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Universidade de Lisboa

MASTERS IN MANAGEMENT (MIM)

MASTERS FINAL WORK

DISSERTATION

FINANCIAL MANAGEMENT PRACTICES AND PROFITABILITY IN MICROENTERPRISES: EVIDENCE FROM PORTUGAL

JOANA ALMEIDA BRAGA

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ACKNOWLEDGEMENTS

First, I would like to express my gratitude to my supervisor, professor Maria João Guedes, for her valuable advice, recommendations, and availability.

I am also very grateful to Metathesis, the microenterprise where I started my career path and grew as a professional. I have learned a lot during the year we worked together. And the topic of this study was certainly influenced by this experience.

Finally, I would like to thank my family.

I am extremely grateful for my parents, who made it possible to accomplish this achievement. Thank you for being the example you are for me.

To Pedro, thank you for always pushing me further. Thank you for the support, the review readings, the endless patience, and the bags of candies. I am very lucky to have you by my side.

Last but certainly not least, to my favourite person in the whole world, Avô Zé. Wherever you are, I hope you are proud of me.

RESUMO

As microempresas têm um papel central no desenvolvimento económico e social dos países, representando, em Portugal, 96% do tecido empresarial. No entanto, estas empresas apresentam taxas de sobrevivência mais baixas quando comparadas com empresas de maior dimensão e enfrentam diversas restrições a nível financeiro.

Pelo seu peso na economia, torna-se extremamente importante compreender os fatores que contribuem para a performance e consequente sucesso das microempresas. O objetivo deste trabalho é analisar se as práticas de gestão financeira impactam a rendibilidade das empresas portuguesas.

Assim sendo, foram analisadas 140 microempresas portuguesas e as suas práticas de gestão financeira. No geral, os resultados obtidos indicam que as práticas de gestão financeira não têm um impacto na rendibilidade das microempresas.

Palavras-Chave: *Práticas de Gestão Financeira, Gestão Financeira, Rendibilidade, Microempresas*

ABSTRACT

Microenterprises play a central role in the economic and social development of every country. In Portugal, these firms represent 96% of the entrepreneurial fabric. However, microenterprises appear to be less resilient than large companies as they present lower survival rates and face specific financial restrictions.

Given their importance, understanding what contributes to the performance and survival of these firms is extremely important. The aim of this study is to investigate whether the financial management practices of Portuguese microenterprises influence profitability. In this sense, primary data was collected from 140 microenterprises.

Overall, the results obtained indicate that perceived financial management practices do not have an impact on the profitability of microenterprises.

Keywords: *Financial Management Practices*, *Financial Management*, *Profitability*, *Microenterprises*

ABBREVIATIONS

AIS: Accounting Information System

CCC: Cash Conversion Cycle

FMP: Financial Management Practices

IASB: International Accounting Standards Board

IES: Informação Empresarial Simplificada

IFRS: International Financial Reporting Standards

IRR: Internal Rate of Return

MIRR: Modified Internal Rate of Return

NPV: Net Present Value

PI: Profitability Index

ROA: Return on Asset

ROE: Return on Equity

ROS: Return on Sale

SME: Small and Medium Enterprise

WCM: Working Capital Management

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CHAPTER 1 - INTRODUCTION

Small and Medium Enterprises (SMEs) play a decisive role on the economic and social development of every country.

In Portugal, SMEs represent the majority of all private sector firms, making it the country with the second-largest share (Eurostat, 2019). There are 1.3 million actively trading firms representing 99% of all enterprises and employ more than 4,3 million people (77% of labour force), contributing with almost €250 million per annum in turnover to the economy. (Pordata, 2019).

Despite being considered engines of growth, SMEs face particular financial constraints when compared to larger firms (Patel & Guedes, 2022). SMEs have limited resources to compete (Ang, 1991), weaker internal management and control systems (Teittinen, Pellinen, & Jarvenpaa, 2013), register more instability on their cash-flows (Gupta, Wilson, Gregoriou, & Healy, 2014), and therefore, lower liquidity which results in significant barriers in accessing credit markets (Berger & Udell, A more complete conceptual framework for SME finance, 2006). Additionally, SMEs face greater information asymmetries which aggravates their access to external capital (Ang, 1991).

SMEs are composed of micro, small, and medium enterprises. Microenterprises represent 96% of the Portuguese economy (Pordata, 2019) and, given their characteristics, are likely to experience these challenges in a more pronounced way. This is evidenced by their survival rates as almost 25% do not survive their first 4 years (Banco de Portugal, 2011).

To that end, it is pivotal to understand what can contribute to the survival of these firms. One aspect that can play a role in enterprises' growth and profitability is its Financial Management, especially because there are major differences between how large

and small firms run their finances. However, to date and to the best of my knowledge, no study has investigated whether financial management practices employed by microenterprises in Portugal affect profitability.

The thesis is organized as follows. First, by means of a literature review, the concepts of Microenterprises and Financial Management are defined, and an overview of financial management practices is presented. Then, a description of data and methodology adapted is provided, followed by an analysis of the findings. Finally, Chapter 5 contains the conclusions and limitations of the study.

CHAPTER 2 - LITERATURE REVIEW

2.1. Small Medium Enterprises and Microenterprises in Portugal

According to the European Commission, the definition of SME considers three criteria: staff headcount, annual turnover, and annual balance sheet total (European Commission, 2015). A SME employs less than 250 individuals and has either an annual turnover lower or equal to €50 million or a balance sheet total not exceeding €43 million. Microenterprises have less than 10 employees and an annual turnover or balance sheet total lower than €2 million.

