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The Effect of Financial Literacy on Financial capacity and Savings Behavior from the Perspective of Investors in Iran

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ABSTRACT

A growing body of evidence suggests that financial literacy plays an important role in financial well-being, and that differences in financial knowledge acquired early in life can explain a significant role in Financial capacity and Savings Behavior in Adulthood life.The purpose of this study is to investigate the effect of financial literacy on Financial capacity and Savings Behavior. according to this, 350 Active real investors of Tehran Stock Exchange were selected by simple random sampling. This research is an applied research method. The method of collecting descriptive information is a survey type of qualitative research and the tools used in the research are standard questionnaires. In this research, structural equation model with partial least squares approach (PLS) has been used to confirm the relationship between variables. The results showed that financial literacy has a positive and significant effect on financial capacity and savings behavior.

Keywords:

financial literacy, Financial capacity , Savings Behavior

1. Introduction

Financial literacy and understanding its implications is effective for all individuals. One of the most important issues in many societies is financial literacy and financial decision-making skills. In fact, financial literacy is defined as the ability of an individual to use knowledge and skills to effectively manage financial resources for financial security over a lifetime. On the other hand, financial capacity is the process of Adequate access, timely and low cost to financial services and products and helping to increase its use by the general public. In fact, financial capacity is an important vehicle to promote economic growth and reducing poverty. At the micro level, many studies have shown that improving financial capacity may help reduce poverty (Burgess and Panda, 2005), increase employment (Bruhn and Love, 2014), and increase savings (Brune et al., 2016). At the macro level, financial capacity has a positive effect on economic growth (Inoue and Hamori, 2016) and increases financial stability (Han and Melecky, 2013).According to Grohmann et al. (2018), financial literacy plays an important role in advancing financial capacity. On the other hand, Lusardi and Mitchell (2007) in their study provided international evidence of a strong link between financial literacy and the ability to save for retirement.Adetunji and David-West (2019) found that financial literacy affects the savings patterns of formal and informal financial institutions. Morgan and Trinh (2019) similarly found that financial literacy has a positive relationship with savings behavior.Other studies have shown that better financial literacy with Wider participation in financial markets, greater use of formal sources of borrowing (Klapper et al. 2013), higher voluntary savings (Landerretche and Martinez 2013), and better financial diversification (Beckmann) Has a positive relationship. Xu and Zia (2012) provide evidence from emerging economies that show that financial literacy is positively correlated with having bank account and insurance policies. A number of issues have been raised in studies on the relationship between financial literacy and financial capacity.The first issue concerns the measurement of financial literacy. There are several common definitions of financial literacy. . For example, Lusardi and Mitchell (2014) defined financial literacy as "the ability of individuals to process economic information and make informed decisions about financial planning, wealth accumulation, debt, and pensions."Most recently, OECD (2016) defines financial literacy as "a combination of consciousness, knowledge, skills, attitudes, and behaviors necessary to make the right financial decisions and ultimately achieve individual financial well-being"; Thus, the concept of financial literacy is multidimensional and reflects not only knowledge but also real skills, attitudes and real behavior. However, in most recent empirical studies, financial literacy is measured by only one dimension, financial knowledge. The second issue is about measuring financial capacity. OECD (2016) argued that most recent articles have examined financial capacity from the supply side, while instead financial inclusion should be viewed from the consumption perspective. Financial capacity is related not only to the maintenance of financial products, but also to product recognition, active product selection, and knowledge of alternatives to formal financial services. However, current texts do not agree on how to measure financial capacity. The third issue concerns the measurement of savings behavior. The most appropriate concept of savings is to look at savings from the perspective of capital formation, because savings and investment in the real world are not separate. In other words, the same goods and services that have not been consumed due to the refusal of members of society to spend all their income or due to savings, can be turned into investments. But how you decide to save can come from financial literacy. In fact, financial literacy affects the savings patterns of formal and informal financial institutions. In fact, financially savvy people are more likely to plan for retirement, and those who plan are more likely to save (Morgan and Trinh 2019).

The field of financial literacy has evolved over a period of time as an interdisciplinary science. As a result, it is necessary to review the existing literature with a focus on identifying the progress of research. Therefore, the purpose of this study is to investigate the impact of financial literacy on financial capacity and savings behavior. In fact, this study seeks to fill this gap through the use of newly collected data.

