An Integrated Approach on MSMEs Financial Literacy

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ARTICLE INFO	ABSTRACT
	Purpose: The main objective of this paper is to suggest an integrated approach of assessing the level of financial literacy of MSMEs, combining quantitative data derived by the use of the OECD/INFE (2019) questionnaire, and qualitative data via designing focus groups to discuss the survey results with various stakeholders and get policy recommendations. **Design/methodology/approach:** We apply a two-stage methodology; we first use the specifically designed OECD/INFE (2019) questionnaire, and we second apply qualitative focus-group analysis methodology, where we create groups of stakeholders to discuss MSMEs financial literacy. **Findings:** Stage 1 results show that the financial literacy score of Greek MSME owners is 60.23%, very close to the adult population OECD (2020) percentage. In stage 2, we discuss the scores and survey results with stakeholders in focus groups and we get specific recommendations in the MSMEs financial literacy field, from an MSMEs policy perspective. **Research limitations/implications:** The main limitation of this study is the small sample of MSME owners that participated in the first stage of our methodological approach. The main practical implication of this paper is that the MSMEs stakeholders' bodies can offer useful insights in the MSMEs financial literacy field. **Originality/value:** This study contributes to the field of MSMEs financial literacy (FL) by suggesting an integrated approach in measuring the financial theory of MSMEs, by including both quantitative and qualitative data. We believe that, by suggesting the inclusion of qualitative data derived from the MSMEs stakeholders' bodies, to complement the quantitative outcome via the application of the OECD structured questionnaire, we can reach better conclusions regarding the MSMEs FL field.

1. Introduction

Financial literacy is defined as the "*ability to read, analyze, manage and communicate about the personal financial conditions that affect material well- being*" (Vitt et al., 2000). Focusing on the specific financial concepts under financial literacy, most definitions include aspects such as money basics, borrowing, investing and protecting resources (Huston, 2010). Governments and international organizations have recognized the importance of financial literacy since the beginning of the 20th century. Probably the first action for the improvement of financial literacy came from the USA with the Smith-Lever Act (USDA) in 1914, which developed university programs for research and teaching the public "useful and practical information" about a range of topics, including personal finance. In recent years, many developed countries have developed strategies and programs for the financial literacy of high school students and adults. The OECD has been particularly active in the field, developing a series of initiatives, starting with the Financial Education Project in 2003[1], followed by a publication of best practices in 2005[2], while in 2008 the Organization created the

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[1]https://www.oecd.org/finance/financial-education/oecdfinancialeducationprojectbackgroundandimplementation.htm
[2]https://www.oecd.org/finance/financial-education/35108560.pdf

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International Network on Financial Education (OECD/INFE) which aims at collecting and sharing data and good practices, developing methodologies and policy instruments and promoting their implementation and monitoring[3].

Financial literacy is a broad field that expands from primary school pupils to pensioners, and from self-employed to micro and small -sized entrepreneurs (MSMEs)[4]. Studies have shown that financial literacy positively affects their performance and overall strategy and is essential for their survival (Davidson, 2004; Wise 2013; Allgood & Walstad, 2016). In this context, the World Bank (2014) reported that financial literacy could help MSMEs, and especially those in the informal sector, overcome their financial constraints and address their financial exclusion[5], while the OECD (2017)[6] pointed out that we should identify the needs of micro and small entrepreneurs in financial competency and collect evidence on their financial literacy. It should be highlighted that the particular area of MSMEs is of great importance for all economies, since they consist of the majority of enterprises worldwide, contribute significantly to employment and their effectiveness is rather crucial for inclusive growth (Ioannidis & Giakoulas, 2023).

Although the importance of financial literacy is undisputed in a series of fields in the economic life of various stakeholders, the respective research level on the specific subfield of micro and small entrepreneurs and its links with relative fields in their economic activity is very fragmented. It is only very recently that this particular area of the financial literacy of micro and small entrepreneurs seems to have started attracting the interest of the academic community, as evidenced by the recent works of Anshika & Singla (2022) and Grana-Alvarez et al. (2022) who both offer a systematic literature review in this field. Both papers highlight the fragmented research efforts, particularly in the area of measuring the financial literacy of micro and small entrepreneurs. To date, perhaps the most coherent effort to measure MSMEs[7] financial literacy is that of OECD/INFE (2019), which constructed a detailed questionnaire that splits financial literacy into three dimensions, each containing a number of entrepreneurship-related questions, developed to measure financial literacy aspects. However, the OECD/INFE questionnaire, despite being the broader and most conclusive available questionnaire to date, still provides a relatively "narrow" scope of the financial literacy field in question, since it measures financial literacy based on the small entrepreneurs' input and from their perspectives, missing important qualitative aspects in a broader stakeholders' context. It thus fails to offer an integrated approach of the MSMEs financial literacy field in question.

