45% | 5.55 | | Married |  |  |  | | No | 389 | 97.01% | 5.25 | | Yes | 12 | 2.99% | 6.08 | | **Personal factors** | **Count** | **%** | **Score** | | Field of Study |  |  |  | | Arts | 2 | 0.50% | 5.50 | | Economics/Business | 230 | 57.36% | 5.34 | | Education | 3 | 0.75% | 4.33 | | Engineering/Technology | 19 | 4.74% | 4.74 | | Finance/Banking/Accounting/Auditing | 115 | 28.68% | 5.68 | | Law | 11 | 2.74% | 5.09 | | Linguistics/Journalism/Media studies | 16 | 3.99% | 3.06 | | Medicine | 2 | 0.50% | 2.50 | | Tourism/Airlines | 3 | 0.75% | 3.00 | | Year of Study |  |  |  | | First | 14 | 3.49% | 3.29 | | Second | 78 | 19.45% | 5.21 | | Third | 106 | 26.43% | 5.08 | | Final | 89 | 22.19% | 5.27 | | Graduated | 114 | 28.43% | 5.75 | | Working Experience |  |  |  | | No | 315 | 78.55% | 5.14 | | Yes | 86 | 21.45% | 5.76 | | Social involvement |  |  |  | | Often | 245 | 61.10% | 5.33 | | Rarely | 156 | 38.90% | 5.18 | | Time preferences |  |  |  | | Non-smoker | 370 | 92.27% | 5.24 | | Smoker | 31 | 7.73% | 5.61 | | | | |
| Financial Independence |  |  |  |
| No | 232 | 57.86% | 5.20 |
| Yes | 169 | 42.14% | 5.37 |
| Personal Saving/Investment |  |  |  |
| No | 210 | 52.37% | 4.94 |
| Yes | 191 | 47.63% | 5.63 |
| Financial confidence |  |  |  |
| Little | 243 | 60.60% | 5.39 |
| No | 115 | 28.68% | 4.91 |
| Yes | 43 | 10.72% | 5.56 |
| **Social influences** | **Count** | **%** | **Score** |
| Family educational attainment |  |  |  |
| High school/College | 202 | 50.37% | 5.00 |
| University | 199 | 49.63% | 5.54 |
| Family wealth |  |  |  |
| Do not | 11 | 2.74% | 5.36 |
| Own a house | 390 | 97.26% | 5.27 |
| Family financial sophistication |  |  |  |
| Do not | 263 | 65.59% | 5.17 |
| Own stocks, etc. | 138 | 34.41% | 5.46 |
| Family retirement plan |  |  |  |
| Do not | 215 | 53.62% | 5.10 |
| Have retirement plan | 186 | 46.38% | 5.47 |
| Family social interactions level |  |  |  |
| Often | 145 | 36.16% | 5.31 |
| Rarely | 256 | 63.84% | 5.25 |
| Peer educational attainment |  |  |  |
| High school/College | 23 | 5.74% | 4.96 |
| University | 378 | 94.26% | 5.29 |
| Peer social involvement |  |  |  |
| Often | 336 | 83.79% | 5.34 |
| Rarely | 65 | 16.21% | 4.92 |
| Peer time preferences |  |  |  |
| Non-smoker | 327 | 81.55% | 5.43 |
| Smoker | 74 | 18.45% | 4.58 |
| **Grand Total** | **401** | **100%** | **5.27** |

**Source**: The calculation results from software

* + 1. *Regression Analysis*

Logistic regression is employed with a binary dependent variable (Financial literacy level) and many independent variables. The result is in the table below.

