

The Influence of Financial Literacy on the Growth of SME—The Case of NERBA, Bragança, Portugal

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Abstract

The present work focused on the study of a group of small companies associated with NERBA—Business Association of the city of Bragança, Portugal. The objective was to evaluate, in terms of business management, what is the influence of financial literacy on the growth of small enterprises. The selected companies to participate in the study follow a non-probability sampling. In addition, these companies maintained a sustainable growth in their business in recent years, and the choice was done by the association itself, so the research was only concerned with data collection and analysis of the results. In this way, the work sought to better understand the companies, understand their structure, understand the profile of each manager, and understand their level of education and the financial literacy knowledge of each. At the end of the study, it was possible to see that, in fact, as expected, managers with a greater number of correct answers to questions about financial literacy were responsible for the companies that obtained the highest earnings related to the turnover of the business.

Keywords

Financial Literacy, Entrepreneur, Business Management, SME, Northern Region of Portugal

1. Introduction

When talking about business, we have a society marked by changes and different structures within the labor market, since both people and companies are inserted in a changing context, which is dynamic and technological, it is the role

of each institution reinvent itself from time to time, in order to become more competitive and adaptable to the markets in which it exists (Mandell & Klein, 2007).

Chiavenato (2005) claims that organizations are only maintained through the achievement of pre-established goals and objectives, and these are only achieved through the collective effort of a certain group of people, which had specific skills and knowledge that allow them to create better results for the organizations where they work.

To become capable of managing processes or systems individually, a manager must combine the necessary knowledge and information that allow him to make better choices and take more conscious actions. Towards this, Machado (2011) argues that knowledge in financial literacy is an essential tool not only for the well-being of the individual as a consumer, but also for the development of organizations, regulation of financial institutions and economic growth of a given region or country. Financial literacy helps to know how to manage money in personal finances, in the family budget and in business accounts.

In view of this, this work proposes to better understand the profile of managers of small companies in the northern region of Portugal, as well as the structure of the businesses in which they are inserted.

2. Main Context

2.1. Context of Organizations

Mandell and Klein (2007) argue that the rapid changes that happen in the society has a lot to do with the development of new technologies and, in this case, with the growth of the financial sector and the economy, therefore, it is up to companies to develop tools and resources that allow them to be integrated to new events and also to obtain a prominent position within the market.

Scenarios are constantly changing, customer needs are dynamic, suppliers are offering new products and the capitalist machine is always asking for more. In view of these factors, it can be said that the companies that best fit into new contexts and that have the greatest capacity to respond to changes in the market, most of the time, are the ones with the best performance (Morgan, 2006).

According to Lovera et al. (2008) the ability to change and innovate is a crucial factor for the health and economic well-being of companies, as it consists of creating something new, involves modifying products, processes and services within the environment, and therefore promotes growth, economic and competitive advantage for the organization.

For an organization to grow and develop in a continuous and healthy way, it must have well-informed and qualified managers, which should be also skilled for their function, in addition, the way in which each organization is managed, has a lot to do with the profile of its respective manager, who is the person that organizes structure and divides functions within the institution.

2.2. The Importance of Financial Literacy in the Current Context

In the current context, with so much availability of products and services, people become more vulnerable to the facilities that the modern world brings, such as the use of credit cards, forms of financing, loans and leasing, overdraft, direct credit to consumer, or the huge range of financial products such as savings, investment funds, stock market, among other banking products and services that are offered to consumers on a daily basis. To deal with the complexity of the products, evaluate everything that is offered and make the best choice for each situation, the individual must be prepared and gather a range of knowledge that allows him to discern between the options (Lucci et al., 2006).

Therefore, the need for a better understanding of issues related to financial literacy, the more an individual knows about a given subject, the better he understands about his degree of need or urgency through the acquisition of certain goods or products and the easier it is to him to discern whether it is in fact worth paying for what is offered or whether it is possible to obtain the same product through other means.

The Australian Securities & Investments Commission (ASIC, 2003), defends the importance of literacy, precisely because it is the type of education that gives the individual the ability to use knowledge in practical situations where it is possible to make coherent judgments and make cohesive decisions about of your financial life.

Orton (2007) argues that financial literacy does not only concern financial and monetary knowledge, or the decisions that an individual is capable of making, but rather has to do with the ability to understand, analyze, manage and communicate about their personal finances and the way it affects well-being. This also considers that the individual is able to discuss financial matters, discern between financial options, understand the global economic context, respond competently to financial decisions and plan their future.