The Portuguese entrepreneurial fabric is predominantly constituted by SMEs and microenterprises: in 2019, 99.9% of the non-financial companies were SMEs and, of those, 96.0% were microenterprises (Pordata, 2019), a higher share when compared to EU figures (European Commission, 2019). SMEs contribute heavily to national turnover, when compared to large companies (56.5%) and play a central role in the labour market, as they employed more than two-thirds of the national labour force, with microenterprises representing almost 45% (Pordata, 2019).

TABLE 1 - SMEs in Portugal: Head count and Turnover

Enterprise	**Number**		**Head Count**		**Turnover (millions)**	
Category	**Nº**	**% of Total**	**Nº**	**% of Total**	**€**	**% of Total**
Micro	1 281 857	96.0%	1 887 051	44.7%	€ 78 207	17.8%
Small	44 492	3.3%	813 849	19.8%	€ 81 477	18.5%
Medium-Sized	7 300	0.5%	643 892	15.9%	€ 88 760	20.2%
SMEs	1 333 649	99.9%	3 344 792	77.4%	€ 248 445	56.5%
Total	**1 335 006**	**100.0%**	**4 320 492**	**100.0%**	**€ 439 742**	**100.0%**

Source: Pordata (2019)

2.2. Microenterprises and Financial Constraints

Despite the importance of Microenterprises in the Portuguese economy, evidence shows that the smaller the enterprise, the lower its ability to survive in the market. Microenterprises have a survival rate of 89% in their first year, compared with 98% for SMEs and almost 100% for large companies. At 19 years of activity, rates decline to 31%, 56%, and 75%, respectively, clearly representing the vulnerability of microenterprises (Banco de Portugal, 2011).

The numbers presented call for further investigation in order to understand what can be contributing to these small rates of survival.

2.2.1. Liability of Smallness

The influence of size on firms' profitability, performance, and survival has been a subject of interest for several years. There are two commonly known factors that help explain a positive relationship between them: economies of scale and economies of scope. On the one hand, economies of scale allow for dispersion of fixed costs. It can be beneficial for firms as it encourages specialization and increases productivity; creates stronger relationships with both suppliers and clients; and enables lower discount and interest rates (Becker-Blease, Kaen, Eterabi, & Baumann, 2010). On the other hand, economies of scope refer to the possibility of internalizing the production of different products, further reducing costs (Yang & Chen, 2009).

Nevertheless, there are other factors that help explain the effects of size on firms, such as the limitations faced by not achieving a certain size (Fonseca, Guedes, & Gonçalves, 2022). The literature commonly refers to this as "*Liability of Smallness*". Aldrich & Auster (1986) believe that liability of smallness emerges from (i) the lack of financial resources and support, (ii) managerial weaknesses. On the one side, small firms

have limited control over market conditions (Aldrich & Auster, 1986). Previous research identified fundamental financial issues that are different between SMEs and large firms. Compared with large firms, SMEs face limited growth opportunities, with limited resources available to compete and smaller asset bases, which can lead to a weaker internal management control system (Teittinen, Pellinen, & Jarvenpaa, 2013) and lower competitiveness. At the same time, SMEs face more instability in cash-flows (Gupta, Wilson, Gregoriou, & Healy, 2014) as they usually have less power with suppliers and less stable relationships with their customers (Kaufmann, Kreft, Ehrgott, & Reimann, 2012). Finally, all the above-mentioned constraints are reflected in the high barriers SMES face in accessing credit markets. Reduced asset bases are translated into lower collateral availability, increasing the cost of accessing external funds (Berger & Udell, A more complete conceptual framework for SME finance, 2006). Lower financial support leads to fewer opportunities to invest in new projects or to improve operational processes (Fonseca, Guedes, & Gonçalves, 2022).

Additionally, SMEs face greater information asymmetries. For example, some firms face agency problems when managers make decisions that will prioritize their own benefit (reputation and individual wealth) instead of the company's (Ang, 1991; Jensen & Meckling, 1976). Additionally, firms can also face information problems (greater credibility issues, small incentives for a third party to collect information for sale since the market for that information is smaller); failure costs (as small enterprises face higher costs of market imperfections such as higher proportional legal, accountancy and auctioning fees); taxes; and transaction costs (Ang, 1991).

Simultaneously, managerial weaknesses make survival problematic for small firms. These include deficiencies in the personal characteristics of executives such as an insufficient view of the market, reluctance to transfer responsibilities, rigidity, and

inadequate reporting (Aldrich & Auster, 1986). Moreover, small firms have difficulty in attracting qualified personnel as the perceived offer of a long-term career is limited when compared to large firms (Aldrich & Auster, 1986).

On average, a Portuguese microenterprise has an asset base 350 times lower than large firms and employs two individuals (while large firms employ on average 708) - (Banco de Portugal, 2020). Hence, from both financial and human resources management points of view, it is expected that these challenges are even more pronounced for microenterprises.

2.3. Financial Management

The main objective of this study is to investigate whether financial management practices of Portuguese microenterprises influence profitability.

Financial management is an integral part of overall management concerned with the effective management of business funds (Paramasivan & Subramanian, 2009). Financial management, also called Corporate Finance, is the managerial activity that is involved with planning and controlling the firm's resources (Pandey, 1999), and it has a central role in the success of small firms (Meredith & Mantel, 2015). Neves (1998) believes that, as time evolves, the functions of the financial manager will be increasingly important, contributing directly to the business volume and profitability.

