Financial Literacy Training As a Strategic Management Tool Among Small – Medium Sized Businesses Operating In Turkey

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Abstract

This paper deals with manager’s ability to use financial market instruments in small and medium sized businesses operate in Turkey. According to the findings of the study, financial literacy level of the manager increases with financial training, which is a strategic management decision in the conclusion. It is determined that financial literacy levels of the managers who participated in the study are higher compared to the other studies in the literature. Additionally, managers with higher financial literacy levels show greater participation in the financial markets by diminishing information constraints. Another behavioral factor effects the market participation is overconfidence that very low among managers participated in the study. This may be the fact of limited market participation among SMBs managers. Financial training has also relation with confidence levels of the managers.

Keywords: Financial literacy, SMBs, Strategic management, Turkey

1. Introduction

Small and medium sized businesses (SMBs) are entities that employ fewer than 250 people and its net sales revenue or any of balance sheet items not exceeding 40 million Turkish Lira in Turkey. SMBs are categorized into three as micro businesses, small businesses and medium businesses. This definition of SMBs, which is made by Turkish state in 2012, shows similarities with the definition made by European Commission in 2011. Standardization of the definition is important for domestic SMBs to compete with European SMBs, because 70 % of the country’s foreign trade is with the members of the European Union countries.

SMBs are important in proportion of their contribution to the national economy. SMBs that operating in the manufacturing and service sector accounts for 99% of the total enterprises in Turkey. SMBs also meets the 78% of

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total employment, 55% of total value added, 65, 5% of total sales, 50% of total investments, 56% of total export and 9% of total credits in Turkey (Turkish Statistical Institute-TSI, 2013). Considering the size of the unregistered economic activity, contribution of SMBs to the Turkish economy becomes more important. In addition to these figures, countries with higher Gross Domestic Product (GDP) per capita increase the contribution of SMBs to the economy in the perspective of employment and GDP (Ayyagari, Beck and Demirgüç-Kunt, 2005). In other words, there are reciprocal relationship between economic development and the relative size of SMBs.

SMBs exhibit more dynamic structure by being more innovative, following niche strategies, producing higher quality products, being more responsive to the customers in comparison with large scale mass producer counterparts. This situation led to a rapid growth of SMBs also brings a relative risk to these firms. Because of this risk premium, underdeveloped bank-borrower relations and small cash flows causes financial institutions that provide funds to these SMBs to set some restrictions and consequently costs of funds increases. High borrowing costs directs managers and owners to use more private equity than external finance (Ardic, Mylenko and Saltane, 2011).

Despite the fact that how SMBs streamline the economy, large majority of these firms faces with closure and bankruptcy risk every year in Turkey. Especially in times of crisis, SMBs are having trouble with financing their net working capital requirements. Turnover rates for entering and leaving the market for these firms are very high and smaller enterprises have lower probability of survival rates compared to the larger enterprises. According Small Enterprise Loan Report (2012), the average lifecycle of many SMBs is 11 and 80% of newly established firms are closed within five years or less in Turkey. According to European Commission Report (2011) bankruptcies are also a common issue among SMBs which operates in Europe. About half of the SMBs are facing bankruptcy in the first five years of their life. Furthermore, bankruptcy has a negative effect on entrepreneurship as fear of failure increases.

After the industrial revolution, along with the development of financial markets wide variety of financial instruments is available to firms. Funding and risk reduction methods for SMBs include; factoring, leasing, bank loans, private equity, options, forward and futures are some of the available financial instruments to overcome the financial challenges that firms are facing. Despite the fact that there is diversity and availability in financial products, there is still the inability for SMBs to use these products efficiently. Cassar and Holmes (2003) indicates that difference between SMBs and large firms, with respect to their financial decision making, may also be the indicator of their lack of management skills and knowledge, who generally operates without access to professional advice. SMB owner and managers may have lack of knowledge about funding options which is the first constraint, while the other constraint about finding the right funds for the firms is supply of these funds by financial institutions. The existence of information asymmetry between the lender and the borrower causes to limit the supply of the debt.

In addition to financial constraints, SMBs problems like lack of available trained personnel (Çatal, 2007) and information gaps (Saulles, 2006) about training courses affects the level of financial illiteracy among these firms which makes them more vulnerable to financial crisis compared to the large firms in the economy. According to European Commission Report of 2009 and OECD Report of 2002, continuous training and lifelong learning are regarded as important elements of competitiveness and strategic management. However statistics show that these training courses and qualifications are less likely available to employees working in SMEs.

