

# FINANCIAL LITERACY AND DEMOGRAPHY CHARACTERISTICS AMONG INDONESIAN MILLENNIALS

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***Abstract—Millennials whom we define as aged 22 to 38 in 2018 are expected to be the largest labour force in Indonesia. Despite the fact that the country will reach its productive peak by 2020, the result of national financial literacy survey conducted by OJK show that around 75.69% percent of the population do not have a complete grasp on financial products and services. Ample of research show that a financially illiterate society can create problems to the countries' economy since it may lead to poverty and greater income inequality. This study is conducted to investigate the level of financial literacy, as well as to examine the relationship between financial literacy and demographic factors among Indonesian millennials. We distributed questionnaires to 446 millennials and found that on average the level of financial literacy of Indonesian millennials fell in the fair category. Our result also indicates that millennials who possess Bachelor's Degree or higher, are enrolled in Economics or Business major, and have longer working experiences and receive financial education (formal/informal), appear to have significantly higher level of financial literacy compared to the students with lower level of education, enrolled in courses other than Economics or Business, having no working experience and any exposure to financial education.***

***Keywords—financial literacy, demographic characteristics, millennials***

## I. INTRODUCTION

It is projected that millennials as a generation will account for 75 percent of the world work force (Ciccotello, 2016). In Indonesia alone, data from Indonesian Ministry of National Development Planning in 2016 showed that more than 30% of Indonesia population was young population aged 15–34 years old, and by 2020 this group is predicted to be the biggest proportion compared to other any birth cohort. This fact makes the financial decisions made by millennials will have a significant impact for themselves as well as to the country's economy.

Born in the internet era, millennials are the first to grow up surrounded by digital technology. As digital natives, there are many characteristics that differentiate millennials from the previous generation. On the positive sides, millennials are generally regarded as more open-minded, confident and self-expressive. Technological advances and the growth of fin-tech industries have given them access to countless tools and information in order to seek solutions from their own problem.

On the other side, millennials are also well known as the consumerist generation. Although consumerism is a big part of life through every generation, due to the large tech boom, millennials spend a lot of their income on active online consumer spending. This could lead to heavy spending since young people are very susceptible to the lifestyle aspirations of advertising media.

Due to the increasingly complex marketplace and wider array of financial instruments and investment opportunities, it is important to equip consumers with adequate level of financial literacy, since the consequences of not knowing the basic knowledge of financial matters is proven to be costly. Research conducted by Mavrinac and Chin (2004) suggests that for the majority, a lack of knowledge is the source of excessive debt and bankruptcy, instead of lack of income.

Financial literacy is defined as the competence to comprehend knowledge of the aspects of finance, including financial products offered by a financial institution. Financial literacy is vital to enable individuals making the most optimum financial decisions. There are of empirical evidences that demonstrate the lack of financial literacy may cause incompetence on utilizing financial products and lack of planning for retirement, and higher score in financial literacy will increase the chances for individuals for saving and investing, getting out of debt, spending less than they earn, and living in a budget.

The 2016's national literacy and financial inclusion poll conducted by Financial Services Authority (OJK)

showed that the majority of Indonesians did not have a complete grasp on financial services and products. This study provides an overview on the level of financial literacy among Indonesian millennials as well as the relationship with the demographic factors. Analyzing the level of financial literacy according to the demographic characteristics will provide the opportunity in finding ways to improve the financial literacy of the millennials. This study also contributes to the literatures relating to financial literacy in the emerging market.

## II. LITERATURE REVIEW

The terms financial literacy, financial education, and financial knowledge have been used interchangeably in academic literature as well as in the media. At its core, financial literacy is understanding how to use money responsibly. Lusardi and Mitchell (2014) describe financial literacy as “people’s ability to process economic information and make informed decisions about financial planning, wealth accumulation, debt and pensions”. In accordance with that, Remund (2010) defines the basic definition of financial literacy as competency that a person has in managing money, and classifies four most common operational definitions of financial literacy being budgeting, saving, borrowing, and investing.