2. Literature Review

The concept of financial literacy has been used by different researchers in different fields. Morgan and Trinh (2019) used a financial account structure that combines financial literacy and financial ability to study them. They highlighted the impact of the financial account on Financial management resultssuch as savings, loans, taxes, and higher decisions including credit score, retirement security, and financial well-being. Lusardi and Mitchell (2011) and Morgan and Trinh (2019), in their studies in the United States and the Netherlands, respectively, showed that financial literacy is a strong predictor of retirement planning and savings. Murendo and Mutsonziwa (2017), They inferred that some financial literacy increase interventions were likely to bridge the gap between non-participation and participation in investment programs. A number of studies have examined the determinants of financial capacity. Using the World Bank's Global Findex database, Demirgüc-Kunt and Klapper (2013) found that differences in income between 148 countries and between individuals within these countries influence the level of financial capacity .Allen et al. (2016) emphasized the importance of the role of income and education in determining bank account ownership and savings in bank accounts based on data from 123 countries. Ghosh and Vinod (2017), showed that other factors that may affect financial capacity include the development of the banking network and socio-economic factors (Davutyan and Öztürkkal 2016; Kumar 2013). There are rich scientific resources that link financial literacy criteria to other economic and financial behaviors. The background to this research goes back to Bernheim (1995, 1998) who examined the shift to retirement plans with a certain share in the United States. This area of research increased after the global financial crisis of 2009-2008, which drew attention to the many scams perpetrated against individual borrowers and investors in the United States and other countries. Hilgert et al. (2003) found a strong correlation between financial literacy and daily financial management skills, while other studies have shown that people with higher financial literacy and education are more likely to participate in financial markets and accumulate prudential savings (Christelis et al. 2010; van Rooij et al. 2011; and de Bassa Scheresberg 2013).

A number of studies have examined the determinant factors of savings behavior (Morgan and Trinh 2019). In fact, people with higher financial literacy are more likely than others to plan for retirement in the process of accumulate more wealth and savings. (Lusardi and Mitchell 2011). These results have been confirmed in a number of countries (Morgan and Trinh 2019).While there is a considerable body of theoretical and empirical research in the field of economics, less attention has been paid to how people acquire and apply financial literacy.But in recent years, few researchers have begun to consider the decision to acquire financial literacy and the links between financial capacity and savings, including Morgan and Long (2020) and Losardi, Michad and Mitchell (2011).Morgan and Long's (2020) study provides a simple two-period model of savings and portfolio allocation to safe bonds and high-risk stocks that enables the acquisition of human capital in the form of financial knowledge.This study hypothesizes that individuals optimally choose to invest in financial knowledge to access higher-Returns assets: This training will help them identify better performing assets or hire financial advisors who can reduce investment costs.

In the context of developing countries, Grohmann et al. (2018) used cross-country data from the S&P Global Financial Literacy Survey to find that financial literacy has a positive effect on the use of financial services. They also found that there is a positive impact of financial literacy on all income levels and subgroups in countries, defined by different characteristics.

Adetunji and David-West (2019) used survey data from more than 22,000 respondents in Nigeria to show that financial literacy significantly affects savings patterns in both formal and informal financial institutions.

Morgan and Trinh (2019), Using a comprehensive measure of financial literacy, they found positive effects of financial literacy on financial capacity and savings behavior in Vietnam.

Random control experiments in developing countries have also confirmed that higher financial literacy is positively associated with participation in financial markets, greater use of formal sources of borrowing (Klapper et al. 2013), voluntary savings (Landerretche and Martinez 2013)), and asset diversity (Beckmann 2013). And has the right choice of financial products (Cohen and Nelson, 2011).

Philippas and Avdoulas (2020) examined the relationship between financial literacy and financial well-being. Their findings show that people with higher financial literacy are more able to cope with unexpected financial shocks. In general, financial literacy is a major factor in financial well-being.

Morgan (2020) examined the impact of financial literacy on savings behavior. The results showed that people with higher financial literacy were more likely to exhibit positive formal and informal savings behavior even when gender and age were controlled.

Morgan (2019) examined the determinants of financial literacy. The results showed that the level of education, income, age and employment status had an impact on financial literacy. Also, the level of financial literacy and the level of public education are positively and significantly related to savings behavior and financial capacity.

Grohmann (2018) examined the impact of financial literacy on financial behavior. The results showed that the level of financial literacy in industrialized countries is higher than developing countries. Similarly, in industrialized countries, most people have savings accounts. In addition, financial literacy improves financial decision making.

Murendo (2017) examined the impact of financial literacy decisions on savings by financial consumers. The results showed that financial literacy has a positive effect on the savings behavior of rural and urban people. In addition, financial literacy has a positive effect on informal and formal savings. Policy interventions that enhance financial literacy are needed to improve people's saving behaviors.