Development of the financial education among these SMBs will lead to the development of both financial and SMBs markets. On the other side, Nunoo and Andoh (2012) indicates that, better financial literacy may provide benefits to those SMBs like; increased demand for financial services, more saving, better management of risk, economic volatility reduction, intermediation improvement and accelerate the financial development. This situation will led competition to increase in the financial markets and more balanced distribution of the capital to the society.

In this study, it is aimed to determine level of financial literacy in SMBs that having financial-trained personnel. In additional to this, the relationship between level of financial literacy of SMBs and financial market participation will be analyzed and later it is determined whether SMBs used the financial market more effectively or not. In this context, the study begins by a literature review of financial literacy, and then will go on to development of hypotheses. Research methodology and hypotheses will take place at second section. The results of the analyses will be discussed and recommendation will be provided for managers and academician at the last section.
2. Literature Review

In literature, most of the studies focus on optimum capital structure models (see, e.g., Mira (2005), Cassar and Holmes (2003), Romano et al (2001), Hall et al (2010), Michaelas et al. (1999), Nguyen and Ramachandran (2006)) and financing problems (see, e.g., Berger and Udell (2006), Cressy and Olofsson (1997), Hughes (1997)) of SMBs. However, building a optimum capital structure, implementing the right financing strategy and to be successful in this strategy by using these theories requires some level of financial literacy. Financial literacy is defined as the ability of managing money effectively and efficiently on financial decision making processes (Marcolin and Abraham, 2006).

Profitability ratios and cost of the capital varies for the firms which employ managers that have different level of financial literacy. Managers with higher level of financial literacy prefer financial instruments that provide better premiums to the firms. According to Lusardi (2008), failure in financial planning, lack of market participation and bad borrowing behaviors can be resolved by basic level of financial training. Lusardi and Mitchell (2011) indicates that individuals have overconfidence about financial matters especially in developed countries. Individuals with low level financial literacy and higher level of confidence about financial markets are more prone to making wrong decisions than other individuals. Financial literacy and its impact on financial decision making under the uncertainty was first introduced by Chen and Volpe (1998). Thereafter, Lusardi and Mitchell (2006) developed the financial literacy concept as one of the personnel finance tool. They indicated that, financial literacy decreases the stock market participation costs and let individuals to make financial planning easily. Müller and Weber (2010) indicated that, investors with higher financial literacy prefer to invest their funds to passive instruments due to their low commission rates. Beal and Delpachitra (2003) found that, experience in the financial markets and financial literacy supports each other. Chen and Volpe (2002) suggest that, education in the field of business and economics increases the level of financial literacy.

Hendriks (2010) indicates that well rounded financial education can help to initiate saving plans, manage debt and make strategic investment decisions for their retirement or their children’s education. In opposition to this, Fernandes, Lynch and Netemeyer indicates that interventions to improve financial literacy explains only small part of the financial behavior and it decays by time like any other education. This opinion is supported by Mandell and Klein (2009) that effect of the financial education on financial literacy levels disappears after seven years from the graduation. According to study of Drexler et al. (2010), instead of standard and fundamentals based finance training, using more simplified and rule of thumb training may produce economically meaningful improvements in SMBs. In other words, training the SMBs, according to their basic financial needs is most suitable and efficient way for economic development and growth of those companies. Also, SMBs can manage better during those crisis times and increases average sales and saving significantly whether owner/manager get training courses.

Financial markets have experienced incredible changes over the past decade. Technology, globalization and intensifying competition have become key strategic elements. As a result, the promotion of competition and financial inclusion are mutually exclusive. Financial literacy training and enhancing financial services awareness among SMBs indicated as one of the combating tool against to financial exclusion which is developed by Carbo et al (2005). Low level of financial literacy and financial awareness may increase the psychological barriers on financial markets while decreasing the trust and belief about the market.

There are information asymmetry problems between lenders and SMBs due to lack of past experiences and inadequate financial literacy of SMBs. Because of this reason, lending practices requires some level of collateral which increases the cost of lending. Poonpatpibul and Limthammahisorn (2005) recommend promoting and improving flows of information and financial literacy among SMBs to overcome the information asymmetry and lending constraints in the market. Nunoo and Andoh (2012) found that 44% of the Ghanians are financially excluded and have no financial products. Also, financial literacy of owners of SMBs is modest. They recommend SMBs to increase their financial literacy through financial education to utilize more financial services. According to criticism made by Huston (2010), despite all these studies on financial literacy in the literature, common scale could not be established for the financial literacy measurement.

