
Financial literacy training and its role in the participation ratio of the SMEs in the financial markets

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Abstract

The importance of financial literacy has increased due to factors such as the development of new financial products, the complexity of instruments and financial markets, political changes, and economic factors. For this reason, considerable measures have been performed recently by people and organizations with scientific competencies such as the World Bank, in respect of introducing, evaluating, and improving the people's financial literacy. Due to the importance of this concept, this research has been performed with the goal of evaluating the role of the financial literacy training in the participation ratio of small and medium-size enterprises in financial markets. The statistical population of this research is composed of small and medium-size companies activating in the industrial city of Rasht. For the data analysis, the Structural Equation Modelling was used, by the PLS method. The results show that the financial literacy training has a positive and significant impact on the financial literacy level, and also on the market participation.

Keywords: Financial Literacy, Financial Training, Market Participation

JEL Classification: C12, G1

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Introduction

One of the important topics in Iran's economy is the investment issue, as well as the participation ratio of economic enterprises in this field, with an impact on reaching sustainable development. Investment in Iran is a major issue of the country's development plans. As an important reason therefor we can point to the unemployment issue in the country, which is considered a great crisis in the country's economy. There is hope that this issue can be dealt with by investment development as investment leads to an increase of the national production, and it ultimately causes the increase of the community's need of workforce. Another important issue which should be noted is the financial literacy ratio of the investors. Those who have a higher financial understanding manage their daily financial affairs and long-term plans better. The investment market is very complicated and it is based on important and difficult decision makings. Naturally, decision makers should have proper information. The investors, who are decision makers in the economic field, should have financial information and the ability to analyze the financial market at a reasonable level, whereas this shows the importance of financial literacy. .

Financial literacy means the ability to manage money effectively and efficiently in the processes related to financial decision makings (Bayrakdaroglu and San, 2014). Accurate and coherent financial training can help creating saving plans, debt management and making strategic investment decisions for training retired people or their children. Contrary to this point, some researchers say that the measures performed in respect of financial literacy improvement can only justify a small part of the financial behavior and, like other trainings, it will be eliminated with the passage of time (Hendriks, 2010). Financial literacy impacts on the decision-making process, and it is less likely that people with low financial literacy participate and invest in stock markets.

Investors' access to the information related to financial assets during a short time and usually without cost is important for the analytical thinking of the managers. By having knowledge and information concerning items transacted in financial markets and by the exact evaluation of these items and instruments, managers can respond better to the company's requirements. The process of changing and processing raw financial data to eligible items like responsiveness and meeting company's requirements is also made possible by the

ability of managers in the field of financial literacy (Rojij *et al.*, 2011)

The development of small and medium enterprises that actually makes possible the general public participation in the country's economic development is the most basic and perhaps the most essential foundation of the economic development. In Iran, the definition of various organizations about small and medium enterprises is not the same either. Various organizations, like The Iran Small Industrial Parks Organization (ISIPO, 2014), according to their business requirements, have considered different classifications for the enterprises in terms of large, small and medium-sized. Despite the effect of SMEs on the global economy, this is not well recognized in Iran. The Ministry of Industry, Mining and Trade showed in 2014 that the number of firms with less than 50 employees and an industrial operating license, is of 82.8 thousand, i.e. 91.5% of all units. Their share in the capital and full-time employment of industrial units was of 24.4% and 41.2%, respectively. By contrast, firms with 50 or more employees, despite their relatively low share of operating licenses, comprise 75.6% of the capital and 58.8% of the full-time employment of industrial units. This is greater than for firms with less than 50 employees (Ebrahimi and Mirbargkar 2017).

Ebrahimi and Mirbargkar (2017) introduces small and medium enterprises as having 5 to 50 employees. Growth and development among Small and Medium Enterprises (SME) will result both in the development of financial markets and SMEs. Better financial literacy can have advantages such as an increased demand for financial services, higher savings, a better risk management, the reduction of economic volatility, the improvement of financial intermediation and the financial development progress for these small and medium enterprises. This condition will cause the increase of competition in financial markets and the investment distribution will reach more balance among the community (Nunoo and Andoh, 2012). Creating an optimum investment structure and performing an accurate and successful financial strategy require a certain degree of literacy.