Learning is an internal process of empowerment and a key to personal and social improvement. As financial markets become increasingly complex in both developed and developing countries, financial literacy and basic education should be made relevant to people’s daily activity. The coincidence of literacy with poverty is a phenomenon long realized by experts (Demirgüç-Kunt & Klapper, 2013; Roy-Singh, 1990), and the concerns about the degree of financial literacy are confirmed by different studies. Lusardi and Mitchell (2007) show that many households are unfamiliar with even most basic economic concepts needed to make savings and investment decisions. Later on, study by Lusardi, Mitchell, and Curto (2010) shows that the capacity to do a simple interest rate calculation and the knowledge of inflation and risk diversification are strikingly low among the young.

Ample of research find that financial wellbeing and financial literacy are tightly intertwined. Many studies have emphasized the importance of financial literacy for individuals and household. Mavrincac and Chin (2004) suggest that for the majority, a lack of knowledge is the source of excessive debt and bankruptcy, instead of lack of income. Low level of financial literacy results into inability to understand basic financial concepts and poor judgement in financial decisions, such as borrowing decisions and retirement planning, and higher score in financial literacy will increase the chances for individuals for saving and investing, getting out of debt, spending less than they earn, and living in a budget. Low levels of

financial literacy have been linked to high levels of personal and household debt (Lusardi & Tufano, 2009), poor health and productivity (Garman, Kim, Kratzer, Brunson, & Joo, 1999), and inadequate retirement planning (Lusardi & Mitchell, 2007).

The research of Chen and Volpe (1998) finds that students that low level of financial knowledge have limited ability to make informed decision; hence, have a higher probability in making incorrect financial choice. The study conducted by S. A. Cole, Sampson, and Zia (2009) on financial literacy in the developing world finds that financial literacy is a powerful predictor of demand for savings, loans, and insurance services. Hence, having a good financial literacy will enable individual to process economic information and make an informed short-term or long-term financial decision about wealth accumulation, debt and financial; thus, decrease chance of bankruptcy and receive government assistance (Lusardi & Mitchell, 2014).

## III. RESEARCH FRAMEWORK

Every person is required to have good financial literacy in order to manage their finances. With a good level of financial knowledge, each individual will be able to make the right decisions in allocating funds to improve their welfare. Financial literacy is a person’s ability to understand knowledge in various aspects regarding finance, which includes savings, loans, investment, financial planning, and has expertise in managing the financial resources it has to make effective financial decisions. Financial literacy is thought to be influenced by many factors, one of which is demographic related factors, such as age, education level, marital status and income level.

The level of financial literacy tends to vary according to education and income levels, but it has since emerged that regardless of one’s social standing, everyone needs basic knowledge and appreciation of financial planning. Studies of financial literacy confirm the correlation between financial literacy and socio demographic factors. Chen and Volpe (1998) find that women generally have less enthusiasm for, lower confidence in, and less willingness to learn about personal finance topics compared to men. Lusardi and Mitchell (2014) find that financial literacy increases with age, but declines at old age, with females at all age recorded have lower financial literacy than male. Similar findings also found by Oseifuah and Gyekye (2014) who show that students in South African being male, financing college using debt, and exposed to money management course and decision significantly have better financial literacy. However, in their study among Indians, Agarwalla, Barua, Jacob, and Varma (2015) find that financial knowledge among the women are marginally higher than men, and greater access to consumption credits has influenced the financial behaviour of young employees. Bhushan and

Medury (2014) suggest that several factors that influence financial literacy level are gender, education, income, nature of employment and place of work whereas age and geographic region do not affect the level of financial literacy. Ansong and Gyensare (2012) also find that mother’s education is also positively correlated with respondents’ financial literacy, but not the fathers.

Hypothesis: There is a significant association between demography factors and the financial literacy level possessed by the millennials.