3. Methodology

The methodology used is quantitative, but with an eminently descriptive character. In order to achieve the proposed objectives of understanding the degree of financial literacy of the participants and getting to know better about the structure of the companies, the quantitative research method was used, through which data were collected through a questionnaire survey. The survey used was proposed by Director Annamaria Lusardi and Professor Olivia S. Mitchell, from the Global Financial Literacy Excellence Center—GFLEC, and this material has been used in more than 20 countries with the aim of measuring financial literacy knowledge.

Additionally, a last question was asked, also related to financial literacy, proposed by the Portugal Bank, through questionnaire survey, which aims to test the knowledge of the population. The second block of questions asked in the survey was exclusively sociodemographic, in order to assess the profile of res-

pondents and measure age, gender and level of education.

And finally, some questions were asked to analyze the structure of the companies, so were used questions that evaluated the volume of business, internationalization, that is, the ability to carry out exports, the number of workers belonging to the staff and the area occupied by the company's facilities in m².

The respondents of this study were 53 businessmen and managers of associated companies of NERBA—Associação Empresarial do Distrito de Bragança, who answered a questionnaire through google forms, during a period of 20 days, between November 21st and December 10th, 2022, afterwards there was analysis done by SPSS, a statistical analysis program.

4. Analysis, Discussion and Results

Regarding the characterization of the companies, these were mostly from the service sector, 22 in absolute value (corresponding to 42%) of the total; and industry, 14 in absolute value (corresponding to 26%) of the total; followed by trade, with 11 companies (corresponding to 21%); and finally, agriculture and the like with only 6 companies (corresponding to 11%) belonging to this sector.

Regarding the structure of the organizations, 32% of the companies (17 in absolute terms) indicated that they had an annual gross turnover of less than €250,000, 26%, that is 14 companies, indicated that they had an annual turnover of between €250,000 and less than €500,000, 15%, representing 8 organizations, indicated having a turnover between €500,000 and €1,000,000, 13% of 7 companies have values between €1,000,000 and €2,000,000, 7.5% representing 4 organizations declared a turnover between more than 2,000,000€ and less than €5,000,000, 2%, referring to only 1 company, reported having turnover values between €5,000,000 and €10,000,000 and only 4% of the total have an annual turnover greater than €10,000,000, representing 2 companies out of the 53 participants.

Talking about the number of workers, a group of 30 companies (57%) indicated having a staff of less than 10 workers, 16 companies (30%) have a team between 10 and 20 workers, 5 of the organizations (9%) are composed by between 21 and 50 workers in their staff and only 2 companies (4%) have a group of between 51 and 250 workers. None of the organizations reported having more than 250 workers on their staff.

In relation to the size of the installations, in general, the companies indicated that they had areas occupied by the installations with different dimensions. Most organizations, 17 of them (corresponding to 32%) indicated occupying an area greater than 1000 m², on the other hand, the second largest group is of companies that have an area of less than 100 m², representing a total of 12 companies (corresponding to 23%), then a group of 10 companies (19% of the total) occupy an area with a size between more than 100 m² and less than 300 m², then 9 organizations (relative to 17%) have an area of size between 500 m² and 1000 m² and finally 5 of the participating companies (9% of them) have a space between

300 m² and less than 500 m².

Finally, in terms of exports, the total set of companies, 19 of them (36%) reported exporting their products and another 34 (64%) reported that they did not. It is worth mentioning that among these 35 that do not export, 17 are companies providing local services, an activity sector in which exports are more difficult to occur and are rarer. Data were also crossed, in **Table 1** below, the respondents' age, gender and education level were evaluated in terms of correct answers and non-answers per question.

Through **Table 1**, it is possible to observe that 22% of the female respondents got all the financial literacy questions right and 24% of the men also did so, which can demonstrate a very similar level of knowledge regardless of the gender of the participants. People aged between 36 and 45 years were the ones who got the most questions right, with a percentage of 35%, followed by 29% of people aged between 25 and 35 years and 22% of respondents in the age group between 56 and 70 years old, the lowest percentage of correct answers was from the group aged between 46 and 55 years old, with only 6%.

Table 1. Financial Literacy and sociodemographic variables.