Previous researches have shown that instead of using standards and principles based on financial training, using empirical and simpler training can cause the economic development of small and medium companies to a greater extent. In other words, using a training course in small and medium companies that

corresponds with their basic requirements is considered as the most efficient and appropriate method for the economic development and growth of these enterprises (Drexler *et al.*, 2014). Researches have also shown that financial literacy in connection with analyzing and understanding hazard has a direct relationship with the investment decision making (Sachse *et al.*, 2012).

Currently, it seems that the financial literacy level as an information limitation has prevented the participation and use of all the capacities of small and medium enterprises on the financial markets. Hence, in this research we intend to determine the Financial Literacy level (FL) and its relationship with Financial Training (FT) and Market Participation (MP) among small and medium business enterprises in the industrial city of Rasht. With regard to the mentioned points, the question occupying the researcher's mind regards the relationship between the financial literacy education and the participation ratio of small and medium enterprises from the industrial city of Rasht in the financial markets.

1. Literature review

Financial literacy was defined for the first time in 1997 in America as "the ability of a person to use the knowledge and skills for effectively management of financial resources for lifetime financial security." After this definition, several definitions were provided for financial literacy ranging from having knowledge of financial concepts to the ability to perform financial planning for the future needs. The Organization for Economic Cooperation and Development (OECD) defined financial literacy for people under 15 years as it follows: "financial literacy refers to the knowledge and understanding the concepts and financial risks, skills, motivation and confidence to apply such knowledge and understanding in order to make effective decisions in range of financial areas for improving financial welfare of people and community as well as empowerment to participate in economic life". In addition, this organization defined financial literacy for adults as a combination of awareness, knowledge, skills, attitude, and behaviour necessary for adopting proper financial decisions and ultimately to achieve personal financial welfare. Financial literacy includes a set of skills and perceptions necessary to deal with everyday financial issues and issues available in public economy; the proper use of these skills makes people achieve a long term financial

welfare. Nowadays, considering the complexity of financial markets, the development and expansion in scope of the financial institutions' activity and the ongoing effort to increase the market share, the need for having financial literacy increased. Financial literacy is the ability of people to obtain information, analyse and manage their financial status so that it affects their financial and mental welfare (life satisfaction). The financial market provides the necessary facilities for the transfer of savings from natural and legal people to other people, who have productive investment opportunities and require financial resources. The transfer of funds in almost all cases leads to the creation of financial assets. In fact, it is a claim to future incomes of personal (legal) assets, that have issued securities. In terms of the importance of small and medium-sized enterprises for the economic development, it can be said that today, in many newly-developed countries such as India, South Korea and Malaysia, what has accelerated their development is the growth of their small and medium-sized businesses. The development of these enterprises, which in fact provide the conditions for public participation in the country's economic development, is one of the most basic and perhaps essential economic infrastructures of development in economic sectors (Loader, 2015). Accordingly, the small, quick impact of entrepreneur industries has always been considered by developed or developing countries as one of the ways for economic development during the last three decades. The economic justification of small industries is the need for low investment, high efficiency, and flexibility.. Tennyson and Nguyen (2001) investigated in their study the effect of the financial literacy education programs provided in different states of USA, on the financial literacy score of high school students. The selected sample consisted of 1997 high school students from 20 states with comprehensive financial literacy topics and 11 states without financial literacy topics. In the studies conducted, a considerable difference was observed between the financial literacy score of the two groups. According to them, this result might be attributed to the employment and effectiveness of the educational programs in the different states. Additionally, Peng (2010) examined in his study the effect of a theory-based educational method based on the change theory in promoting financial literacy among high school students in Hong Kong

Accordingly, 193 students were divided into two experimental and control groups. Twelve teachers (n=6 in each group) provided financial literacy to students using two methods (the conventional method and the method based on change theory). They took a financial literacy test in four stages (one pre-test and three post-tests: immediately after completing the class, six weeks after completing the class, and 6 months after completing the class). The results of the tests showed that in all stages the experimental group surpassed the control group and kept their distance in all the tests. The author suggests that the method based on the change theory should be used for educating financial literacy and support its durability over time.