The purpose of financial management is to, ultimately, maximize the financial wealth of the business owner, which is a function of the amount, timing, and risk of cash-flows a company receives (McMahon & Stanger, Understanding the Small Enterprise Financial Objective Function, 1995). Hence, it aims to increase both profitability and liquidity.

When reviewing the existing literature on financial management in SMEs and microenterprises, there is evidence that the theory of modern corporate finance is not fully

adapted to small businesses' reality. For example, the stylized theoretical firm is assumed to have access to external capital market, for debt and equity (Ang, 1991), and it might not reflect the reality for SMEs and, especially, for microenterprises.

Literature on the financial management of microenterprises is scarce. However, as microenterprises face specific financial challenges such as financial and human resource constraints (Aldrich & Auster, 1986; Teittinen, Pellinen, & Jarvenpaa, 2013), difficulties in accessing credit markets (Berger & Udell, A more complete conceptual framework for SME finance, 2006), and information asymmetry issues (Ang, 1991), their financial management is considerably different from large firms. This occurs not only due to their size but also the way small business owner-managers make decisions (Abdulsaleh & Worthington, 2013). In this sense, the role of financial management is exacerbated as poor financial management appears to be one of the major causes of their failure (Hall & Young, 1991). Hence, firms must overcome these constraints to improve performance and assure survival (Patel & Guedes, 2022).

2.3. Financial Management Practices

Researchers focus on different aspects of financial management practices, depending on their objectives. Armstrong (2006) identifies five key activities of financial management: financial planning, financial accounting, financial analysis, management accounting, and capital appraisal and budgeting. McMahon, et al. (1993) divided financial practices into three different branches – Accounting information systems, financing decisions, and investing decisions. Regarding SMEs, Kieu (2001) focused on the relationship between financial management practices, and characteristics of SME's profitability in Vietnam and considered the following areas: accounting information systems, financial reporting, and analysis, working capital management, financial

structure management, financial planning and control, financial advice, and financial management expertise.

Taken together as the adopted practices, this study will focus on five financial management practices: working capital management, investing decisions, financing decisions, accounting information systems, and financial reporting and analysis.

2.3.1. Working Capital Management

The main purpose of Working Capital Management (WCM) is to sustain the optimum balance of account receivables, inventory, and account payables. WCM has become one of the most important issues in firms because of its effects on profitability and risk and, therefore, its value (Smith, 1980; Richards & Laughlin, 1980; Vijayakumaran, 2019). It has a central role for smaller firms as they have limited access to long-term capital markets and heavily rely on short-term funds (Walker & Petty, 1979).

Previous literature demonstrates that the impact of WCM is not only important for financial equilibrium, but it can also impact profitability (Shin & Soenen, 1998; García-Teruel & Martínez-Solano, 2007; Pais & Gama, 2015). Simultaneously, WCM is also impacted by the choices of capital structure. Most firms have a significant amount of cash invested in WCM and large amounts of short-term payables as a source of financing (Deloof, 2003). At the same time, and according to the Pecking Order Theory, firms tend to rely on internal funds to finance themselves (Myers & Majluf, 1984) which can lead to higher amounts of cash and equivalents to avoid both lack of resources and the need for external sources (Chen, 2004). The Trade-off Theory suggests that firms set an optimal level of liquidity to balance the costs (e.g., low rates of returns, tax disadvantages) and benefits (e.g., savings of transaction costs, financing through liquid assets) of holding cash (Kraus & Litzenberger, 1973; Scott, 1977).

As WCM impacts liquidity and profitability, inefficient management may lead to short-term losses even for a firm with favourable long-run prospects (Richards & Laughlin, 1980).

Previous research shows an inverse relationship between profitability and Cash Conversion Cycle (CCC) - shorter CCC tend to be more profitable as they minimize the cost of holding less profitable assets, such as cash and equivalents (Jose, Lancaster, & Stevens, 1996; Wang, 2002). There is also evidence that profitability can increase as accounts receivables reduce (less profitable firms tend to delay the payment period to suppliers (Deloof, 2003). On the other hand, other studies do not identify a statistically significant impact of account receivables on profitability (García-Teruel & Martínez-Solano, 2007).

Considering the Portuguese context, Valadas (2015) focused on 4.616 Portuguese firms and found the same conclusions as previous studies – an inverse and statistically significant relation between profitability and CCC. Pais & Gama (2015) analysed a sample of 6.063 SMEs and found that a reduction of the levels of inventory and a reduction in accounts receivables and payables days are related with higher levels of profitability. Gomes (2013) using a sample of 41.536 firms, defends that there is an optimal level of working capital that maximizes profitability that is sensitive to industry, size, location, and age. Additionally, the author defends that CEO's demographic and educational characteristics are positively related to profitability.

2.3.2. Investing Decisions

Capital budgeting (fixed asset management or capital investment decision) is the financial assessment of the capital investment opportunities of a company (Al-Mutairi, Naser, & Saeid, 2018). It consists in the long-term planning of the available or future

capital to maximize profitability (Fabozzi & Peterson, 2009). Unlike short-term investment decisions, it implies committing funds of the company for a period longer than one year, and it might impact a company's strategic position within the industry.