**IV. METHODS**

To achieve the research objectives, we conducted a survey using our own developed instruments that consists of 30 questions with 15 questions regarding financial literacy. Since the study mainly focused on millennials, respondents between age of 23–35 had been targeted. The questionnaire was run from September 3<sup>rd</sup> until October 5<sup>th</sup> 2018, and we collected 500 responses out of which 446 qualified as fully completed. The sampling technique used simple random sampling. Questions related with financial literacy were in multiple choices with only one right answer. Each question was coded as a dummy variable, with correct answer was given 1 point. If the respondent gave an incorrect response or did not know the answer, the variable was coded as zero, since it was assumed that they could not answer the question correctly. A person would get maximum 15 points for question related to financial literacy. Only fully completed questionnaires were accepted for evaluation. The questionnaires were distributed online, and the questions were clearly described, and respondents were not allowed to choose more than one answer. After collected, the questionnaires were then tabulated and the results were summarized for the purpose of analysis.

Financial literacy score for the millennials is divided into:

Financial Literacy	Score
Very Low	0,00 – 3,00
Low	3,01 – 6,00
Fair	6,01 – 9,00
Good	9,01 – 12,00
Excellent	12,01 – 15,00

The operational variables on this research are as follows on Table 1:

**TABLE 1. OPERATIONAL VARIABLES**

Variable	Concept	Indicator	Scale
Financial Literacy (X)	The competence in understanding financial knowledge which includes basic concepts of finance, savings, borrowing, investment and insurance along with basic knowledge on financial institutions, bank or non-bank	The basic knowledge of: <ul style="list-style-type: none"> <li>• Time Value of Money</li> <li>• Financial Products</li> <li>• Risk and Return</li> </ul>	Ratio

The research instrument requires each respondent to provide his/her demographic and socioeconomic data that include gender, age, level of education, field of work, years of work experience, marital status, living arrangement, and parents’ education which later on coded as dummy variables. Since each question and the questionnaire as a whole had to be evaluated before final administration, we also conducted reliability and validity tests during pre-testing stage. The responses of the questionnaires were then analysed by means of an item analysis and reliability testing. We made some minor adjustments to improve the questionnaires that did not meet sufficient requirements on validity and reliability test.

Ghozali (2009) states that validity test is used to measure the validity of a set of questionnaires. A questionnaire is considered valid if the inquiries are able to reveal certain objectives that will be measured by the questionnaire itself.

$$r_i = \frac{\sum xy}{\sqrt{(\sum x^2)(\sum y^2)}} \tag{1}$$

The inquiries of the questionnaire is valid if *r calculated* > *r designated* or sig < 0.05, and if *r calculated* < *r designated* or sig > 0.05, then the questionnaire is invalid.

Berg, Bergeron, Seitz, Monroe, and McConnell (2007) define reliability as a measure of the consistency of a test that provides an indication of a random error that may influence the test scores. Random error can be caused by differences in time, content, scores, memory and guessing. The reliability score is shown by a certain set of numbers called reliability coefficient (*alpha Cronbach*). If the value of alpha is > 0.7, reliability has been sufficed. Furthermore, if the value of alpha is > 0.8, it suggests that all of the inquiries and the overall test are constantly reliable and have a strong reliability coefficient. Alternatively, there is a different interpretation towards the test:

If the value of alpha > 0.9, it has an absolute reliability. If the value of alpha is 0.7 – 0.9, it has a

high rate of reliability. If the value of alpha 0.5 – 0.7, it has a fair rate of reliability. If the value of alpha is < 0.5, it has a low rate of reliability. If the value of alpha is low, possibly one or several inquiries are unreliable.