2. METHODOLOGY

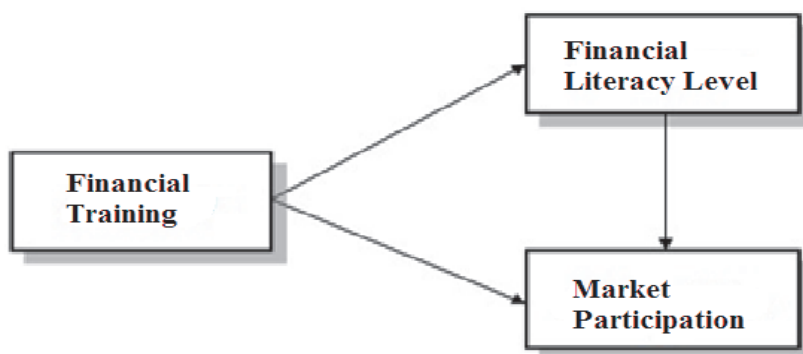
2.1. Research goal

The major goal of performing this research is to investigate the impact of the financial training and the financial literacy level on the participation of small and medium enterprises in the financial markets.

2.2. Research model and hypotheses

The researcher-made conceptual model of research and the relationships between variables have been shown in **Figure no. 1.**

Figure no. 1. Research Conceptual Model



Source: Author's compilation, 2016

Considering research model, the following hypotheses are suggested:

- Hypothesis 1.** The financial training impacts on the financial literacy level of SMEs.
- Hypothesis 2.** The financial training impacts on the participation of SMEs in financial markets.
- Hypothesis 3.** The financial literacy level impacts on the participation of SMEs in financial markets.

2.3. Sample and data collection

The statistical population of this research is composed of small and medium enterprises activating in the industrial city of Rasht. The basis of this research is

the definition of the Industries and Mines Organization and Industrial Towns about small and medium enterprises. Based on the information obtained from the Industries and Mines Organization and Industrial Towns Company of Guilan province, the number of SMEs activating in the industrial city of Rasht is of 150 companies. In order to sample the research statistical population, having the list of small and medium companies activating in the industrial city of Rasht, the simple random sampling method has been used. According to Morgan's table, the sample size with regard to the statistical population size was estimated to 108 people. For this purpose, 130 questionnaires were distributed among the members of the research statistical population (senior managers of mentioned companies), and ultimately the data analysis was performed on 109 analysable questionnaires.

2.4. Variables measurement

In the present research, the researcher-made questionnaire was used in order to investigate the investors' viewpoint in the stock exchange, (see, Appendix 1). The scale used in the questionnaire is Likert's 5 options scale. We used 10 items to measure the variables of financial training, 10 items to measure the financial literacy level, and 4 items to measure the participation in financial markets.

3. RESULT

3.1. Respondents' Features

From 109 respondents of the questionnaire of this study, 85 percent are male, 15 percent are female, 26 percent are single, and 74 percent are married, 26 percent have

less than 5 years, 22 percent have between 5 to 10 years, 15 percent have between 15 to 20 years, and 8 percent have more than 20 years work experience.

3.2. Test of Data Normality

In order to assess the normality or non-normality status of the distribution of the research variables, the K-S test has been used (See, Table no. 1).

Regarding the K-S test results inserted in Table no. 1, the Sig value for all variables was less than 0.05, hence the hypothesis of the normality of variables is rejected and the hypothesis of non-normality of the distribution of research variables is confirmed.

Regarding that the research variables do not have a normal distribution, the structural equation modelling, by the PLS method, is used for analysing the data.

Table no. 1. Assessment Test of the Distribution Status of the Research Variables

Variables	Number	K-S statistics	Sig
Financial Literacy Training	109	1.531	0.018
Financial Literacy Level	109	1.802	0.003
Market Participation	109	1.631	0.010

Source: Author's calculations, 2016

3.3. Data Analysis

The structural equation modelling by the PLS method includes two stages: the measurement model test, and the structural model test. The measurement model test includes the investigation of reliability (internal

consistency) and discriminant validity. To assess the reliability criterion, we investigate each one of the items. If the factor loads of each item on the structure related to itself is significant, it can be argued that the items have an adequate reliability.