This is the main idea behind the paper. Namely to suggest an integrated approach of assessing the level of financial literacy of MSMEs, combining quantitative data derived by the use of the OECD/INFE (2019) questionnaire, and qualitative data via designing focus groups to discuss the survey results with various stakeholders and get policy recommendations. In this context, we apply a respective two-stage methodological approach. In stage one, we apply the specifically designed OECD/INFE (2019) questionnaire, as the most effective available tool to measure MSMEs financial literacy to date. In stage two, we apply qualitative focus-group analysis methodology, where we create groups of stakeholders to discuss MSMEs financial literacy. This way, we gain insights from both the focus instrument (MSMEs) and the general environment (stakeholder institutions), which allows us to shape a more integrated picture of the financial literacy issue in question. Our dataset of MSMEs respondents is small, and this is the main limitation of our paper. However, the primary objective of this paper is to suggest an integrated approach of assessing the level of financial literacy of MSMEs, and not to focus on the actual numeric results derived; we believe that the approach we suggest triggers a new academic route in the MSMEs financial literacy context.

The remainder of the paper is as follows. Section 2 defines financial literacy and discusses the challenging field of measuring financial literacy in general, gradually focusing on MSMEs, and concluding that the OECD/INFE (2019) questionnaire even if being, to date, the best tool available to use, should be complemented with qualitative approaches as well, to get a more integrated picture of the field in question. Section 3 reviews the academic literature in the MSMEs financial literacy field. Section 4 discusses the methodology, Section 5 presents the results, while Section 6 concludes the paper.

2. MSMEs Financial literacy; definition and measurement

There are plenty of conceptual definitions of financial literacy that describe the abilities, attitudes and financial concepts that a financial literate person should possess. On the abilities and attitudes, most definitions include elements such as the knowledge of specific financial concepts, being able to communicate about these concepts, the ability to manage personal finances, the ability to make appropriate financial decisions and planning for the future financial needs (Remund, 2010). In this context, as also mentioned above, one of the most widely accepted definitions

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[3]https://www.oecd.org/financial/education/oecd-international-network-on-financial-education.htm

[4]In this paper, we use the MSMEs abbreviation for micro and small enterprises and the SMEs abbreviation for micro, small and medium-sized enterprises.

[5]ACCA (January 2014) – Financial Education for Entrepreneurs: What Next?

[6]https://www.oecd-ilibrary.org/docserver/bb2cd70c-en.pdf?expires=1648078596&id=id&accname=guest&checksum=26F04A0392BA8AAA864C8FB7D1E566C2

[7]We use the terms "MSMEs financial literacy" and "micro and small entrepreneurs' financial literacy" interchangeably. The focus of the study is on the individual, the entrepreneur him/herself.

is the "*ability to read, analyze, manage and communicate about the personal financial conditions that affect material well- being*" (Vitt et al., 2000)[8].

Another definition is that of OECD which defines financial literacy as "the process by which financial consumers/investors improve their understanding of financial products, concepts and risks and, through information, instruction and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to go for help and to take other effective actions to improve their financial well-being" (OECD, 2005).

As regards the definition of financial literacy of micro and small enterprises, looking at the literature for a workable definition, probably the most concrete and inclusive is of OECD/INFE who define financial literacy of MSMEs as "the combination of awareness, knowledge, skills, attitudes and behaviour that a potential entrepreneur or an owner or manager of a micro, small or medium-sized enterprise should have in order to make effective financial decisions to start a business, run a business, and ultimately ensure its sustainability and growth" (OECD, 2018)[9]

Measuring financial literacy is not an easy endeavour. Lusardi & Mitchell (2011) note that "*while it is important to assess how financially literate people are, in practice it is difficult to explore how people process economic information and make informed decisions about household finances*". In this respect, there have been many attempts for the measurement of financial literacy through converting the concepts described above into measurable criteria. These criteria are used to assess the level of financial literacy of a given population sample through surveys.

There are already several survey-based tools that focus on measuring the economic and financial literacy in various stakeholder subfields. From the American Developmental Economic Education Program (DEEP) context (Soper & Brenneke, 1981) to the National Endowment for Financial Education (NEFE) program (Danes, 2004), numerous studies have been constantly evaluating the levels of financial literacy for high school students (Braunstein & Welch, 2002; Mandell, 2008). There are much more studies conducted for adults, where the impact of financial literacy on adults' life is measured (Lusardi & Mitchell, 2011; Fornero & Monticone, 2011; Bucher-Koenen & Lusardi, 2011; Sekita, 2011).