**V. RESULTS AND DISCUSSION**

**TABLE 2. DEMOGRAPHIC PROFILES OF THE RESPONDENTS**

Demographic Variables		N	%
Gender	Female	234	52%
	Male	212	48%
Age	19-23	104	23%
	24-28	176	39%
	29-33	96	22%
	34-38	70	16%
Marital Status	Married	191	43%
	Not Married	255	57%
Level of Education	High School	19	4%
	Diploma Certified	22	5%
	Bachelor Degree	304	68%
	Post Graduate Degree	101	23%
Education Background	Economy/ Business	235	53%
	Others	211	47%
Received Financial Education	Yes	390	87%
	No	56	13%
Length of Working Experience	Never	40	9%
	Less than 1 year	71	16%
	1-2 years	92	21%
	3-5 years	100	22%
	More than 5 years	143	32%
Monthly Income	≤ Rp 4.000.000	157	35%
	Rp 4.000.001 - Rp 7.000.000	145	33%
	Rp 7.000.001 - Rp 11.000.000	64	14%
	Rp 11.000.001 - Rp 14.000.000	33	7%
	≥ Rp 14.000.001	47	11%
# Credit Card	0	280	63%
	1	87	20%
	2	57	13%
	≥ 2	22	5%
Living Arrangement	Boardinghouse atau apartement	148	33%
	Have their own house	110	25%
	Living with parents	188	42%
Level of Education (Mother)	High School (≤ SMA )	227	51%
	Diploma Certified (D3)	52	12%
	Bachelor (D4/S1)	118	26%
Level of Education (Father)	Postgrade (S2 & S 3)	49	11%
	High School (≤ SMA )	159	36%
	Diploma Certified (D3)	48	11%
	Bachelor (D4/S1)	153	34%
Supporting Family (Parents/ Siblings)	Postgrade (S2 & S 3)	64	14%
	Yes	105	24%
	No	341	76%

From Table 2, it can be seen that the sample has gender distribution of approximately 52% female (n = 234) and 48% (n=212) male, with the age distribution

of sample respondents is dominated by age group 24 – 28 years old (39% of the total respondents), in comparison with other age groups (from 19 - 23 to 34 – 38). In terms of education, more than half of the respondents (58%) study economics and business with the majority of the respondent (68%) possess a Bachelor’s Degree, 23% and 5% respondents have completed postgraduate and diploma degree respectively, and high school graduates compose the smallest proportion of the sample (4%). In terms of the familiarity with financial products, 87% of the respondent have received the (formal or non formal) financial education; however, the majority of the sample (63%) do not own credit card.

With respect to monthly income of the respondents, the highest proportion of respondents (35%) is less than Rp.4.000.000 per month, and 11% earn more than Rp.14.000.000 per month. Sample distribution with regard to years of work experience, 16% respondents possess working experience of less than 1 year, 32% of the total working experience of more than 5 years, and 21% and 22% of respondents have 1 – 2 years and 3 – 5 working experience respectively.

Demographic data also show that the respondents are divided in the various stages of family life cycle, with 57% of the sample are married and 43% are not married. Majority of respondents (42%) live with their parents, 33% live in boarding house or apartment, and 25% own a house. This living arrangement may indicate respondent’s financial obligation, with those who stay with their parents have smallest percentage of their income allocated to pay for housing rent or mortgage.

We also include family demographic such as parents’ level and education as well as whether the respondents support parents or siblings to capture whether social impact through peers and experience can help to determine the financial knowledge and decision making. The demographic profiles of the respondents show that around 50% of respondents’ mother education are high school graduates, while almost 50% of respondents’ father possess Bachelor’s Degree or higher. Majority of the respondents (76%) do not support their parents and siblings.

**TABLE 3. DESCRIPTIVE STATISTICS OF FINANCIAL LITERACY SCORE**

Category	Financial Literacy
Very Low	54
Low	94
Fair	134
Good	134
Very Good	30
Mean	7
Median	3
Standard Deviation	15
Min	0
Max	15

Source: data processed, 2018



A person's financial literacy score is the sum of the number of correct responses to the fifteen financial literacy questions. Table 3 shows the number of respondents within each category of Financial Literacy and Financial Behaviour based on their score. In terms of Financial Literacy, the average score of the respondents is 7 which is considered as fair, with the percentage of respondents that are categorized as having a fair and good financial literacy, are each composing 30% of the sample. The average numbers of 12.11% and 21.08% are considered as having very low and low financial literacy respectively, while 6.73% is considered as having very good financial literacy.