Table 2. Factor Load of Financial Literacy Training

Items	Financial Literacy Training	
	Factor Load	Significance
Q1	0.67	Confirmed
Q2	0.79	Confirmed
Q3	0.70	Confirmed
Q4	0.78	Confirmed
Q5	0.79	Confirmed
Q6	0.80	Confirmed
Q7	0.64	Confirmed
Q8	0.28	Rejected
Q9	0.59	Confirmed
Q10	0.73	Confirmed

Source: Author's calculations, 2016

As it is observed in **Table no. 2**, the factor load of item 8 is less than 0.5; hence this question was excluded from

the next analyses. Other items were higher than 0.5, at 0.01 significance level.

Table no. 3. Factor Load of Financial Literacy Level Variable					
Financial Literacy Level					
Items	Factor Load	Significance	Items	Factor Load	Significance
Q11	0.70	Confirmed	Q16	0.78	Confirmed
Q12	0.61	Confirmed	Q17	0.69	Confirmed
Q13	0.74	Confirmed	Q18	0.68	Confirmed
Q14	0.72	Confirmed	Q19	0.76	Confirmed
Q15	0.76	Confirmed	Q20	0.61	Confirmed

Source: Author's calculations, 2016

As it is observed in **Table no. 3**, the factor loads of all items were higher than 0.5, at 0.01 significance level.

The second reliability criterion is the investigation of the compound reliability of each one of the structures. Compound reliability, which is known as Composite Reliability as well, is considered a more modern criterion for determining reliability, compared with Cronbach's alpha. This reliability is obtained through the Dillon - Goldstein coefficient, and values that are higher than 0.7 for this criterion are acceptable. The third reliability criterion is the Average Variance Extracted (AVE). The AVE criterion indicates the average variance shared between each structure with its indicators. Actually, this criterion shows the correlation ratio of one structure with its indicators; a higher value of this correlation stands for a better model fitness. The values higher than 0.5 for this criterion indicate an appropriate reliability of the structure. In **Table no. 5**, the two criteria of CR and AVE for the research structures have been presented.

Table no. 4. Factor Load of Market Participation Variable		
Items	Market Participation	
	Factor Load	Significance
Q21	0.83	Confirmed
Q22	0.86	Confirmed
Q23	0.79	Confirmed
Q24	0.67	Confirmed

Source: Author's calculations, 2016

As it is observed in **Table no. 4**, the factor loads of all items were higher than 0.5, at 0.01 significance level.

Table no. 5. Reliability Values of the Research Structures		
Variable	CR	AVE
Financial literacy Training	0.91	0.53
Market Participation	0.87	0.63
Financial Literacy level	0.90	0.50

Source: Author's calculations, 2016

In order to investigate the validity of the research model, the criterion introduced by *Fornell and Larcker (1981)* is used. This criterion shows the relationship ratio of one structure with its indicators in comparing the relationship of that structure with other structures of research, in a way that the divergent validity of a model indicates that

one structure in the model has more interaction with its indicators than other structures. The *Fornell and Larcker criterion* is obtained in this way that the AVE Square root of one structure should be more than the correlation of that structure with other structures. This criterion has been presented in **Table no. 6**.

Table no. 6. Investigation of Research Variables Validity

Variable	Financial Literacy Training	Market Participation	Financial Literacy Level
Financial literacy Training	0.72		
Market Participation	0.71	0.79	
Financial Literacy level	0.57	0.68	0.70

Source: Author's calculations, 2016

In this matrix, the correlation of latent variables has been reported. The scores on the main diagonal of matrix are AVE Square root. Based on this criterion, provided that these scores are higher than their lower scores, the structure has an appropriate validity. In **Table no. 6**, all

variables have appropriate validity. As it is observed in **Table no. 7**, regarding the results of the t-statistics, it can be said that all research hypotheses were significant at 0.01 error level, and they are confirmed.