Capital investment decisions are crucial to financial success and are considered one of the most important decisions an owner or manager must make. On the one hand, they usually require a considerable capital outlay, and, on the other hand, they imply long-lasting and recurring obligations. Hence, capital budgeting might be more important to smaller companies than large enterprises (Brigham, 1995). Given their characteristics, microenterprises are more likely to face information problems leading to under or over-investment situations (unadjusted expectations, riskier positions, higher exiting costs, etc.), (Ang, 1991).

Therefore, it is vital that decision-makers understand how to correctly evaluate projects and choose which to invest in or to reject. When reviewing the existing literature on capital budgeting techniques in SMEs, Sarwary (2019) listed several appraisal techniques such as net present value (NPV), internal rate of return (IRR), modified internal rate of return (MIRR), Profitability Index (PI), Payback Period, Accounting rate of return, Return on Assets, discounted payback, etc. The most commonly used in the studies reviewed by the author is the Payback period.

However, there is evidence that some decision-makers rely on their *gut feeling* to make investing decisions as a capital budget technique instead of normative rationality when evaluating investments (Danielson & Scott, 2006; Ekanem & Smallbone, 2007; Harjoto & Paglia, 2012). The gut feeling is based on the extensive learning experience of the decision-makers and its surroundings, suggesting it can be beneficial in some cases (Ekanem & Smallbone, 2007).

2.3.3. Financing Decisions

The availability of financial resources has been pointed as a fundamental factor in the development and sustainable growth and profitability of SMEs (Ou & Haynes, 2006). Microenterprises differ significantly from large firms in terms of their financing decisions as they frequently face problems of lack of capital base. Interest on choices of capital structure date back to Modigliani Miller's Capital Structure Theory. The authors argue that the value of a firm is not affected by capital structure choices (Modigliani & Miller, 1963). However, some new theories have emerged as authors questioned this assumption. The financial growth cycle paradigm of Berger & Udell (1998), defends that throughout the company's life cycle, the financial needs and resources available for SMEs change. Initially, firms rely on inside funds as external resources are difficult to obtain because of informational opacity (Berger & Udell, The Economics of Small Business Finance: The Roles of Private Equity and Debt Markets in the Financial Growth Cycle, 1998), absence of trade history (Cassar, 2004), and the risk of failure (Huyghebaert & Van de Gucht, 2007). As information becomes more available and the ability to provide collateral increases, firms start to attract more attention from investors. Finally, in more advanced stages, asymmetric information decreases and it's possible to assess equity markets (Berger & Udell, The Economics of Small Business Finance: The Roles of Private Equity and Debt Markets in the Financial Growth Cycle, 1998). However, this theory contrasts with the Pecking Order Theory developed by Myers (1984). The author suggests that internal sources are prioritized while the use of external sources is delayed until the internal ones are exhausted. On the other hand, there's the Trade-off theory that argues that firms try to reach an optimal level of debt, balancing the direct and indirect costs of

financial distress and the benefits of debt, such as tax-saving and reducing agency conflicts (Kraus & Litzenberger, 1973; Scott, 1977).

Works by Sánchez-Vidal & Martín-Ugedo (2005) on Spanish firms and Matias & Serrasqueiro (2017) on Portuguese firms support the idea that SMEs act according to the Pecking Order framework.

2.3.4. Accounting Information Systems

An Accounting information system (AIS) refers to a subsystem of the information system. The main purpose of AIS is to collect, process, and report information related to the financial aspects of business events, producing meaningful outputs for decision making (Gelinas, Dull, & Wheeler, 2010).

AIS plays a critical role as organizational mechanism that are necessary for the effectiveness of decision making by the management and control in organizations (Hall J. A., 2011) and the biggest advantage of computer-based AIS is the automation and increased efficiency of reporting (Romney & Steinbart, 2012). Technological advances widen the range of possibilities of the use of AIS from an operational perspective to a strategic one (Grande, Pérez, & Colomina, 2011).

Previous research has found that AIS can positively impact on company's performance, profitability, and operations efficiency (Ismail & King, 2005; Naranjo-Gil, 2004). Financial awareness among SMEs decision makers varies considerably and the use of AIS for the preparation of management accounting information is not at its full potential (Marriot & Marriot, 2000). Optimal use of AIS allows for a better adaptation to a rapidly changing environment (as it provides instant access to organized information and is able to prepare reliable forecasts) and increases the flow of communication improving both internal and external relationships (Grande, Pérez, & Colomina, 2011).

These advantages have a considerable impact on microenterprises that face specific challenges and can benefit from the AIS to minimize uncertainty and vulnerability.

2.3.5. Financial Reporting and Analysis

Portuguese enterprises report their finances according to the Accounting Standardization System (CNS), based on the international accounting standards of the International Accounting Standards Board (IASB) – the International Financial Reporting Standards (IFRSs). This is a set of guidelines widely adopted by several countries and determines how transactions and other accounting events are required to be reported in financial statements. In this sense, financial statements can be consistent, reliable, transparent, and comparable across all companies, market sectors, and countries.

Microenterprises, however, have simplified reporting requirements – the Accounting Normalization for Micro-entities. For this purpose, micro-entities are considered to be companies that, at the balance sheet date, do not exceed two of the following limits: (i) Total Balance Sheet of 500.000€; (ii) Net turnover of 500.000€; (iii) an average number of five employees during the year (Lei n.º 35/2010 de 2 de Setembro, 2010). These entities are only obligated to disclose their Balance Sheet, Income Statement, and an annex with information about the company's characterization, main accounting policies, detail on fixed assets, leases, inventories, provisions, public subsidies, income taxes, financial assets and liabilities, equity and other information considered relevant for the interpretation of the results.