	N	%	Interest		Inflation		Diversification		Planning		All	
			Correct	NA	Correct	NA	Correct	NA	Correct	NA	Correct	NA
Age												
25 - 35	7	13	4	2	5	0	6	1	3	1	2	0
36 - 45	20	37	17	2	15	4	15	5	11	0	7	0
46 - 55	17	32	15	2	15	1	11	5	1	3	1	1
56 - 70	9	17	7	1	8	1	7	1	4	2	2	0
Gender												
F	23	43	18	3	19	1	16	7	8	0	5	0
M	29	55	24	4	23	5	22	5	11	5	7	1
NN	1	2	1	0	1	0	1	0	0	1	0	0
Ed												
2°	1	2	0	0	1	0	1	0	1	0	0	0
3°	4	7	4	0	3	1	4	0	1	1	1	0
4°	9	17	7	1	7	0	6	2	1	2	1	0
5°	3	6	3	0	2	1	3	0	2	0	1	0
6°	26	49	21	5	22	3	18	7	10	3	6	1
7°	9	17	7	1	7	1	6	3	4	0	3	0
8°	1	2	1	0	1	0	1	0	0	0	0	0

Caption: N = Number of observations, % = Frequency in percentage, Correct = Number of correct answers, NA = Number of people who said they did not know the answer, F = Female, M = Male, NN = Number of people who do not identify with any gender, Ed = Education, 1st = 1st Complete Education Cycle, 2nd = 2nd Complete Education Cycle, 3rd = 3rd Complete Education Cycle, 4th = Complete Secondary Education, 5th = Technological Specialization Course, 6th = Complete University Degree, 7th = Postgraduate or Complete Master's Degree, 8th = Complete Doctorate. Source: Own elaboration.

When talking about the level of education, as expected, the highest percentages of correct answers belonged to people with a level of education superior to technological specialization, however, as the samples had different sizes, in general, the groups obtained percentage values related to the total of correct answers, very similar to each other.

None of the respondents studied only up to the 1st Complete Education Cycle, so there are no data for this group. In the group comprising people who have completed the 2nd Education Cycle, there was only one respondent, who got the inflation, risk and financial planning questions right, but missed the interest rate question, in the total percentage of correct answers, relating the four questions, this group scored 0%.

In the 3rd Complete Education Cycle, there was a 100% success in the question of interest and in the question of risk, in the topic inflation, there was 75% of correct answers and in the financial planning, it was 25%, representing the correct answer of only one person of the four belonging to this group, in the general hit, the group obtained 25%, only one of the respondents answered all the questions correctly.

In the analysis of the fourth group, 78% of correct answers were identified in the interest and inflation questions, 67% in the risk question and only 11% in the financial planning question, regarding the general percentage of correct answers, in this group only one respondent correctly answered all questions, representing 11% of the group of people with Complete Secondary Education.

Of the respondents in the fifth group, respondents who have Technological Specialization, there was a 100% success rate on the interest and risk questions and 67% success on the inflation and financial planning questions; overall, only one of the participants got all the questions right, which was equivalent to 33% of the group.

The sixth group, referring to the group that has Completed University Education, is the group with the largest number of people, represented by 26 of the 53 respondents. 81%, corresponding to 21 people, correctly answer the question of interest; 85%, corresponding to 22 people, answered the inflation question correctly; 69%, that is, 18 people, got the question of interest right; 38%, corresponding to 10 people, answered the financial planning question correctly; and 6 people answered all questions correctly, which refers to 23% of the total group.

In the seventh studied group, related to people with a Postgraduate or master's degree, 78% of the respondents correctly answered the interest and inflation questions, 67% got the risk question right, 44% got the financial planning question right, and 33% of the respondents got it right all questions.

Finally, the group related to people with a Complete Doctorate Degree, had only 1 respondent, who got the questions about interest, inflation and risk right and missed the financial planning question, in the general percentage related to the correct answers to all questions, this group obtained 0%.

In general, and for all levels of education, the interest and inflation questions

were the ones that obtained the highest number of correct answers, being answered correctly by 43 of the respondents (a number equivalent to 81%), showing that within the studied sample, there is more knowledge about calculating interest rates and understanding the concept of inflation than about making decisions regarding risk and financial planning and creating an emergency reserve.