There is also a number of studies to compare financial literacy, mainly on different categories of adults, across countries. For example, the World Bank has deployed a series of comparable surveys since 2006 in developed and developing countries concluding that financial literacy is significantly lower in the later (Xu & Zia, 2012), while another wide survey has been that of Standard and Poor's which measured the financial literacy of 150.000 adults in 140 countries (Klapper et al., 2014). In general, the financial literacy field for adults and students is indeed relatively exhaustive.

However, the picture is more blur when it comes to measuring financial literacy for MSMEs; it seems that the overall field of financial literacy and MSMEs is rather fragmented, consisting of individual research efforts with different approaches that do not provide a coherent picture of an overall financial literacy level. Some of these efforts are described in the paragraphs that follow.

Brown et al. (2006) conducted a survey on the financial literacy of 147 new business owners in UK. The questionnaire included a quite wide range of concepts such as financial investments, prior seeking of financial advice or educational programs and their perceptions on their perception and confidence on their level of financial skills. Sage (2012) conducted a survey regarding the financial literacy of 300 SME owners in Canada. They focused on their overall perceptions, knowledge, and habits on the concepts of financial management, resources, and compliance. Pearl & Eileen (2014) focused on researching the financial literacy of startups in the USA. They addressed a questionnaire in 14 small firms which was practically a test on their level of their financial understanding as part of the financial analysis of the firms. Fatoki (2014), deployed a survey on the level of financial literacy of micro enterprises owners in Johannesburg – South Africa. The survey included simple questions of every day financial practices such as financial planning, bookkeeping, funding sources, understanding of business terminology, use of technology and business insurance. Plakalović (2015) surveyed the financial literacy of 51 business owners/managers in Banjaluka and East Sarajevo regions. The survey included questions on everyday financial issues such as the estimation of their profitability, the usage of financial reports and financial analysis etc.

Conclusively, there are several studies investigating the financial literacy of MSMEs and providing useful insights, but they do not have a common ground on the aspects of financial literacy they investigate. Anshika & Singla (2022) cite more than 20 studies, and Grana-Alvarez et al. (2022) cite 71 studies in their systematic literature reviews regarding SMEs financial literacy and describe the broad spectrum of parameters and conceptualization approaches that researchers use in their studies.

In this context, probably the most coherent and inclusive survey of measuring the level of financial literacy of small entrepreneurs to date is that of OECD/INFE (2019). The survey provides a common framework for surveying and measuring the financial literacy of MSMEs. The OECD/INFE (2019) questionnaire includes common questions that are categorized into the three basic aspects of financial literacy: a. financial knowledge, b. financial behaviour, and c. financial attitudes. It then compiles all responses and brings back a score for each category and a total financial

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[8]https://www.researchgate.net/publication/240619141_Personal_Finance_and_the_Rush_to_Competence_Financial_Literacy_Education_in_the_US
[9]https://www.oecd.org/finance/financial-education/OECD-INFE-core-competencies-framework-on-financial-literacy-for-MSMEs.pdf

literacy score. As such, the methodology captures all different angles of financial literacy, specifically designed for micro and small entrepreneurs, thus providing a clear picture of the respective level of financial literacy of the respondents.

However, the OECD/INFE (2019) questionnaire uses input from MSMEs owners only and thus provides a relatively one-sided picture of the financial literacy level of MSMEs. We suggest that the OECD/INFE (2019) methodology should be accompanied and complemented with qualitative tools, to capture a broader range of the issue in question. This qualitative approach should capture the opinions of various stakeholders and relative institutions (i.e. banks, MSMEs representatives, alternative investment financiers, civil society organizations) in a way that discusses the MSMEs financial literacy related issues and provides a better understanding of the problem at hand.

3. Financial literacy and MSMEs financial performance

SMEs consist of the majority of enterprises worldwide, and significantly contribute to employment and value added. For example, in Europe, SMEs account for 99.8% of the total number of enterprises, employ the 65.0% of total number of persons employed and produce the 53.0% of total value added (SME Annual Report, 2022). In this respect MSMEs' economic and financial performance is rather crucial for inclusive growth. In this respect, G20 and OECD in their common publication on High-Level Principles on SME financing in 2015 set 11 principles for improving MSMEs financial literacy and access to finance. One of the principles suggests to "Enhance SME financial skills and strategic vision"[10].