Table no. 7. Investigation of the Research Hypotheses

Research Hypotheses	β	t-Value	Test Result
H1: Financial Literacy Training Financial Literacy Level	0.57	7.98	Confirmed
H2: Financial Literacy Level Market Participation	0.35	3.82	Confirmed
H3: Financial Literacy Training Market Participation	0.58	7.55	Confirmed

Source: Author's calculations, 2016

The GOF criterion is also related to the general part of the structural equations modelling. It means that the researcher, having investigated the fitness of the measurement section and structural section of his/her research general model, can also test the fitness of the general section by this criterion. In the PLS method,

three values of 0.01, 0.25, and 0.36 have been introduced as weak, medium, and strong values for GOF (Wetzels, Odekerken-Schröder and Oppen, 2009). In table 8, the GOF value related to the research structural model has been calculated.

Table no. 8. Investigation of GOF Criterion

Variable	R ²	Shared values	GOF
Financial Literacy Training	-	0.53	0.52
Market Participation	0.69	0.63	
Financial Literacy Level	0.32	0.50	

The GOF criterion has been calculated 0.52 for fitness of general model, indicating a very strong fitness of model.

Conclusion

Nowadays, what has accelerated the progress in many new developed countries is the development of their small and medium businesses. The development of

these enterprises that actually permits the background of general public participation in the country's economic development, is among the most basic and perhaps the most essential infrastructures of development in economic sections. On this basis, small quick yielding and entrepreneur industries have continuously been considered by developed or developing countries as one of the ways of reaching economic development during

three recent decades. The low investment requirement, the high return, and the flexibility of small industries reveal further the economic justification of small industries. Small and medium industries also have a very important role in creating employment, particularly for workers with limited skills and low income women. The ability to use financial market instruments and having adequate financial literacy in small and medium trade companies considerably help their progress and success in financial and competitive markets. The financial literacy level of managers, and even employees having financial training, impact on making strategic management decisions and getting desirable result.

Due to a set of distinctive characteristics separating the small and medium enterprises from large enterprises, we see different economic effects of activities of these enterprises on the economy compared to large enterprises; these effects determine the need to investigate the situation of small and medium enterprises in general, and especially solving their financing problems. Some of the most important effects of small and medium enterprises in all countries are their contribution to the job growth and the decrease of the unemployment rate, especially in less developed or developing countries, where the uncontrolled growth of the population, the deficiency in creating human capital and the inefficiency of market mechanisms in creating a balance between the supply and demand of work are some of the economic structure characteristics. It caused that, despite abundant potential economic facilities, employment became an unsolved problem and crisis. Since 1970 onwards, most development economists continuously emphasize the orientation to small industries for solving the problem of the unemployment crisis in the third world. In its annual report from 1997, UNIDO declared the failed experience of large industries to create employment and stated that, in order to solve the problem of unemployment in the developing countries, small and medium enterprises should be supported financially. As small and medium industries have a high share of employment, they were more directed to use a special type of technology, implemented with by more workers and

less capital. In other words, since the small and medium enterprises apply more user-based technology compared with large enterprises, and can create employment with less capital, the number of jobs created by these companies is more than the one created by large companies. The second effect of small and medium industries is the positive effect of these industries on the distribution of income.

Suggestions for Future Researches

It is suggested to assess the financial literacy level variable by designing questions, issues, and practices about financial topics in future researches and compare their results with the findings of this research. It is also suggested that the future researchers investigate the relationship between the independent and dependent variables of this research in various industries separately, as well as their attractiveness ratio and the level of knowledge workers required for various industries separately, and compare the results with the findings of this study.

Research Limitations

In this research, in order to assess the financial literacy level, the components and topics were extracted from the theoretical bases and according to them, the respondents' viewpoints concerning their information ratio about these components were asked. This issue is one of the limitations of this research. In the absence of this limitation, researcher could evaluate the respondents' financial literacy level by technical questions related to financial topics. The market participation variable was also assessed as a distance variable, while this variable can be assessed relatively too. In this study, all small and medium companies activating in the industrial city of Rasht were also investigated as a statistical population, and factors such as the industry type and its attractiveness, the ratio of the industry's reliance on financial literacy, and the knowledge level of employees working in the industry were not considered in the statistical analysis.