However, bookkeeping alone does not provide enough information for managerial decisions. Financial analysis is required to evaluate a company's performance and to assess if it is creating value for its shareholders or not. Additionally, it should also explain the reason behind such results, main achievements, and weaknesses to tackle in order to

contribute to the strategic guidelines of the company (Neves, 1998). There are several types of financial analysis that are mainly focused on the company's survival and performance. Financial ratios (Annex I) allow the comparison of the firm's performance over time and between similar firms.

Most studies on the importance of financial reporting and analysis focused on large firms, which generally have the resources and obligation to satisfy reporting requirements. As stressed by Argilés & Slof (2003), there is an absence of empirical research to support the idea that accounting reports are a valuable control tool in small firms. Several studies also reinforce that small firms give little use of their traditional accounting reports, as they are not well understood (Dang, Marriott, & Marriott Pru, 2006). Despite being obligated to report financial information, a large share of Portuguese companies does not use it in an efficient way, assuming it has only legal and fiscal purposes (Marcos, Naia, & Silva, 2001).

Previous research on small firms found that while 81% of the firms produced financial reports, only 11% used that information in the decision-making process (DeThomas & Fredenberger, 1985). Additionally, enterprises with more comprehensive reporting in terms of quantity and frequency were more likely to utilize financial analysis (McMahon & Davies, Financial reporting and analysis practices in small enterprises: their association with growth rate and financial performance, 1994).

2.4. Profitability

Profitability can be defined as a relative measure that reflects the efficiency and the performance of a firm (Ilaboya & Ohiokha, 2016). McMahon & Stanger (1995) consider profitability one of the most important purposes of financial management practices, determining a business failure or success.

However, profitability is a very complex attribute of a firm to conceptualize and measure (Ross, Westerfield, Jade, & Jordan, 1999). Accounting profits are measured by the difference between revenues and costs. It is considered a limited measure as it does not consider risk or opportunity costs. Existing literature pointed several ratios to measure profitability, such as Return on Assets (ROA), Return on Equity (ROE), and Return on Sales (ROS). Following García-Teruel & Martínez-Solano (2007) and Patel & Guedes (2022) this study will use ROA as a measure of profitability.

In sum, there is evidence that microenterprises face greater financial challenges when compared to larger firms. Hence, firms should be careful when managing their finances in order to overcome these constraints. In the following chapters, we will analyze the relationship between financial management practices of Portuguese microenterprises and profitability.

CHAPTER 3 - DATA DESCRIPTION AND METHODOLOGY

3.1. Data Description

For this study, data was obtained using an online questionnaire sent via e-mail using the *Qualtrics* software. The questionnaire was the selected method to collect the information since it is easily distributed, low cost, and does not require in-person contact (which is taken as a benefit during the COVID pandemic). The main disadvantages are the possibility of lower response rates, as emails can be easily ignored (Hoonaker & Carayon, 2009). With the objective of ensuring the full comprehension of all questions, the questionnaire was tested by management professionals before its final version was sent.

The target companies were Portuguese firms with less than 10 employees. Contacts were requested to Informa D&B and a total of 3.194 e-mails were sent. To achieve a higher number of response rates, the questionnaire was sent three more times to the respondents who had not completed it. A total of 212 questionnaires was received. However, only responses of board members, accountants, or financial professionals were considered. The final sample comprises 140 respondents, which represents a response rate of approximately 4,4%.

Additionally, the financial and performance information of the respondents was retrieved from the IES (*Informação Empresarial Simplificada*) form obtained from the INFORMA D&B database.

The sample was analysed and the variables to study were defined. The definition of variables was done, following previous literature, based on how financial management practices could influence the profitability of microenterprises. A complete description of the sample is available in Annex II. Of the 140 individuals that form the sample, 66.4% are male, 62.9% have ages between 41 and 60 years, 85% have undergraduate, master, or Ph.D. degrees and 77.9% have financial, economic, or management educational backgrounds. Additionally, 60.0% of the responses came from the person responsible for the company. 58.6% works for the firm for at least 10 years.

Regarding the characteristics of the firms, the average firm is in activity for 19 years, 36.4% have more than 20 years of activity and 55.0% employ a maximum of 2 employees. 34.4% are family firms. The sample included 35 different activity sectors. The sectors with the higher representativity are real estate related (29.3%), followed by consultancy services (10.7%) and wholesale activities (9.2%).

3.2. Variables Description

This study is designed to develop a model and test the association between financial management practices and microenterprises profitability. For that, variables had to be defined and measured clearly.

3.2.1. Financial Management Practices

Financial Management Practices are a complex and multi-dimension concept. Based on previous literature, this study divides Financial Management Practices into five different subjects: Working Capital Management (WCM), Financing Decisions (FIN), Investing Decisions (INV), Accounting Information Systems (AIS), and Financial Reporting and Analysis (FINREP). Respondents were asked how frequently the firm performed financial management practices within the five dimensions above mentioned. Frequency was measured through a five-point scale where 1 equal never and 5 means very frequently. The extent of efficiency was measured by the average score obtained in each subject –WCM, FIN, INV, AIS and FINREP.