On this basis, the conceptual model of the research is as figure 1:

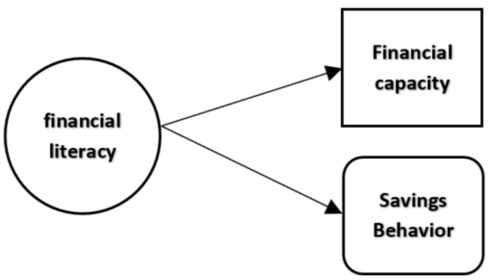

Figure1: Conceptual research model

3. Research Hypotheses

Main hypothesis: Financial literacy has effect on the financial capacity and savings behavior.

Subsidiary hypothesis 1: Financial literacy has effect on financial capacity.

Subsidiary hypothesis 2: Financial literacy has effect on savings behavior.

4. Methodology

This research is an applied research method. The method of collecting descriptive information is a survey type of qualitative research and the tools used in the research are standard questionnaires. In this research, structural equation model with partial least squares approach (PLS) has been used to confirm the relationship between variables. This cross-sectional study was conducted in 2020. The statistical population was an unlimited number of investors in the Tehran Stock Exchange. 350 person were selected as a sample by simple random sampling. The data collection tool was a standard questionnaire based on the Likert spectrum with 5 options, which was displayed in the qualitative section and in the form of Table (1) during the data analysis process.

Table 1. Structure of the questionnaire

Variable	Questions
Financial literacy	1-15
Financial capacity	16-20
Savings behavior	21-25

In this study, a set of 15 questions was relied on to calculate the financial literacy index. The overall score for financial literacy is the sum of the scores for financial knowledge, financial behavior, and financial attitude, and hence takes values between 1 and 15. (Morgan and Trinh 2019). Also, In this study, a financial capacity index is based on two components: holdings of financial products and active consumption of financial products. hence takes values between 16 and 20. Also in this study ,the savings behavior index is based on four components :Purchase management, Timely payment of bills,Financial care,Long-term financial goals. hence takes values between 21 and 25.

4.1. Validity analysis or reliability of items related to the main research variables

The reliability of an instrument which is interpreted as reliability, accuracy, and reliability, is that if a measuring instrument made for measuring a variable and industrial is used in similar conditions at another time or place, similar results are obtained. In other words, a reliable tool is a tool that has the property of reproducibility and measuring the same results. In this study, Cronbach's alpha test was used to assess the reliability of the questionnaire. If Cronbach's alpha is greater than or equal to 70%, the relevant items are retained; And if Cronbach's alpha coefficient is less than 70%, the relevant items are removed.

Table 2. Validity analysis or reliability of items related to the main research variables

Variable	Questions	Cronbach's alpha
Financial literacy	1-15	0.758
Financial capacity	16-20	0.738
Savings behavior	21-25	0.745

5. Results

Description statistics and inferential statistics have been surveyed in this section.

5.1. Description of demographic characteristics of sample members

In order to better understand the nature of the population studied in the study and familiarity with the research variables before analyzing the statistical data, it is necessary to describe this data as well as the general description of the data is in order to identify the pattern governing them and the basis to explain the relationships between the variables. According to the results of the second part of the questionnaire (demographic characteristics), the following information is briefly provided the characteristics of the statistical sample.

Table 3. Description of demographic characteristics of sample members

Gender	frequency	Percent of frequency
Male	260	74.2
Female	90	25.8
Age	frequency	Percent of frequency
Less than 30 years	38	10.8
30 to 35 years	116	33.1
36 to 40 years	97	27.7
41 to 45 years	77	22
More than 46 years	22	6.4
Educations	frequency	Percent of frequency
Diploma	25	7.1
Associate degree	45	12.8
BA	137	39.1
MA	109	31.1
Ph.D	34	9.9
Investment history	frequency	Percent of frequency
Below 5 years	152	43.4
5 to 10 years	75	21.4
11 to 15 years	55	15.7
16 to 20 years	47	13.4
More than 21 years	21	6.1
Sum	350	100

5.2. Descriptive characteristics of research variables

Descriptive statistics includes a set of methods used to collect, summarize, classify, and describe numerical facts. In fact, these statistics describe the data and information of the research and provide a general plan or pattern of data for faster and better use of them. In a summary, the characteristics of a group of information can be expressed using the appropriate use of descriptive statistics. Central and dispersion parameters are used for this purpose. The function of these criteria is that the main characteristics of a set of data can be expressed as a number, and thus, in addition to helping to better understand the results of a test, it facilitates the comparison of the results of that test with the tests and other observations.