In **Figure 1** below, the percentage of correct answers obtained, the percentage of participants who got each answer wrong or who did not know how to answer it will be presented. On the question relating to interest, 6% of respondents answered incorrectly and 13% said they did not know the answer. In the question about inflation, the percentage of error was 8% and 11% said they did not know the answer. In the question associated with risk, the highest percentage was related to those who did not know how to answer (23%), while 4% answered incorrectly. Finally, the financial planning question was the one with the highest number of errors, with 58% of respondents providing incorrect answers and 11% saying they did not know the answer.

In an illustrative way, **Figure 1** shows that there was a percentage of correct answers above 70% for 3 of the 4 questions applied regarding financial literacy, which makes it possible to say that the study group has a good understanding of concepts and is able to perform calculations related to the topic in question.

In the next topic, the percentage of correct answers by turnover group will be analyzed. In this analysis, the objective is to understand whether the companies that earn more are, effectively, those with managers who have greater knowledge about financial literacy.

In **Figure 2**, it is possible to see that in the group represented by companies that earn less than €250,000, corresponding to 17 of the companies who responded, there were a greater number of correct answers to questions related to interest and inflation. In the group represented by companies with a turnover between 250 thousand euros and less than 500 thousand euros, the highest percentage of correct answers was related to the question of risk.

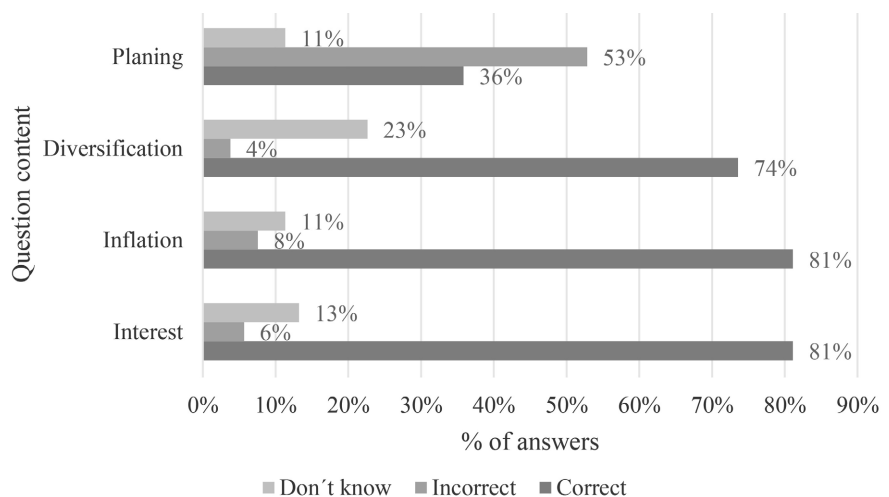


Figure 1. Percentage of correct answers per question. Source: Own elaboration.

In the group represented by companies with a turnover between 500 thousand euros and 1 million euros, the highest percentage of correct answers was similar to that of the 1st group and was related to inflation and interest questions and in the group represented by companies with a turnover between more than 1 million euros and 2 million euros, the highest percentage of correct answers was related to the question of interest, followed by a tie between the questions of inflation and risk.

The group represented by companies that earn between more than 2 million and less than 5 million euros, similarly to the previous group, obtained a higher percentage of correct answers on the question of interest, followed by a tie between the questions of inflation and risks.

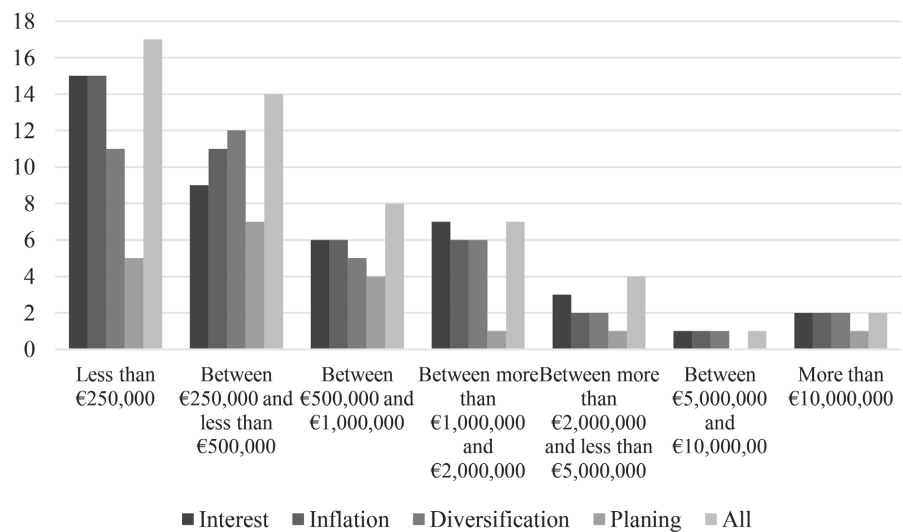


Figure 2. Own turnover vs. correct answers per question. Source: Own elaboration.