Financial literacy is of crucial importance for businesses and especially MSMEs. One strand of the academic literature of SMEs is simply to measure financial literacy using various approaches, as discussed in the previous section. In this context, following on the literature references presented in the previous section, Fatoki (2014), showed very low levels of financial literacy for micro enterpises in the Johannesburg area, and Plakalovic (2015) also showed that only 20% of the business owners/managers in Banjaluka and East Sarajevo regions participants were found financial literate.

Some studies enlarge the research context and link financial literacy to specific entrepreneurship traits, within the individual approach of the researcher. In this context, the afore mentioned Sage (2012) survey showed that respondents were weak in dealing with taxes, managing sales and marketing, and managing the finances of their businesses and more competent at dealing with clients, dealing with suppliers and managing the finances of their businesses. Brown et al. (2006) indicated that despite the business owners' awareness of their lack in financial literacy, they barely understood what their exact financial needs are and also displayed a lack of knowledge on where to find products and services to cover these needs. Last, Pearl & Eileen (2014) showed that half of the start-up owners they researched did not review their financial statements regularly and experienced financial difficulties.

Apart from just measuring the level of financial literacy of MSMEs, many studies have shown significant relation of the level of financial education of MSME owners and the performance of the firm. For example, Fernandes (2015) surveyed a sample of 103 MSME owners in North Portugal and found that significant positive correlation between their financial literacy and the Return on Assets of their firms. Likewise, Menike (2019) addressed a questionnaire to 378 MSME owners in Sri Lanka investigating the effect of their financial literacy on their businesses sales, total assets and in the number of permanent employees as employed and found a positive impact. Additionally, as the findings of Bayrakdaroğlu & Şan (2014) and Wise (2013) support, the enhancement of financial literacy of SMEs could improve their access in financial market instruments and tools and thus strengthen their position.

4. Methodology

Based on the conceptual framework described above, we designed and applied an integrated approach, to capture MSMEs financial literacy in a multi-dimensional way. Specifically, we apply a two-stage methodology combining quantitative and qualitative information, collected from MSMEs themselves plus general stakeholders related with the issue in question, as follows. In stage one, we apply the OECD/INFE (2019) questionnaire, which was specifically designed to measure MSMEs financial literacy, considering this questionnaire as the most effective available tool to measure MSMEs financial literacy to date. In stage two, we design and apply a qualitative focus-group analysis methodology, where we create groups of stakeholders to discuss the MSMEs financial literacy issue. These two stages are discussed in detail in the paragraphs that follow.

Stage one: the OECD/INFE Questionnaire

The OECD/INFE (2019) questionnaire consists of around 50 questions[11] structured across the following categories:

    1.   Screening (QC1-QC5 questions)

The main purpose of these questions is to make sure that the respondent has some minimum features that qualify him/her to go on with the interview process. For example, if the respondent answers that he runs a branch or non-profit business, then the interview stops. Similarly, if the respondent answers that he is not the owner of the business,

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[10]https://www.oecd.org/finance/G20-OECD-High-Level-Principles-on-SME-Financing.pdf
[11]The exact number of questions that each respondent is asked to provide answers to, depends on how the respondent answers in some specific questions, which may lead to additional questions that appear.

then the interview stops. If the respondent answers that the company employs more than 50 employees, then the interview stops, etc.

2.   Characteristics of the business (QC6-QC10 questions)

These questions are designed to capture firm specificities, like turnover, years in operation, exports, main activity (sector) etc.

3.   Financial products (QP questions)

These questions capture the respondents' familiarity and usage of financial products. For example, if the company has a current/savings account at a traditional/online bank, if they have heard/used of bank overdrafts, business loans, invoice discounting, micro-credit, trade credit etc., how they made their choice about using a financial product or service, etc.

4.   Managing and planning business finances (QM questions)

These questions capture how respondents think about and plan business finances, where entrepreneurs are asked if they have received any help from other people (i.e. business partners, book-keepers, business advisors, banks etc.) in taking financial decisions, if they have asked help for specific matters (i.e. how to manage cash, how to access external financing, advice on tax-issues etc.), how they keep track of the financial records of the business (i.e. with the use of a dedicated software, in paper form, via an accountant etc.), if they plan for retirement, how much they agree or disagree (4-level Liker scale) on specific statements about a range of business issues (i.e. data security, comparison of financing sources, profitability forecast etc.).

5.   Financial knowledge and attitudes (QK questions)

These questions capture whether the respondent can understand simple financial concepts and tools like the interest, the balance sheet, dividends, equity, the Return-on-Assets ratio, etc.