Table 4. Descriptive characteristics of research variables

	Financial literacy	Financial capacity	Savings behavior
Mean	2,726	2,378	2.204
Medium	2,733	2.2	2
Minimum	1.6	1	1
Maximum	4.47	5	5

5.3. KMO and Bartlett's test

KMO index and Bartlett's test were used to evaluate the adequacy of the sample. Based on these two tests, the data are suitable for factor analysis when the KMO index is more than (0.7) and close to one and the significance level (sig) of Bartlett's test is less than (0.05). The output of this test is presented in the following table: It should be noted that the value of the KMO index always fluctuates between 0 and 1. If the value of this index is greater than 0.7, the correlations between the data will be suitable for factor analysis. Table 5 shows the KMO value, Bartlett statistic value, degree of freedom and significance level (sig) of Bartlett test. Since the value of KMO index is 0.786 (above 0.7), the number of samples is sufficient for factor analysis and path analysis with structural equation modeling. Also, the significance level (sig) of Bartlett test is less than 5%, which indicates that there is a significant relationship between the variables and factor analysis is appropriate to identify the structural model.

Table 5. KMO and Bartlett's test

KMO	Bartlett's test statistics	df	sig
0.786	1272	100	0.000

5.4. Reliability and Validity

The reliability of the measurement model is assessed with the use of factor loadings, Cronbach's alpha, and composite reliability (CR). If the value of a factor loading is equal to or greater than 0.4 and also Cronbach's alpha and CR for each variable are greater than 0.7, it would indicate the suitable internal consistency of measurement models. The next criterion for the evaluation of the measurement model is convergent validity. To measure convergent validity, the average variance extracted (AVE) is utilized as an index for the assessment of the internal validity of the measurement model. For this index, a minimum of 0.5 has been considered.

Table 6. The factor analysis (factor loading)

AVE	CR	Cronbach's alpha	Factor Loading	Questions	Research variables
0.535	0.9	0.872	0.521	q_2	Financial literacy
			0.562	q_3	
			0.710	q_4	
			0.632	q_5	
			0.829	q_6	
			0.831	q_7	
			0.729	q_8	
			0.857	q_9	
			0.568	q_{12}	
			0.573	q_{14}	
			0.496	q_{15}	
0.538	0.851	0.780	0.810	q_{16}	Financial capacity
			0.833	q_{17}	
			0.857	q_{18}	
			0.533	q_{19}	
			0.561	q_{20}	

AVE	CR	Cronbach's alpha	Factor Loading	Questions	Research variables
0.694	0.918	0.888	0.876	q_{21}	Savings behavior
			0.855	q_{22}	
			0.829	q_{23}	
			0.894	q_{24}	
			0.697	q_{25}	

The results of the above table show that the selected indicators for measuring the model structures have the necessary accuracy because most of the factor loads are all more than 0.7. Those with a factor load of less than 0.7 and above 0.6 are acceptable because they have an average extracted variance of greater than 0.5. Some items of variables had a factor load below 0.5 which were removed from the model. The number of these items for the financial literacy variable is four items. For each of the structures, the Cronbach's alpha value has been calculated, which is more than 0.7, which indicates the appropriate reliability of the structures. The value of AVE indices for all structures is more than 0.5, ie the variables have internal validity. The composite reliability index is more than 0.7, which indicates the internal consistency of the reflection measurement models of the research. Therefore, each of the model constructs has a good validity and reliability for measuring research variables.

5.5. Model quality test

To determine the quality of the model, the coefficient of determination index (R^2) is used. Positive numbers indicate the proper quality of the model. The main criterion for evaluating the endogenous criteria of the path model is the coefficient of determination. This index shows what percentage of the endogenous variable changes by the exogenous variable. Table (7) shows that 0.525% of the changes in financial capacity variables are predicted by financial literacy. Also, 0.168% of changes in savings behavior variables are predicted by financial literacy.

Table7. Model quality test index (R^2)

Model	R2
Financial capacity	0.525
Savings behavior	0.168

5-6- Structural Model Test

5-6-1-Structural model in significant mode (t-value)