Shiller (2000) indicates that overconfidence is the fundamental factor promoting the high volume of trade in the markets. This view is also supported by Shefrin (2000) that overconfident investors get surprised more frequently than they anticipated. Because of too much trading, investors have to pay more commission that decrease revenues compared to the other investors in the financial markets.
3. Research Methodology And Hypotheses

In this study we aim to determine the level of financial literacy (FL) and its relationship with financial training (FT) and market participation (MP) among small – medium sized businesses operating in Turkey. To test the hypotheses, a field survey was conducted by using questionnaires. The survey of this study was conducted on managers of SMBs in Turkey. SMBs that meet those two requirements of SMBs was 120 in number and contacted with email or phone and asked to participate in survey. Data obtained from questionnaires was analyzed through the SPSS statistical packet program and these two proposed relations and overconfidence levels were tested through regression and correlation analyses.

Questionnaire of this study consists of three parts. It is intended to measure demographic factors of participants in the first part of this survey. In the second part, participants’ investment preferences were measured. Participants were asked to choose from eight different financial instruments according to their past investment experiences. Financial instruments ranged from easy to use short term money market tools to long term capital market instruments which are relatively more difficult to use. In the last part of the survey, a self evaluation scale and a financial literacy index which is consist of six questions was created to measure finance literacy levels. Financial literacy scale includes questions like time value of money, stock and bond market awareness which is similar to Lusardi and Mitchell’s (2008) basic financial literacy questions. According to the differences between these two different measurement methods of financial literacy, self confidence levels of the managers were also determined.

The hypotheses tested in the study:

H₁: SMBs have high level of financial literacy whether employees have received training in finance.
H₂: SMBs with high levels of financial literacy exhibit greater participation in the stock markets.

Our models to test these hypotheses are as follows;

\[ Y_{FL} = a + \beta X_{FT} \]

\[ L_{MP} = a + \beta X_{FL} \]

First hypothesis indicates that, managers who get special training in finance and economics will show greater financial literacy levels compared to the untrained ones. Independent variable gets three different values according to participants’ level of financial training. Applying this model requires some preconditions like normal distribution of the sample and correlation between variables. Sample of the study shows normal distribution according to One - Sample Kolmogorov – Simirnov test which is probable result of our random sampling method and adequacy of the sample size. Because of the discontinuity feature of independent variable, Spearman’s Correlation test was used and correlation was significant at the 0,01 level. According to these findings, H₁ hypothesis was suitable for the linear regression analysis.

It is aimed to expose the relationship between financial literacy level and financial market participation in the second hypothesis. There are two ways to measure financial market participation. One of them is whether managers participate in the capital markets which are relatively complex in nature and the second method is to evaluate the number of financial instruments that they used. We tested second hypothesis of the research with these two methods and find out that stock market participation was most significant model to explain financial literacy and financial market participation compared to the number of the financial instrument used (see; Nunoo and Andoh, 2012) by managers. Dummy variable was used for the dependent variable of this hypothesis. Dummy variable gets the value of ‘1’ if the survey participants attended to the stock market and ‘0’ otherwise. Logistic regression was used because of the dependent variables’ this feature. Stock market participation is realized in two ways. Investors may directly invest their funds to the market or they may use professionally managed hedge funds which is defined as a indirect participation. Although our survey measures both of them, we considered direct participation to get more realistic results in the analysis.
4. Results

This part of the study consists of the three sections. Descriptive statistics was given in the first section, in the second section hypothesis tests being performed and in the last section confidence levels about managers’ financial literacy abilities was given.

4.1. Descriptive Results

According to demographical findings of the survey 63.3 percent of the participants are men while rest of those participants is women. High proportion of the participants (48 percent) have a bachelor degree while 31.7 percent of the participants have a high school degree and those who attended finance class during their lifetime is 34.2 percent. Average age of the SMBs ranges from six to ten years and majority (45.8 percent) of the firm’s age ranges one to five years which is very low figure and indicates that survival rates are also very low for these businesses. The average number of employee is five and most of the firms (62.5 percent) have up to ten employees. These businesses also can be defined as a micro enterprise under the condition of ignoring balance sheet and turnover ratios.