The WCM indicator was defined as a measure of the respondents' perception of the company's cash, receivable, and inventory management practices. Respondents were asked a total of 16 questions, divided into the three subtopics – cash management, accounts receivables management, and inventory management – that aimed to understand how often the firm, for example, prepared cash budgets, reviewed accounts receivables, and checked for obsolete inventory. The Cronbach's alpha coefficient of the scale is 0.88, meaning the measure has good reliability (DeVellis, 1991).

The responses were then combined into a single mean measure. The lower the mean, the less frequently WCM practices are perceived to be performed.

Respondents' perception regarding the efficiency of financing decisions were measured by how frequently the respondents indicated the company performed activities, such as the analysis of the companies cost of equity and cost of debt, the comparison of different credit proposals. The Cronbach's alpha coefficient of the scale is 0.85, meaning the measure has good reliability (DeVellis, 1991). Similar to WCM, responses were combined into a single mean measure.

Respondents' perception regarding the efficiency of investing decisions were measured by how frequently the respondent indicated the company applies quantitative techniques for capital project evaluation, preparation of budgets, and how sophisticated the analysis is. The Cronbach's alpha coefficient of the scale is 0.86, meaning the measure has good reliability (DeVellis, 1991). Once again, responses were combined into a single mean.

Perceptions on the efficiency of Accounting Information Systems were defined by how frequently the firm uses the AIS to produce and analyse financial information and its importance on the decision-making process. The Cronbach's alpha coefficient of the scale is 0.90, meaning the measure has good reliability (DeVellis, 1991). A single mean was then computed by combining the responses.

Finally, respondents' perception of Financial Analysis and Reporting were defined by how often firms prepare their financial demonstrations, compare their results with their budgets, and define KPIs. The Cronbach's alpha coefficient of the scale is 0.93, meaning the measure has very good reliability (DeVellis, 1991). As computed on the previous indicators, responses were combined into a single mean.

3.2.2. Company's Profitability

The company's profitability was measured through the Return on Asset (ROA), computed as the ratio of Net Income to Total Assets. ROA measures the ability of the firm to create profits through an efficient use of resources. Financial information was obtained by IES (*Informação Empresarial Simplificada*) form obtained from the INFORMA D&B database.

When compared to Return on Equity (ROE) – the ratio between net income and equity – another measure commonly used to study profitability, ROA appeared to be more beneficial as it is less sensitive to leverage. For example, for firms with both negative net income and equity, ROE assumes a positive value which can be misleading as the firm is clearly underperforming.

3.3. Model Development

To examine the relationship between microenterprises profitability and financial management practices, a multiple linear regression analysis with the robust option was tested for four models, using the same variables and the *STATA* statistic software. The models are presented in equations 1 to 4. Profitability is the dependent variable, and the five components of financial management practices are the main independent variables. Furthermore, control variables were included to allow a deeper comprehension of other relevant variables that can affect profitability. These variables were divided into the firm-related variables and individual-related variables. Following Pais & Gama (2015), regarding company-related variables, it was considered the size of the firm (SIZE), measured as the logarithm of assets, its leverage (LEV), measured as total debt divided by total assets, current assets ratio (CAR), and current liabilities ratio (CLR). Additionally, it was considered information about the individual's gender (GENDER),

academic background (if he/ she had any academic background in management, finance, or economics - ECO_EDUC), and responsibility within the firm (MAX_RESP).

Additionally, the variables ROA and LEV were submitted to a winsorizing process to remove extreme values in data in order to diminish the effect of possible spurious outliers (Rousseeuw & Leroy, 1987).

Table 2 summarizes the variables included in the analysis.

TABLE 2 - Variables Description

Dependent Variable	
PROF	Return on Assets (Net Income/ Total Assets)*
Independent Variables	
Perception on Financial Management related Variables	
WCM	Respondents' perception regarding the company's WCM decisions.
INV	Respondents' perception regarding the company's investing decisions.
FIN	Respondents' perception regarding the company's financing decisions.
AIS	Respondents' perception regarding the company's AIS.
FINREP	Respondents' perception regarding the company's financial reporting and analysis practices.
Company related Variables	
SIZE	Logarithm scale of firms' assets (Log(Total Assets))
LEV	Financial leverage of the firm (Debt/ Total Assets) *
CAR	Current Asset Ratio (Current Assets/ Total Assets)
CLR	Current Liability Ratio (Current Liabilities/ Total Liabilities)
Individual related Variables	
GENDER	0 if female; 1 if male
ECO_EDUC	0 if does not have an economic/ finance/ management academic background; 1 if has an economic/ finance/ management academic background
MAX_RESP	0 if not the maximum responsible for the firm; 1 if the maximum responsible for the firm

Note: * Variable winsorized at 10% on each tail

Equation 1 concerns only the relation between profitability and the respondent's perception regarding the company's financial management practices (WCM, financing and investing decisions, AIS and Financial Reporting and Analysis); equation 2 adds control variables related to the firm (size, financial leverage, current asset ratio, and current liability ratio); equation 3 adds, instead, control variables, related to the individual (academic background and gender); finally, equation 4 combines all the above-mentioned dimensions.