**TABLE 4. STRONGEST AND WEAKEST AREAS OF FINANCIAL LITERACY**

Topics	True	False	Do Not Know
Saving	49.55%	48.65%	1.79%
Credit Management	43.72%	28.92%	27.35%
Inflation	58.74%	16.82%	24.44%
Time Value of Money	33.41%	53.36%	13.23%
Financial Market	58.52%	21.08%	20.40%
Investment Risk	56.84%	20.96%	22.20%
Rate of Return	54.93%	21.41%	23.65%
Stock	51.79%	32.17%	16.03%
Bond	15.92%	56.50%	27.58%
Insurance	21.75%	70.18%	8.07%

Source: data processed, 2018

Table 4 shows the group of questions correspond to each financial knowledge, as well as the percentage of correct, incorrect, and not knowing the answer for each category. The question with the worst results is in the area of bond with 16% of the total respondents answer correctly, followed by knowledge on insurance and time value of money with the percentage of sample answered correctly are 22% and 33% correspondently. The question with the best result is in the area of financial market with 59% correct answers, followed by question on inflation and investment risk. Low score in answering questions on bond could be interpreted that the respondents are less financially knowledgeable on the investment alternatives, whereas low score on insurance and time value of money should be brought to attention since the increase in the life expectancy for Indonesian population means the possibility of more time spent in retirement. Furthermore, compared to previous generation, millennials have variety of ways to generate and disperse their income. These changes also mean that the income stream of individuals has become more inconsistent over a long period. There are periods of high income followed by low level of income or no income at all. Thus, a greater need of financial planning as well as expanded insurance expenses to cover unpredictable eventualities.

**Table 5. Financial Literacy Score Based on Demographic Characteristics**

Demographic Variables		Very Low	Low	Fair	Good	Very Good
Gender	Female	28	54	80	61	11
	Male	26	40	54	73	19
Age	19-23	18	26	29	29	2
	24-28	20	34	58	57	7
	29-33	8	19	24	31	14
	34-38	8	15	23	17	7
Marital Status	Married	22	44	57	48	20
	Not Married	32	50	77	86	10
Level of Education	High School	5	6	4	4	0
	Diploma Certified	2	7	10	3	0
	Bachelor Degree	36	61	93	97	17
	Post Graduate Degree	11	20	27	30	13
Education Background	Economy/ Business	7	33	75	97	23
	Others	47	61	59	37	7
	Received Financial Education	Yes	34	71	125	131
	No	20	23	9	3	1
Length of Working Experience	Never	9	13	13	5	0
	Less than 1 year	7	14	21	25	4
	1-2 years	15	15	33	26	3
	3-5 years	5	26	31	33	5
	More than 5 years	18	26	36	45	18
Monthly Income	≤ Rp 4.000.000	31	47	48	30	1
	Rp 4.000.001 - Rp 7.000.000	14	31	46	47	7
	Rp 7.000.001 - Rp 11.000.000	4	10	18	24	8
	Rp 11.000.001 - Rp 14.000.000	1	3	11	12	6
	≥ Rp 14.000.001	4	3	11	21	8
# Credit Card	0	44	68	89	69	10
	1	4	18	24	33	8
	2	6	7	14	21	9
	≥ 2	0	1	7	11	3
Living Arrangement	Boardinghouse atau apartement	19	24	42	52	11
	Have their own house	17	28	30	24	11
	Living with parents	18	42	62	58	8
Level of Education (Mother)	High School	33	56	67	58	13
	Diploma Certified	4	7	17	17	7
	Bachelor (D4/S1)	11	25	39	37	6