**Table 4**.Logistic regression result

|  | **Coef.** | **St.Err.** | **t-value** | **p-value** | **[95% Conf** | **Interval]** | **Sig** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Gender | 1.335 | .447 | 0.86 | .388 | .692 | 2.573 |  |
| Marital status | 1.669 | 1.275 | 0.67 | .503 | .373 | 7.459 |  |
| Cognitive ability | 1.255 | .079 | 3.60 | 0 | 1.109 | 1.419 | \*\*\* |
| Field of study |  |  |  |  |  |  |  |
| Base vs. Maths-related | .735 | .472 | -0.48 | .632 | .209 | 2.584 |  |
| Base vs. Law | .417 | .258 | -1.41 | .158 | .124 | 1.404 |  |
| Base vs. Economics | .09 | .075 | -2.90 | .004 | .018 | .458 | \*\*\* |
| Year of study | 1.488 | .174 | 3.39 | .001 | 1.182 | 1.872 | \*\*\* |
| Work experience | .788 | .264 | -0.71 | .477 | .409 | 1.519 |  |
| Social involvement | .71 | .184 | -1.32 | .187 | .428 | 1.18 |  |
| Time preference | 1.413 | .744 | 0.66 | .511 | .504 | 3.965 |  |
| Financial independence | .539 | .146 | -2.29 | .022 | .318 | .916 | \*\* |
| Financial sophistication | 1.021 | .261 | 0.08 | .935 | .618 | 1.686 |  |
| Financial confidence | 1.693 | .364 | 2.45 | .014 | 1.111 | 2.581 | \*\* |
| Family educational attainment | 1.186 | .298 | 0.68 | .497 | .725 | 1.942 |  |
| Family wealth | 1.349 | .89 | 0.45 | .65 | .37 | 4.917 |  |
| Family sophistication | 1.199 | .313 | 0.70 | .486 | .719 | 2 |  |
| Family retirement plan | 1.8 | .46 | 2.30 | .022 | 1.09 | 2.971 | \*\* |
| Family social involvement | 1.599 | .407 | 1.84 | .065 | .971 | 2.633 | \* |
| Peer educational attainment | 1.19 | .597 | 0.35 | .729 | .445 | 3.18 |  |
| Peer social involvement | 1.546 | .507 | 1.33 | .184 | .813 | 2.941 |  |
| Peer time preferences | .452 | .156 | -2.30 | .022 | .23 | .89 | \*\* |
| Constant | 0 | 0 | -3.77 | 0 | 0 | .008 | \*\*\* |
| |  |  |  |  | | --- | --- | --- | --- | | **Mean dependent var** | 0.563 | **SD dependent var** | 0.497 | | **Pseudo r-squared** | 0.143 | **Number of obs** | 394.000 | | **Chi-square** | 77.134 | **Prob > chi2** | 0.000 | | **Akaike crit. (AIC)** | 506.704 | **Bayesian crit. (BIC)** | 594.184 | | | | | | | | |
| **Note**: \*\*\* p<.01, \*\* p<.05, \* p<.1 | | | | | | | |

**Source**: The calculation results from software

**Demo characteristics** such as gender and marital status are shown insignificant variables in explaining financial literacy level of young adults. Filipiak and Walle (2015) argued that the root cause behind lower level of financial knowledge among women relative to men was mainly nurture and not nature. That is why in matrilineal (female dominated) states of India – Mizoram, Nagaland and Meghalaya, there was no gender gap in financial knowledge (as women often make financial decisions for the family).

**Personal factors** are shown to have the most effect on financial literacy. Cognitive ability, field of study, year of study, financial independence and financial confidence evidently have a positive relationship with financial literacy level.

As for cognitive ability, regression model proved that financial literacy has a strong association with this factor. Lusardi, Mitchell, and Curto (2010) also had the same discovering among young NLSY respondents and Cole *et al.* (2009)’s in both India and Indonesia.

Field of study and year of study are also evidently associated with financial literacy level. This finding is in line with Lusardi and Mitchell (2011) who concluded that less educated people are more likely to lack of necessary financial knowledge. As for field of study, economic students are shown to perform better in this test. Even within economics group, respondents who major in finance-related sectors also scored higher than the rest. As for year of study, financial literacy is founded to increase significantly by the year of study, regardless of the respondents’ field of study. Nguyen (2017) also agreed that their level of financial knowledge will increase year by year along with the learning program and even for non-economic students, their financial knowledge may also improve during the study process. A rational explanation is an increasing demand on learning about finance by students themselves when they encounter more realistic financial issues.

As for financial independence, the regression results indicate that the more financially independent young adults are, the higher chance they are financially literate. However, this result contrasts with findings reported by Nguyen (2017).

The regression shows that there is a positive relationship between what people actually know and their self-assessed financial literacy. Across many countries, Lusardi and Mitchell (2014) tend to see that younger people know little on finance and acknowledge that. In this study, young adults are also very aware of their financial literacy status. Particularly, respondents who report that they have no confidence in financial matters actually scored much lower (average of 4.91/8) than people express little to strong confidence (average of 5.39/8 and 5.56/8, respectively).

**Social influences** are found to have a modest impact on the financial literacy of young adults. According to the regression result, respondents whose parents participated in pension funds are more likely to be financially literate. An appropriate explanation is that children learn by observing their parents’ saving and investing habits, or more directly receiving financial education from their parents (Chiteji and Stafford 1999; Li 2009; Shim *et al.* 2009). However, a confirmed inverse link between respondents’ financial literacy and their family social interaction is an unusual discovery.

As for peers’ effect, only one among three peer characteristics is proved to have an association with financial literacy. Surprisingly, having friends who smoke is shown to have a weighty negative impact on respondents’ literacy, despite that being a smoker themselves does not have much meaning. Apart from that, having friends who often join in social activities has a positive impact on the respondents, even though this connection is not proved by the regression model.

**5. Conclusion and Implications**

Several important findings emerged from this study. First, financial literacy is low among Vietnamese young adults. On average, they score 5.2/8 on financial literacy test, which is below the benchmark. Secondly, some significant determinants were discovered by logistic regression model. Financial literacy is linked with the following personal factors: cognitive ability, field of study, year of study, financial independence, and financial confidence. As for social influences, whether the family has retirement plan is positively correlated with financial literacy of young adults, but having a family highly involves in social activities and many peers who smoke is proved to have an inverse effect. Most of these findings are in line with previous research around the world. An implication for this research result is the demand to develop financial education in Viet Nam targeting young adults.

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