6.   Financial education and protection (QF questions)

The respondent is asked here if s/he has received any training on how to manage business finances, training on personal management and how if they train themselves regularly on business financing related issues.

7.   Demographics (QD questions)

This category includes the usual demographics like gender, age, educational level, years of experience as a business owner etc.

8.   Business performance (QG questions)

This category includes questions measuring the perceptions of MSMEs owners, if their business has been successful during the last year, if specific indicators (i.e. turnover, profits etc.) have increased and at what grounds the gross profit ratio was.

The overall financial literacy score is computed as the sum of the financial knowledge, financial behaviour and financial attitudes questions, where each category is called "aspect". It is important to note that *only a sub-set* of all questions contained in the eight categories above, are taken under consideration when calculating the individual score per financial aspect. Specifically, to calculate the individual score for the financial knowledge aspect, the OECD/INFE (2019) methodology uses 8 QK questions; to calculate the individual score for the financial behaviour aspect, the OECD/INFE (2019) methodology uses a mix of QP and QM questions, 10 in total; and to calculate the individual score for the financial attitudes aspect, the OECD/INFE (2019) methodology uses 4 QK questions. The exact questions per aspect and the exact answers and scores per question are shown in detail in the results section. For each correct answer, one (1) point is added to the score. The overall financial literacy score is determined in the following two simple stages.

First, the individual score for each of the three aspects (financial knowledge, financial behaviour, financial attitudes) is calculated. For each question used, all correct answers are added and then divided by the number of total answers; this provides the average score of each aspect:

$$Aspect_x = Avg(\frac{Sum\ of\ correct\ answers}{Total\ answers})\ \%\ (1)$$

Second, the following formula is applied to get the overall financial literacy score, which is the weighted average of the three aspects:

$$Overall\ Score = \frac{(Financial\ Knowledge\% * 8) + (Financial\ Behavior\% * 10) + (Financial\ Attitude\% * 4)}{22}\ (2)$$

The OECD/INFE guidelines do not specify a score for an "acceptable" financial literacy level for the MSME survey. A target score would be helpful in identifying *relative* levels of financial literacy, per each aspect. However, in their adult survey, OECD-INFE (2020) report the average score per aspect and per country (p.17 / normalized to 100). Specifically, OECD/INFE (2020) reports an average overall financial literacy score of 60.5, allocated per aspect as follows: 62.8 for financial knowledge, 59.2 for financial behavior and 59.2 for financial attitude. These average figures provide respective thresholds for evaluating financial literacy levels. In this paper, we adopt these average scores reported in the OECD/INFE (2020) adult survey, as thresholds according to which the MSMEs financial literacy level is evaluated. The reason we compare adults' financial literacy (FL) to that of micro and small entrepreneurs (MSMEs) is twofold: a. there are already plenty of studies that look at adults' FL levels, but not many

regarding MSMEs' FL levels, so we underline this gap in the literature, and b. there is no official threshold set from OECD for MSMEs FL, while there is indeed a respective threshold for the adults' category; thus, we use this figure as a threshold to assess the MSMEs FL levels accordingly.

Stage two: stakeholders' focus groups

The application of the OECD/INFE questionnaire provides interesting information, in a quantitative basis, from the entrepreneurs' perspective. This piece of information is important on its own, however it can be considered as relatively "narrow", because the source of the information is entrepreneurs themselves. To broaden the context of the financial literacy issue in question, we designed and implemented three focus groups, that consisted of different stakeholders related with this issue. Specifically, after having got the results of the questionnaire, and thus possessing important information of the entrepreneurs' views on several aspects of financial behaviour, attitudes and knowledge, we discussed these results with different stakeholders (funding schemes, Institutions, Business Associations, MSMEs owners etc.), to get their views and reflection. Specifically, we structured the interview process as follows: 1. we first communicated the main conclusions derived from the OECD questionnaire and replied to any questions the stakeholders had, regarding any results-related details, 2. we focused on specific issues that each specific stakeholder would be more fit to discuss, 3. we jointly shaped the stakeholder's conclusions, derived from the entire interview process. This way, we were able to a. inform stakeholders about the results of the questionnaire, b. gain insights of how they reflect on these results and what their views are, and c. initiate a discussion around this issue, that could lead to follow-up initiatives from the stakeholders' side. This is how we view the integrated approach on the MSMEs financial literacy field.