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Appendix no. 1: Questionnaire of the research

Financial Training

- Topics related to tax, salary and wages
- Topics related to the impact of inflation on purchase power
- Topics related to added value tax
- Topics related to the safe investment of the surplus funds in short-term
- Topics related to the long-term deposit of surplus funds
- Topics related to the preservation of the purchasing power in inflation conditions
- Topics related to wage deductions and the net amount received
- Topics related to understanding the wage tax base exemption
- Topics related to the impact of investments in stock exchange
- Topics related to the investment risk reduction strategy in the stock

Financial Literacy Level

- Topics related to life-long financial planning
- Topics related to the difference between the bank interest rate belonging to different activities
- Topics related to understanding the appropriate success of borrowing money
- Topics related to people's responsibility limits in loan guarantee of others
- Topics related to the items that are expendable without restriction
- Topics related to the cheque from the perspective of the trade rule
- Topics related to the recognition of credit cards
- Topics related to the recognition of new e-banking services
- Topics related to the recognition of insurance coverage appropriate for different jobs
- Topics related to the rights of retirement period

Financial Markets Participation

- On investment in the stock
- Taking the necessary measures about reducing investment risk in the stock
- On short-term investment without risk
- On the measures needed to acquire the maximum ensured profit from the savings.

Appendix no. 2

Figure no. 2. Route Coefficients and Factor Loads of Research Variables

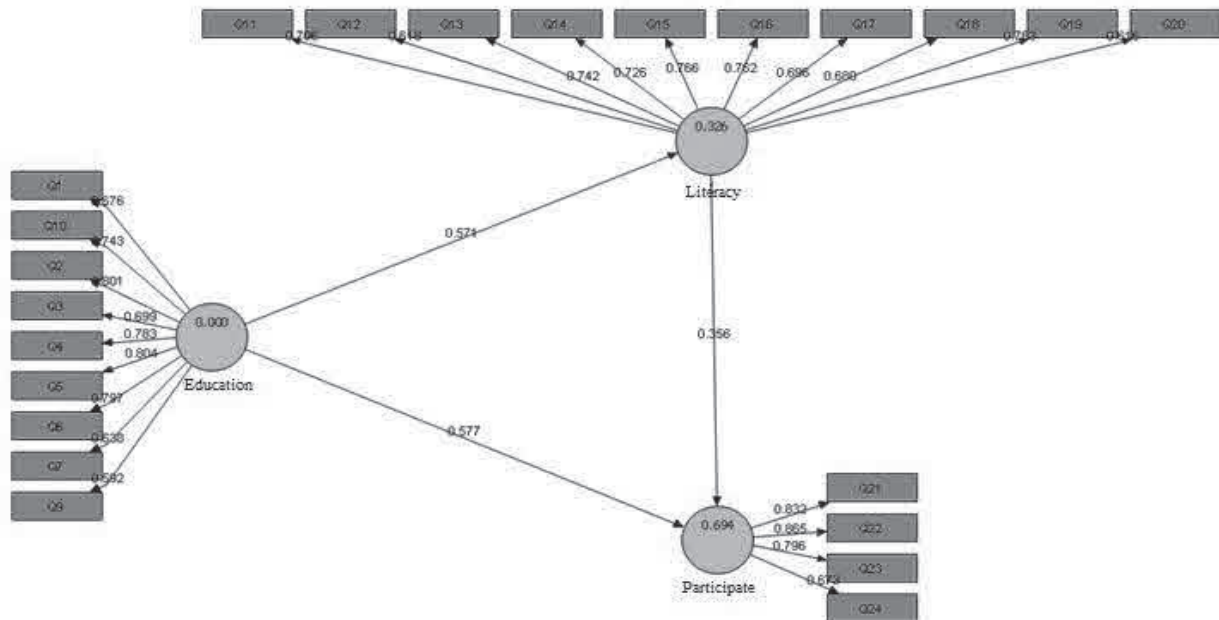


Figure no. 3. Significance of Routes