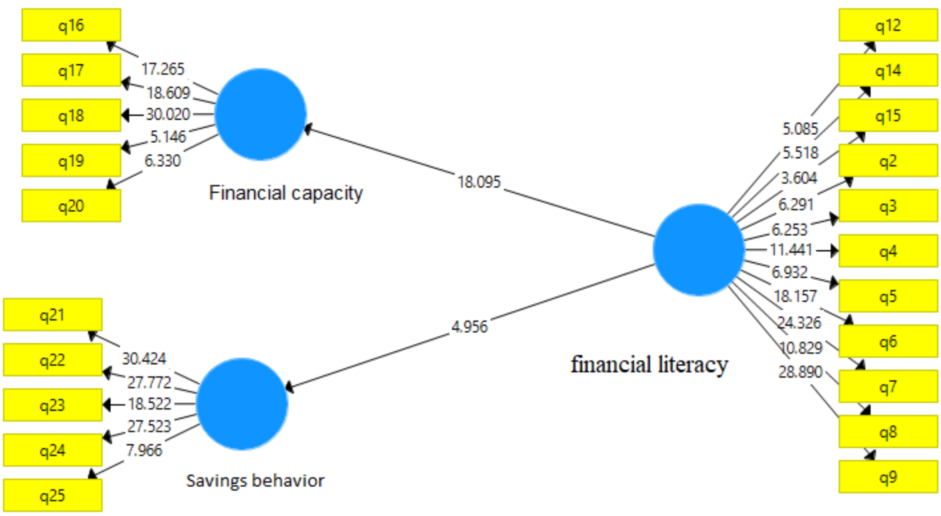

Figure 2. Output of the main structural model in a significant mode (t-value)

5.6.2. Structural model output in standard mode (path analysis)

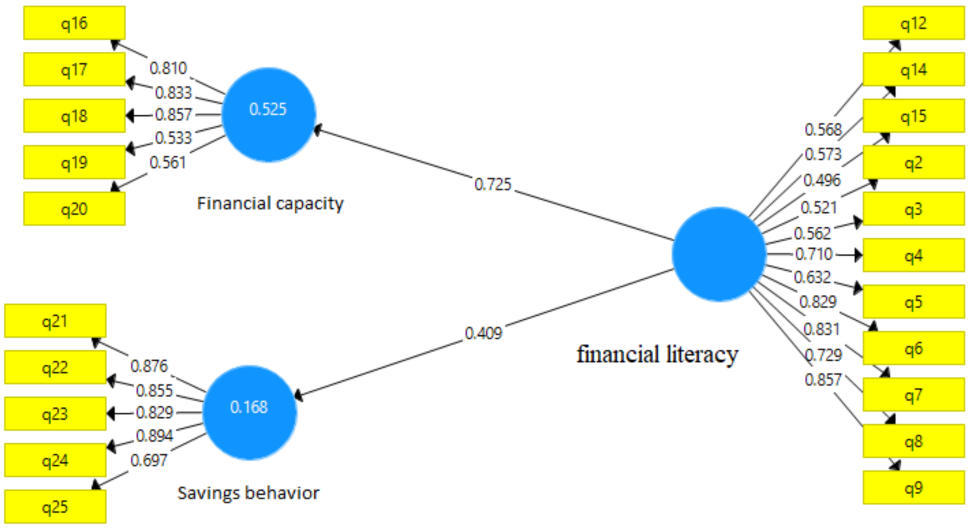

Figure3. Main structural model output in standard mode (path analysis)

6. Discussion and Conclusions

A growing body of evidence suggests that financial literacy plays an important role in financial well-being, and that differences in financial knowledge acquired early in life can explain a significant role in Financial capacity and Savings Behavior in Adulthood life. This study examined the effects of financial literacy on financial capacity and savings behavior. This study showed that financial literacy has widely statistically significant effects on savings behavior and financial capacity. These results are confirmed by the results of previous studies such as the study of Morgan and Trinh (2019), Adetunji and David West (2019) and Allen et al. (2016).

Experimental results The main hypothesis of the research shows that the financial literacy index has a positive and significant effect on financial capacity and savings behavior. In Figures (2) and (3) the fitted model in the state of significance and standard coefficients are given. Financial literacy path coefficient On financial capacity and savings behavior is equal to (0.725) and (0.409). The values of t are equal to (18.09) and (4.95) which is more than 1.96. Therefore, the above path coefficients are significant at the 95% confidence level. Therefore, it can be inferred that financial literacy has a positive and significant effect on financial capacity and savings behavior. Based on the results of the first Subsidiary hypothesis, the coefficient of financial literacy path on financial capacity is equal to (0.725). The value of t statistic is equal to (18.09) which is more than 1.96. Therefore, it can be inferred that financial literacy has a positive and significant effect on financial capacity. Based on the results of the second Subsidiary hypothesis, the coefficient of financial literacy path on savings behavior is equal to (0.409). The value of t statistic is equal to (4.956) which is more than 1.96. Therefore, the above path coefficients are significant at the 95% confidence level. Therefore, it can be inferred that financial literacy has a positive and significant effect on savings behavior. Political gains can be made from the results of this study. Indeed, given that the findings of this study show that financial literacy is important for improving financial capacity and savings behavior, this insight can be important for designing a financial education program.

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