5. Data

There are two data collection exercises, each for each stage discussed in the methodology section. As regards stage one, where we collected data from face-to-face interviews from Greek entrepreneurs, we followed the OECD/INFE (2019) guidelines which are the following (in brief):

- Owners. The survey aims at interviewing the business owner (or one of them in case of multiple owners) as long as s/he is involved in taking financial decisions for the business.
- Business size. The survey covers owners of MSMEs, including self-employed people and one-person businesses, employing fewer than 50 people (including owners, managers, all types of part-time and full-time employees regardless of their job contract, but excluding unpaid family members).
- For-profit businesses. The survey focuses on businesses for profit and excludes not-for-profit organizations.
- Formal/informal businesses. Based on the national context, countries may decide whether and to what extent they would like to cover informal (non-registered) businesses. We only covered registered businesses.

Our final sample consists of 20 micro and small enterprises from various sectors (catering, insurance services, tourism, cleaning services, etc.), from the Attica province. All entrepreneurs were interviewed face-to-face, at their premises, and the data collection exercise took place during January to end of February 2021.

The second dataset consists of qualitative data on an open interview-based questionnaire, upon which an open discussion took place in the context of each focus group. The focus group participants were the following: a. focus group 1: 9 entrepreneurs who had already participated to the survey of stage 1, b. focus group 2: representatives of Bank of Greece and various funding schemes and c. focus group 3: social partners in Greece, ie the Association of Enterprises and Industries (SEV), the Hellenic Confederation of Trade and Entrepreneurship (ESEE), the Association of Industries Of Greece (SVE), the Chamber of Crafts and the General Confederation Professional Craftsmen of Greece (GSEVEE).

Specifically, the first group consisted of a sample of MSME owners who took part in the survey. The purpose of this first focus group was to inform MSME owners about the overall results of the survey stage, to discuss these results, to get their reflection on the most important issues revealed, and to therefore collect qualitative information to be communicated with the "external" stakeholders that would follow in the next two focus groups. The second focus group consisted of representatives of funding schemes and the Bank of Greece. The purpose of this focus group was to capture the reflection of the "financing supply" side of how they perceive the issue of financial literacy. The third focus group consisted of social partners and business associations in Greece. We discussed with them the overall results of the survey plus the main outcomes of the previous two focus group, in an effort to take the issue further at a policy design level, in the financial literacy context.

5. Results

Stage one: the OECD/INFE Questionnaire

In this section, we present the answers for each of the three dimensions of the overall financial literacy score[12]. Tables 1, 2 and 3 show the questions[13] that comprise the financial knowledge, financial behaviour and financial

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[12] We only present the questions and respective results associated with the financial literacy score.
[13] We only show questions and results, and we do not indicative answers, to avoid excess table sizes. For the entire question including indicative answers please see the Appendix.

attitude scores respectively, following the OECD/INFE guidelines. Scores are categorized as high (>65%), moderate (55-65%) and low (<55%). Table 4 shows the overall financial literacy score.

As regards financial knowledge, results show that respondents score relatively high in understanding the concepts of risk (QK7_4), and inflation (QK7_5), moderate to high regarding interest (QK3, QK4), moderate regarding dividends (QK7_2) and low in understanding the balance sheet (QK5), the ROA ratio (QK6) and the interrelation between equity and control (QK7_3). The total average score of the financial knowledge aspect (57.50%) is moderate (Table 1).

As regards financial behaviour, results show that respondents score relatively high in keeping track of financial records (QM3), in thinking about retirement (QM6), in theft strategies (QM8), and in forecasting profitability (QM9_4), moderate in keeping secure data and information (QM9_1), financial-based decision making (QM9_2) and adjusting business to economic factors (QM9_5), and low in keeping separate personal and business accounts (QP2), shopping around for a financial product/service (QP5) and comparing the cost of different sources of finance (QM9_3). The total average score of the financial behaviour aspect (64.50%) is also moderate (Table 2).

As regards financial attitude, results show that respondents score relatively high in a day-to-day effort to manage business finances (QK2_4) and setting long-term financial goals (QK2_1), and low in financial planning (QK2_5) and confidence in approaching external financing sources (QK2_2). The total average score of the financial attitude aspect (55%) is also moderate (Table 3).

Last, regarding the overall financial literacy score, this is formed at the level of 60.23% (Table 4).