$$PROF = \alpha + \beta_1 WCM + \beta_2 INV + \beta_3 FIN + \beta_4 AIS + \beta_5 FINREP + \varepsilon \quad (\mathbf{1})$$

$$PROF = \alpha + \beta_1 WCM + \beta_2 INV + \beta_3 FIN + \beta_4 AIS + \beta_5 FINREP + \beta_6 SIZE + \beta_7 LEV + \beta_8 CLR + \beta_9 CAR + \varepsilon \quad (\mathbf{2})$$

$$PROF = \alpha + \beta_1 WCM + \beta_2 INV + \beta_3 FIN + \beta_4 AIS + \beta_5 FINREP + \beta_6 ECO\_EDUC + \beta_7 GENDER + \beta_8 MAX\_RESP + \varepsilon \quad (\mathbf{3})$$

$$PROF = \alpha + \beta_1 WCM + \beta_2 INV + \beta_3 FIN + \beta_4 AIS + \beta_5 FINREP + \beta_6 SIZE + \beta_7 LEV + \beta_7 CLR + \beta_8 CAR + \beta_9 ECO_{EDUC} + \beta_{10} GENDER + \beta_{11} MAX_{RESP} + \varepsilon \quad (\mathbf{4})$$

CHAPTER 4 - RESULTS

4.1. Descriptive Statistics

This subsection presents the descriptive statistics regarding company profitability and the perception regarding financial management practices, meaning, working capital management, financing and investing decisions, accounting information systems and financial reporting and analysis.

TABLE 3 - Descriptive Statistics

	Min.	**Max.**	**Mean**	**SD**	**α**
Financial Management Practices					

Working Capital Management	1.44	5	3.56	0.74	0.88
Financing Decisions	1	5	3.50	1.01	0.85
Investing Decisions	1	5	3.85	-0.98	0.86
Accounting Information Systems	1	5	4.34	-0.79	0.90
Financial Reporting and Analysis	1	5	3.83	-0.96	0.93
Profitability					
ROA	-1.89	2.13	0.05	0.97	-

Note: α indicates Cronbach's alpha coefficient

4.1.1. Financial Management Practices

When analyzing the five subtopics of financial management practices, it is possible to observe that all display a positive result, with an average above 3, meaning that firms tend to perform with some regularity the practices presented. Financing decisions presented the lower average scores (3.50), whereas Accounting Information Systems registered the highest average score of 4.34 (Table 3).

Companies reported to frequently perform WCM practices, with an average of 3.56 (Table 3). As mentioned in Chapter 3, WCM divides into three subtopics. Regarding cash management practices 43.6% indicated to prepare cash budgets and cash reconciliation very frequently whereas 3.6% never perform these tasks (Table 4). Most of the firms rarely or never invest temporary cash flows surplus. This behavior may be related to the Pecking Order Theory and the importance of liquidity and internally generated funds for microenterprises (Myers & Majluf, 1984; Sánchez-Vidal & Martín-Ugedo, 2005; Matias & Serrasqueiro, 2017). Additionally, only 37.9% uses cash budgets as a tool for decision-making (Table 4).

On receivables management practices, respondents were asked questions about credit sales and policies, levels of receivables, and bad debts. 62.1% responded to sell their products on credit on a frequent or very frequent basis, whereas 16.4% do not sell

on credit. The majority has defined a credit policy and 54.3% reviews the levels of receivables very frequently (Table 4).

On inventory management practices, 60.7% responded to perform internal controls of inventory levels and 52.9% adjust it accordingly to sales forecasts frequently or very frequently. However, only 14.3% computes holding costs frequently (Table 4).

TABLE 4 - Findings on Working Capital Management Practices

Financial Management Practices – Frequency Level	1	2	3	4	5	Mean
Working Capital Management						**3.56**
1. The business prepares cash budgets and forecasts	5	7	20	47	61	4.09
2. The business controls cash-flows internally	8	13	31	37	51	3.79
3. The business carries out cash reconciliation	5	9	20	45	61	4.06
4. The business registers cash surplus/deficits.	17	17	34	40	32	3.38
5. The business invests of temporary cash surplus	35	34	28	31	12	2.65
6. The business uses cash budgets during the decision-making process	6	9	26	46	53	3.94
7. The business sells products or services on credit	23	16	14	41	46	3.51
8. The business has defined a credit policy	8	9	23	49	51	3.90
9. The business reviews levels of receivables	4	4	11	45	76	4.32
10. The business reviews bad debts	11	11	24	46	48	3.78
11. The business controls levels of inventory	23	9	23	48	37	3.48
12. The business plans orders to have quantity discounts	22	12	32	40	34	3.37
13. The business meets order deadlines	16	3	17	59	45	3.81
14. The business computes costs of holding inventory	27	20	39	34	20	3.00
15. The business registers obsolete inventory	39	28	30	27	16	2.67
16. The business adjusts the level of inventory according to sales forecasts	31	17	18	42	32	3.19

Note: Frequency scale (1 = Never; 2=Rarely; 3=Sometimes; 4=Frequently; 5= Very Frequently)

Regarding financing decisions, it would be expected that, given the importance of capital structure, firms would report performing these practices more often. However, as previously mentioned, this subtopic had the lowest average score of 3.50 (Table 3). Additionally, firms also reported to experience some difficulties in accessing external funds as only 53.6% reported doing it frequently or very frequently. Nevertheless, it is a common practice to compare different credit proposals (61.4% do it frequently or very

frequently). Additionally, 10% responded to never perform the above-mentioned practices (Table 5). When analyzing the firm's capital structure is possible to notice that the majority is mainly financed by equity as the average Debt-to-Equity ratio of the studied firms is 54.0%, which might explain these results.