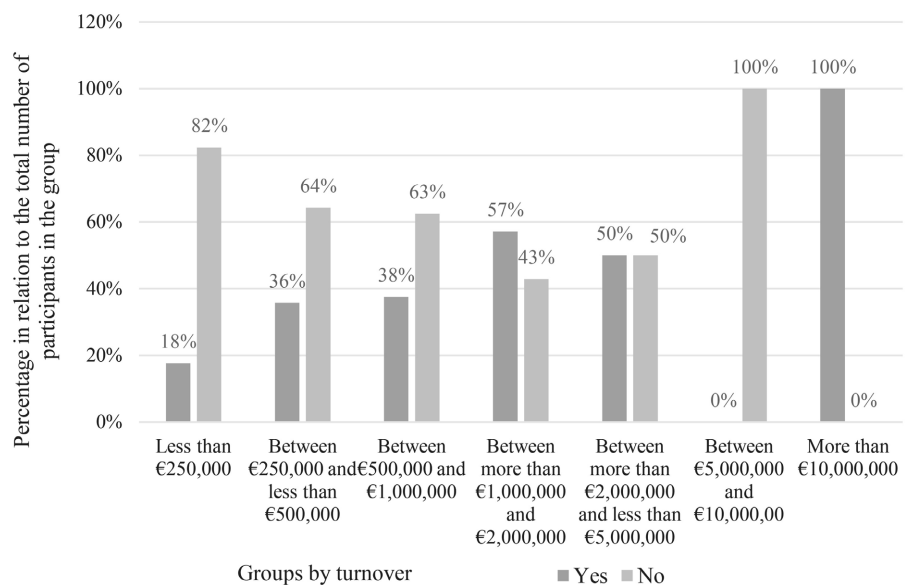


Figure 3. Export criteria vs. volume of business. Source: Own elaboration.

The companies with values between 5 million and 10 million euros, obtained equal success in questions of interest, inflation and risk and finally, the companies which have a turnover superior to 10 million euros, also obtained proportional successes between the questions of inflation, interest and risk.

The above figure (**Figure 3**) shows the intersection between the turnover and the international relation of the companies, in this case, if there is or not the practice of export activities. “Yes” is presented for companies that export and “no” for companies that do not.

As expected, the percentage of companies that export, compared to the total number of companies within each group of turnover gaps, grows in line with the increase in the interval related to the turnover. That is, for the case studied, the greater the turnover of companies, the greater the chances that they will carry out export activities.

5. Conclusion

At the end of this investigation, it was possible to notice that, effectively, the entrepreneurs and managers of the companies with the highest values of turnover were those who obtained the best results (greater number of correct answers) in the questions of financial literacy.

In the general analysis, it was possible to notice that the vast majority of respondents had completed university education, which allows us to say that, apparently, this level of education provides the individual with great ability to calculate interest rates, a great understanding of the concept of inflation and a good understanding about the risk in investments.

When comparing this study with similar studies, which also dealt with financial literacy, it was possible to perceive that in this work, the greater was the correct answers given by the respondents, the greater was the turnover obtained by the institution too. In the case studied by [Agarwal et al. \(2015\)](#), the level of knowledge in financial literacy increased according to the level of education and the aggressiveness of the investors surveyed.

Through the analyzes carried out in this investigation, it was also possible to perceive that the highest percentages of correct answers were given by the group of male respondents and who are in the age group between 36 and 45 years old, and by those who had an education level, equal or superior to university study, which could be considered as a profile within this work.

To the future investigations, it is suggested that the study should be replicated in other regions of the country in order to carry out comparative research at the national level.

Another possibility is to investigate the financial knowledge of professionals from other areas that are not linked to the business sector, such as people from the health or technology area, with the aim of verifying whether financial knowledge is a result of the profession they exercise.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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