Table 1: Financial Knowledge Questions and score

Question number	Question	Value towards final score	Correct answers	Correct answers/Total answers (%)
QK3	Imagine that someone puts €100 into a <no fee, tax free> savings account with a guaranteed interest rate of 2% per year. They don't make any further payments into this account and they don't withdraw any money. How much would be in the account at the end of the first year once the interest payment is made?	1 for correct response [102]. 0 in all other cases.	14	70%
QK4	…and how much would be in the account at the end of five years [add if necessary: remembering there are no fees or tax deductions]?	1 for correct response [More than €110]. 0 in all other cases.	13	65%
QK5	Could you tell me which of these best describes a balance sheet?	1 for correct response [1]. 0 in all other cases.	3	15%
QK6	Could you tell me which of these best describes the Return-on-Assets ratio (ROA)?	1 for correct response [3]. 0 in all other cases.	6	30%
QK7_2	Dividends are part of what a business pays to a bank to repay a loan	1 for correct response [false]. 0 in all other cases.	13	65%
QK7_3	When a company obtains equity from an investor it gives the investor part of the ownership of the company	1 for correct response [true]. 0 in all other cases.	8	40%
QK7_4	If a financial investment offers the chance to make a lot of money it is likely that there is also a chance to lose a lot of money	1 for correct response [true]. 0 in all other cases.	17	85%
QK7_5	High inflation means that the cost of living is increasing rapidly	1 for correct response [true]. 0 in all other cases.	18	90%
Total Average Score:				**57.50%**

Table 2: Financial Behaviour Questions and score

Question number	Question	Value towards final score	Correct answers	Correct answers/Total answers (%)
QP2	Separation account: You mentioned that you have a current or savings account for your business. Can you tell me which of these statements best represents your situation?	1 for separate account [3]. 0 in all other cases.	8	40%
QP5	Shopping around: Which of the following statements best describes how you made your most recent choice about a financial product or service for the business?	1 for shopping around [1 or 4]. 0 in all other cases.	8	40%
QM3	Keeping track of financial records: How do you keep track of the financial records of the business?	1 for keeping track formally [1, 2, 4, 5]. 0 in all other cases.	19	95%
QM6	Thought about retirement: Have you thought about how you will fund your own retirement or maintain yourself when you will no longer work due to old age?	1 if thought about how to fund retirement [1]. 0 in all other cases.	15	75%
QM8	Strategies to cope with theft: Imagine that tomorrow you discover that most of the equipment that you need to operate the business has been stolen (it could be computers, vehicles or other equipment). Which one of these statements best represents what you would do?	1 for thinking ahead of a way of insuring the equipment [1 or 2]. 0 in all other cases.	15	75%
QM9_1	I keep secure data and information about the business	1 for agreeing [4 or 5]. 0 in all other cases.	13	65%
QM9_2	I decide whether to make an investment on the basis of the financial data of the business	1 for agreeing [4 or 5]. 0 in all other cases.	12	60%
QM9_3	I compare the cost of different sources of finance for the business	1 for agreeing [4 or 5]. 0 in all other cases.	10	50%
QM9_4	I forecast the profitability of the business regularly	1 for agreeing [4 or 5]. 0 in all other cases.	17	85%
QM9_5	I follow changes in economic factors to adjust the course of business operations	1 for agreeing [4 or 5]. 0 in all other cases.	12	60%
Total Average Score:				**64.50%**

Table 3: Financial Attitude Questions and score

Question number	Question	Value towards final score	Correct answers	Correct answers/Total answers (%)
QK2_1	I set long term financial goals for the business and strive to achieve them	1 for long-term attitude [4 or 5]. 0 in all other cases.	15	75%
QK2_2	I am confident to approach banks and external investors to obtain business finance	1 for confident attitude [4 or 5]. 0 in all other cases.	5	25%
QK2_4	I try to influence the state of my business finances in the future with my day-to-day behavior	1 for long-term attitude [4 or 5]. 0 in all other cases.	16	80%
QK2_5	I prefer to follow my instinct rather than to make detailed financial plans for my business	1 for prudent attitude [1 or 2]. 0 in all other cases.	8	40%
Total Average Score:				**55.00%**

Table 4: Overall financial literacy score

	Financial Knowledge	Financial Behaviour	Financial Attitude	Overall Score
Total number of questions	8	10	4	22
Total number of participants	20	20	20	20
%	57.50%	64.50%	55%	60.23%

$$\frac{Financial\ Knowledge\% * 8 + Financial\ Behavior\% * 10 + Financial\ Attitude\% * 4}{22} =$$

$$\frac{(57.5\% * 8 + 64.50\% * 10 + 55.00\% * 4)}{22} = 60.23\%$$

This overall financial literacy score (60.23%) is very close to the pre-set threshold of 60.5%, as reported in the OECD/INFE (2020) adult survey.

Stage two: stakeholders' focus groups

We designed and organized three focus groups with stakeholders, as discussed in the methodology section.