Demographic Variables		Very Low	Low	Fair	Good	Very Good
	Postgrade (S2 & S3)	8	4	12	21	4
Level of Education (Father)	High School	22	42	45	40	10
	Diploma Certified	3	10	11	19	5
	Bachelor (D4/S1)	21	28	53	39	12
	Postgrade (S2 & S3)	8	14	25	36	3
Supporting Family (Parents/ Siblings)	Yes	10	17	43	29	6
	No	44	77	91	105	24

Source: data processed, 2018

The same association also can be seen in financial literacy. Higher score of financial literacy is associated with gender, education background, working experience, monthly income, number of credit cards, and mother's education. The present study can also be verified with Chen and Volpe (1998) and Shaari, Hasan, Mohamed, and Sabri (2013) that concludes that non-accounting majors are more likely to be less knowledgeable about personal financial than business majors particularly in finance and accounting.

Various stage of individuals also impacts their financial literacy, as a young adult one is also likely to have comparatively small income needs, especially if one is providing only for themselves. Marital status and dependents, such as children, parents, or siblings, determine whether one is planning only for themselves or for others as well. If they have a spouse or other dependents, they have a financial responsibility to someone else, which demand a responsibility to include them in the financial thinking. Having to be responsible for other family member requires an individual to make number of financial decisions related to saving or consuming, not only for himself, but also for their family, including healthcare or education costs. When someone have no one and almost nothing to protect, their willingness to assume risk is usually high. Providing for others increases income needs; hence, will influence both the attitudes and tolerance toward risk.

This study also finds that credit card users learned about credit card users having higher score of financial literacy, which indicates that they learned about credit management and other financial decision making as they owned them. This finding is in line with Agarwalla, *et. al.* (2015) that suggest that people learn about credit card fees through experience because there has been immediate negative feedback, and they learn to avoid any costly outcome that might occur.

TABLE 6. CORRELATION MATRIX

Demographic Factors	Financial Literacy
Age	0.066
	(0.165)
Gender	<b>0.111*</b>
	(0.019)
Marital Status	-0.007
	(0.881)
Education	0.066
	(0.162)
Education Background	<b>0.324**</b>
	(0.000)
Received Financial Education	<b>0.303**</b>
	(0.000)
Length of Working Experience	<b>0.117*</b>
	0.013
Monthly Income	<b>0.283**</b>
	(0.000)
# of Credit Card	<b>0.230**</b>
	(0.000)
Living Arrangement	0.006
	(0.900)
Mother Education	<b>0.122**</b>
	(0.010)
Father Education	0.071
	(0.134)
Supporting Parents/ Siblings	0.048
	(0.311)

Our results also strengthen the argument that financial education can positively be related to the increasing financial knowledge. Although there are many variables that could affect financial behaviours, those who scored higher on the financial literacy tests, were more likely to follow the recommended financial practices. Personal financial literacy prepares an individual to manage money, credit, and debt effectively. Better-informed consumers make more effective choices and are less likely to mis-buy or mis-sell products and services, which in the end could help to create more competitive and more efficient financial market.

## VI. CONCLUSION

This study on the Indonesian millennials shows that almost 60% of the respondents are able to answer the questions related to the area of finance. However, most of the respondents (less than 40%) are able to answer question on Bond, Insurance, and Time Value of Money. The data also show that few indicators of financial literacy are associated with demographic variables, namely gender, education background, financial education (formal or informal), length of working experience, monthly income, number of credit card possessed, and mother's education.

Looking at the results of this study that shows financial literacy of more than half of the millennials in this sample is considered fair or lower and financial

education is positively correlated with financial literacy, indicating that it is necessary for educational institutions as well as workplace to adopt the enrichment of financial education/training. These findings also support the social learning theory Bandura (1986) which have been identified as parental and peers influence. This theory states that as individual learn over the years through social interaction, they will begin to understand and form their values, knowledge, and attitude about finances. In the case of the Indonesian millennials, family, friends, work place, educational institution where they study as well as the media help to shape their knowledge and attitude over time.