The companies participating in the study vary according to their industry, so there are 24 different sectors in this study. Health care, textiles, tourism and food have the greatest share among these 24 sectors that their share varies from 12 percent to 17 percent. Managers evaluated their financial literacy levels in the self evaluated scale which ranges from one to seven and majority of them (37.5 percent) evaluated their financial literacy level as a moderate. According to test results, 11.7 percent of managers got full marks by answering the whole finance questions correctly while only one manager answered all questions incorrectly. Mean value of this test results was determined as sixty. Investment preferences were asked to the managers and 9 different options (bonds, bills, repo, stocks, hedge funds, gold, foreign currency, term deposit and none) were presented in the survey.

Table 1: Financial Market Participation

<table>
<thead>
<tr>
<th>Financial Instrument</th>
<th>Number of Participant</th>
<th>Percent of Participant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stocks</td>
<td>38</td>
<td>31.7%</td>
</tr>
<tr>
<td>Bonds</td>
<td>11</td>
<td>9.2%</td>
</tr>
<tr>
<td>T-Bills</td>
<td>10</td>
<td>8.3%</td>
</tr>
<tr>
<td>Repo</td>
<td>8</td>
<td>6.7%</td>
</tr>
<tr>
<td>Term Deposit</td>
<td>66</td>
<td>55%</td>
</tr>
<tr>
<td>Hedge Funds</td>
<td>40</td>
<td>33.3%</td>
</tr>
<tr>
<td>Gold</td>
<td>67</td>
<td>55.8%</td>
</tr>
<tr>
<td>Foreign Currency</td>
<td>35</td>
<td>29.2%</td>
</tr>
<tr>
<td>None</td>
<td>14</td>
<td>11.7%</td>
</tr>
</tbody>
</table>

According to financial market participation statistics almost half of the managers prefer gold and term deposit accounts to invest. Direct participation to the stock market, which is the dependent variable of the second hypothesis, is 31.7 percent among managers. Managers do not prefer any of these markets to invest is 11.7 percent and one of the least preferred financial instrument is repo with 6.7 percent. Even though mode value is one for the number of financial instrument used by participants, some managers indicated that they use more than one financial instrument. Highest value for using different type of financial instrument is 6 and mean value for using different type of instrument is 2.4 out of 8.

4.2. Hypothesis Testing

In this study, two different regression analyses are used to test hypotheses and to determine the size of relationship. Linear regression analysis was utilized to test first hypothesis. ANOVAs analysis is also conducted to understand the differences between groups according to their financial education levels and find out that there is significant difference between financially trained and not trained. According to the R square value, 10 percent of the financial literacy level can be accounted by financial training level which is a very meaningful predictor but it is not accounting for huge amount.
Table 2: Coefficients for linear regression analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>50,347</td>
<td>3,394</td>
<td>14,833</td>
</tr>
<tr>
<td>Financial Training</td>
<td>10,826</td>
<td>2,860</td>
<td>.329</td>
<td>3,785</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Financial Literacy

This case is the natural consequence of rapidly changing structure of financial markets over time. This finding is also consistent with the studies in the literature. According to Willis (2008), effectiveness of financial literacy education lacks the empirical support. Complexity of the financial instruments and incompatibility with education causes managers to behave more confidently and leads to worse decisions.

\[ Y_{FL} = 50,347 + 10,826 \times FT \]

According to our model, one unit of increase in the financial training causes financial literacy level to increase almost 10.8 percent over 100 points financial literacy index. As a result of this, our first hypothesis is accepted that SMBs have high level of financial literacy whether employees have received training in finance.

Our second hypothesis is tested with logistic regression analysis, because of its binary dependent variable. Unlike the linear relationship of the first analysis, there is a non-linear relationship in the second analysis. Relations of the variables are given in the probabilistic form for this reason. In this analysis, we first look to the model of fit statistics, significance values and explanatory degrees to be sure about reliability of results. Overall percentage value is 68.3, which is the explanatory factor of the model under the assumption that all participants understands the questions in survey correctly. Stock market participation is added to the model and classification accuracy increases to 83.3 percent in the first step. Hosmer and Lemeshow test measures the link between estimated and actual values of the dependent variable. Statistically insignificant difference in this classification on the chi-square value interprets that our model is good.