The first focus group took place on 16/06/2021 and consisted of 9 MSME owners, who had previously taken part in stage one as respondents. We initially presented the questionnaire results and then asked the participants to comment on these results. The discussion that followed mainly focused around the competency areas that the scores were low. The main conclusions from this focus group are the following. The MSME owners mentioned that it is impossible for an entrepreneur to know ex ante if he meets the conditions for the approval of a bank loan (QK2_2), while they highlighted that, according to their views, banks do not seem to encourage entrepreneurs to possess high levels of knowledge around banking products and services (QP5), so that they remain dependent of the bank they already have a relationship with. MSME owners also highlighted that there is a lack of relevant educational programs regarding financial issues that concern them (QF1-not included in the financial literacy score), and that they typically ask help from a business partner or an accountant for such issues (QM1-not included in the financial literacy score).

The second focus group took place on 30/06/2021 and consisted of representatives from the Bank of Greece and various funding schemes, i.e. business angel investors, crowdfunding experts and one Initial Coin Offerings (ICOs) expert. Again, the meeting started by referring to the main results of the questionnaire, and a discussion followed. The Bank of Greece highlighted the importance of financial literacy of MSMEs. Representatives of the various financing schemes stressed that businesses have different needs and therefore entrepreneurs need a more individualized approach. In this respect, it would be more effective for an entrepreneur to work with a specialized consultant (QM1-not included in the financial literacy score) instead of attending generic educational programs. For the time being, the only field that entrepreneurs ask for external help from consultants is the field of tax and respective issues (QM2-not included in the financial literacy score).

The third focus group which took place on 15/07/2021, and consisted of social partners and business associations, such as the Association of Enterprises and Industries (SEV), the Hellenic Confederation of Trade and Entrepreneurship (ESEE), the Association of Industries Of Greece (SVE), the Chamber of Crafts and the General Confederation Professional Craftsmen of Greece (GSEVEE). Social partners also stressed the need to improve MSMEs financial literacy through targeted actions and customized training tools. They specifically noticed that in the past they had implemented some programs for the improvement of economic/financial knowledge of their members but highlighted the absence of a rigid national strategy. Specifically, participants highlighted the need for training programs on personal money management (QF1-not included in the financial literacy score). Finally, they proposed the extension of the current study to a larger population in order to draw safer conclusions.

5. Conclusion and Recommendations

This paper explores the field of financial literacy of MSME owners, a relatively underdeveloped area in academic literature. We apply a two-stage methodology to suggest an integrated approach in measuring financial literacy; we first use the, specifically designed for MSMEs, OECD/INFE (2019) questionnaire, and we then discuss the questionnaire results and emerging issues thereafter with MSMEs owners themselves and various stakeholders. We thus capture aspects deriving from both the "demand side" of the MSMEs financial literacy field, namely the MSME owners themselves, as well as the "supply side", namely the various stakeholders interested in this field.

Our results show that the overall financial literacy score of small and medium entrepreneurs is 60.23%, very close to the international study on the general adult population conducted by the OECD/INFE in 2020. Regarding the three aspects of financial literacy, the financial knowledge and attitudes scores in our study is 57.5%, and 55% respectively, lower than the corresponding percentages of the OECD/INFE (2020) study, which stand at 62.8% and 59.2% respectively. On the other hand, the financial behaviour score we get from Greek MSMEs is 64.50%, higher than the 59.2% in OECD/INFE (2020). As regards the input we got from the qualitative aspect of our study from the focus groups with stakeholders, one main conclusion was that all stakeholders highlighted the importance of financial literacy of MSMEs. Also, stakeholders mentioned that businesses have different needs and therefore entrepreneurs need a more individualized approach and that, in this context, specialized consultants could play a significant role. Last, MSMEs organizations focused mainly on the various training programs that could be shaped in the financial literacy field. Overall, Greek MSMEs seem to lie at a moderate level of financial literacy, while stakeholders have expressed their interest in this field, and have highlighted specific actions that can be taken to improve this field. The fact however that there are relatively big variations across the *individual* questions per aspect of financial literacy, is very helpful in identifying specific actions in areas that MSMEs owners score low.

The main limitation of this study is the small sample of MSME owners that participated in the first stage of our methodological approach. However, the main purpose of this paper is not to focus on the results themselves, rather, it is to suggest an integrated approach of measuring financing literacy of MSMEs owners, that could be applied in other countries as well. Therefore, as regards the present study, expanding it to a larger population is a key priority in order to analyze a larger sample of companies covering all areas of entrepreneurship. This would allow us to explore possible differentiations across various features of MSMEs owners, for example the industry factor, the age and education levels of MSMEs, etc., analyses which now cannot be conducted because of the very small sample of our study.

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