#### REFERENCES

- [1] Agarwalla, S. K., Barua, S. K., Jacob, J., & Varma, J. R. (2015). Financial literacy among working young in urban India. *World Development*, 67, 101-109.
- [2] Ansong, A., & Gyensare, M. A. (2012). Determinants of university working-students' financial literacy at the University of Cape Coast, Ghana. *International Journal of Business and Management*, 7(9), 126.
- [3] Bandura, A. (1986). Social foundation of thought and action: A social-cognitive view. *Englewood Cliffs*.
- [4] Berg, J., Bergeron, J., Seitz, J., Monroe, M., & McConnell, L. (2007). *Understanding reliability: environmental knowledge in elementary students*. Paper presented at the annual meeting of the North American Association For Environmental Education, Virginia Beach Convention Center, Virginia Beach, Virginia [Online]. Available: [http://www.allacademic.com/meta/p187882\\_index.html](http://www.allacademic.com/meta/p187882_index.html) [Accessed: 8 May 2009].
- [5] Bhushan, P., & Medury, Y. (2014). An Empirical Analysis of Inter Linkages Between Financial Attitudes, Financial Behaviour and Financial Knowledge of Salaried Individuals. *Indian Journal of Commerce and Management Studies*, 5(3), 58-64.
- [6] Chen, H., & Volpe, R. P. (1998). An analysis of personal financial literacy among college students. *Financial services review*, 7(2), 107-128.
- [7] Cole, S., Sampson, T., & Zia, B. (2011). Prices or knowledge? What drives demand for financial services in emerging markets? *The journal of finance*, 66(6), 1933-1967.
- [8] Cole, S. A., Sampson, T. A., & Zia, B. H. (2009). *Financial literacy, financial decisions, and the demand for financial services: evidence from India and Indonesia*: Harvard Business School Cambridge, MA.
- [9] Demirgüç-Kunt, A., & Klapper, L. (2013). Measuring financial inclusion: Explaining variation in use of financial services across and within countries. *Brookings Papers on Economic Activity*, 2013(1), 279-340.
- [10] Garman, E. T., Kim, J., Kratzer, C. Y., Brunson, B. H., & Joo, S.-h. (1999). Workplace financial education improves personal financial wellness. *Financial Counseling and Planning*, 10(1), 79-88.
- [11] Lusardi, A., & Mitchell, O. S. (2007). Baby boomer retirement security: The roles of planning, financial literacy, and housing wealth. *Journal of monetary Economics*, 54(1), 205-224.
- [12] Lusardi, A., & Mitchell, O. S. (2014). The Economic Importance of Financial Literacy: Theory and Evidence. *Journal of Economic Literature*, 52(1), 5-44. doi:<http://www.aeaweb.org/jel/index.php>
- [13] Lusardi, A., Mitchell, O. S., & Curto, V. (2010). Financial literacy among the young. *Journal of Consumer Affairs*, 44(2), 358-380.
- [14] Lusardi, A., & Mitchell, O. (2007). Financial literacy and retirement preparedness: Evidence and implications for financial education. *Business economics*, 42(1), 35-44.
- [15] Lusardi, A., & Tufano, P. (2009). *Debt literacy, financial experiences, and overindebtedness*. Retrieved from
- [16] Mavrinac, S. C., & Chin, W. P. (2004). Financial education for women in Asia Pacific.
- [17] Oseifuah, E. K., & Gyekye, A. B. (2014). Analysis of the Level of Financial Literacy among South African Undergraduate Students. *Journal of Economics and Behavioral Studies*, 6(3), 242.
- [18] 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.
- [19] Roy-Singh, R. (1990). Adult Literacy as Educational Process. Literacy Lessons.
- [20] Shaari, N. A., Hasan, N. A., Mohamed, R., & Sabri, M. (2013). Financial literacy: A study among the university students. *Interdisciplinary journal of contemporary research in business*, 5(2), 279-299.