Table 3: Variables in the Equation

<table>
<thead>
<tr>
<th>Step 1</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp(B)</th>
<th>95% C.I.for EXP(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower</td>
</tr>
<tr>
<td>Financial Literacy</td>
<td>.091</td>
<td>.017</td>
<td>28,331</td>
<td>1</td>
<td>.000</td>
<td>1.095</td>
<td>1.059</td>
</tr>
<tr>
<td>Constant</td>
<td>-7.038</td>
<td>1.316</td>
<td>28,578</td>
<td>1</td>
<td>.000</td>
<td>.001</td>
<td></td>
</tr>
</tbody>
</table>

a. Variable(s) entered on step 1: Financial Literacy.

Financial literacy level which is independent variable of the second hypothesis is significant at 0.01 level. The second model can be expressed as follows according to Table 3;

\[ L_{MP} = -7.038 + 0.091 \times FL \]

Each unit of increase in the financial literacy level increases 1.095 times the probability of participation in stock markets according to second model. Positive coefficient of independent variable also indicates that second hypothesis of the study is accepted.

4.3. Overconfidence on Financial Literacy

Financial literacy level of managers is measured separately with self evaluated seven point likert-type scale and financial literacy index. The differences between these two perceived and measured financial literacy levels give us the overconfidence level of the manager’s on financial literacy. There is a positive correlation (0.180) on the overall relationship between those perceived (subjective) and measured (objective) financial literacy that significant at 0.05 level. Overconfidence and under confidence are expressed respectively as follows,

Overconfidence: Subjective \(_{FL} - \) Objective \(_{FL} > 0\)
Under confidence: Subjective \(_{FL} - \) Objective \(_{FL} < 0\)
It is determined that majority of the managers (57 percent) who participated in this study were identified as underconfident about their financial literacy levels. At the same time 27 percent of the managers identified as overconfident about their financial literacy levels. Xia et al. (2014) point out that market participation positively correlates with overconfidence. In addition to this, we find out that there is a positive correlation (0.243) between financial training and confidence levels about financial literacy.

5. Conclusion

Over the last decade, SMBs have had to deal with a wide variety of financial products to ensure sustainable growth in their businesses. Financial literacy is one of the variables to utilize these market instruments more efficiently. Roij, Lusardi and Alessie (2011) findings indicates that financial literacy affects decision making process and individuals with low literacy are much less likely to invest in stock markets. Financial assets related information reaches to investors in a very short period of time and generally free of charge has revealed the importance of analytical thinking by managers. Managers can respond better to the needs of the company by having knowledge about the instruments that traded on financial markets and by carrying out the required evaluation on these instruments. Processing of raw financial data into qualified material as to respond decision making needs is possible with financial literacy abilities of managers.

Our research shows that utilizing of different financial market instruments is very low among SMBs managers. Despite the diversity of financial products in the market, manager’s failure to use these products effectively and efficiently has been associated with financial literacy level of these managers. According to our findings, financial market participation increases in accordance with financial literacy levels of the SMBs managers. Higher participation of the SMBs in financial markets offers benefits also to the economy by increasing liquidation in the market. Financial literacy is one of the non economic variables to explain financial market participation of the managers. In the literature, there are other social factors that illustrate the financial market participation of the individuals like trust, risk perception, technology literacy, cognitive intelligence and social interaction.

Economically developed countries constitute financial education strategies for their communities to take more effective decisions in financial matters. Financial literacy education strategy also helps managers to refrain from practices that will cause to financial loss. Another contribution of the financial literacy education is teaching how to practice consumer protection rights. According to the findings of the study, financial literacy scores of SMBs managers is concentrated on median value which is higher compared to study of Braunstein and Welch (2002) that carried out with community members. Today, financial training is carried out in two ways as finance courses in economic and business departments of the universities and private certificate finance programs in Turkey. However, financial literacy course is becoming mandatory for high school students at some of the economically developed countries like America and England. Financial literacy training and financial literacy level relationship are examined in the study without considering the time variable that passed after the training. Findings of the study show that financial literacy levels of the managers increases with the financial education.

Overconfidence is a variable that directs investors to trade more frequently than being cautious, which causes to excessive trading volume. Overconfidence level of the managers about financial literacy is very low compared to the other studies in the literature. According to another finding of the study, there is a positive correlation between overconfidence and financial training. Further research may indicate whether overconfidence is intermediate variable between market participation and financial literacy level of the SMB managers. In addition to this, other social factors that effects financial instrument utilization may be considered with the time dimension in further research.

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