TABLE 5 - Findings on Financing Decisions

Financial Management Practices – Frequency Level	1	2	3	4	5	Mean
Financing Decisions						**3.50**
1. The business easy accesses external funds	11	12	42	53	22	3.45
2. The business evaluates the impact of credit on future cash flows	14	18	34	49	25	3.38
3. The business analyses the firm's cost of capital	14	13	35	45	33	3.51
4. The business compares different credit proposals	14	10	30	38	48	3.69

Note: Frequency scale (1 = Never; 2=Rarely; 3=Sometimes; 4=Frequently; 5= Very Frequently)

On investing decisions, respondents were asked questions related to the frequency of evaluating investment projects, preparation of future cash-flows, and reviewing the efficiency of the assets after investing. Questions about the methods used to evaluate an investment were also asked. Overall, investing decisions registered an average of 3.85. Results show that 72.1% of the firms invest frequently or very frequently in long-term assets, whereas 4.3% do not perform this type of investment. The majority compares the obtained results with the expected ones, and 61.4% computes future cash-flows for the investment (Table 6).

TABLE 6 - Findings on Investing Decisions

Financial Management Practices – Frequency Level	1	2	3	4	5	Mean
Investing Decisions						**3.85**
1. The business evaluates the investment in long term assets	6	14	19	49	52	3.91
2. The business prepares forecasts of future cash-flows	8	13	33	47	39	3.69
3. The business compares the forecasted results with the results obtained.	3	10	28	47	52	3.96

Note: Frequency scale (1 = Never; 2=Rarely; 3=Sometimes; 4=Frequently; 5= Very Frequently)

Concerning Accounting Information Systems, it registered the highest average score (4.24). Additionally, as described in Table 7, more than 85% of the respondents use AIS to produce financial reports, analyse the information produced, and consider it an important tool for the decision-making process. In addition, 97.1% of the firms have invoicing software and 55.7% have an inventory management software.

TABLE 7 - Findings on Accounting Information Systems

Financial Management Practices – Frequency Level	1	2	3	4	5	Mean
Accounting Information Systems						**4.34**
1. The business uses AIS to produce financial reports	1	5	13	43	78	4.37
2. The business analyses the information produced by the AIS	1	5	12	46	76	4.36
3. The business uses the AIS as a tool to help in the decision-making process.	2	6	10	56	66	4.27

Note: Frequency scale (1 = Never; 2=Rarely; 3=Sometimes; 4=Frequently; 5= Very Frequently)

Lastly, Financial Reporting and Analysis recorded an average score of 3.83 (Table 3). 82.9% frequently analyse financial statements and 62.9% prepares forecasted financial statements. 75% uses financial reports during the decision-making process and the definition of key performance indicators (KPIs) is a common practice for 57.9% of the firms (Table 8).

TABLE 8 - Findings on Financial Reporting and Analysis

Financial Management Practices – Frequency Level	1	2	3	4	5	Mean
Financial Reporting and Analysis						**3.83**
1. The business prepares Financial Statements	7	8	16	46	63	4.07
2. The business analyses Financial Statements	4	6	14	45	71	4.24
3. The business prepares forecasts of the Financial Statements	9	12	31	47	41	3.71
4. The business compares the forecasted results with the results obtained	10	11	30	43	46	3.74
5. The business uses Financial Statements during the decision-making process	6	6	23	49	56	4.02
6. The business computes financial ratios	9	13	26	49	43	3.74
7. The business prepares other financial reports than the ones legally obligated	14	14	34	36	42	3.56
8. The business defines key performance indicators	9	19	31	42	39	3.59

Note: Frequency scale (1 = Never; 2=Rarely; 3=Sometimes; 4=Frequently; 5= Very Frequently)

When questioned about the type of ratios applied in their analysis almost 87% reported using profitability ratios, followed by 76% that use solvency ratios. Only 6 respondents were not familiarized with the concept of financial ratios.

Moreover, respondents were questioned about the owner-manager's engagement in decision-making processes (Annex III). Investment decisions registered the highest score (average response of 4.46), followed by financing decisions (average score of 4.45). In contrast, inventory management registered the lowest score (mean response of 3.23). Internal financial and accountancy departments have a determinant role in activities such as cash, accounts receivables, inventory, accounting information management, and financial analysis. External accountant services are mainly used for AIS, inventory management and financial analysis (Annex IV).

As expected, the owner–manager's dominant position in the firm is presented by their role as the primary decision-maker. Therefore, decisions on cash management and investing decisions appear to be mainly based on the his/her experience (Annex V).

It should be noted that, since data was collected via self-reporting questionnaire, the information regarding financial management practices only reflects the perception of the respondents.

4.1.2. Profitability

Regarding profitability, the independent variable, the firms' Return on Asset ratio is presented. The higher the ratio, the higher the firm's profitability. On average, firms registered a mean ROA of 5.35%.

4.2. Correlation Analysis

When analyzing the correlation matrix in Table 9, none of the financial management practices variables (WCM, FIN, INV, AIS, FINREP) has a statistically significant

correlation with profitability (PROF). WCM and FINREP are significantly and positively related with all the other financial management practices variables, and FIN is also positively and significantly correlated to all variables, except AIS.

Regarding control variables, SIZE is positively correlated with profitability whereas LEV is negatively correlated.

TABLE 9 - Correlation matrix

	PROF	WCM	FIN	INV	AIS	FINREP	SIZE	LEV	CAR
PROF	1.000								
WCM	0.106	1.000							
FIN	0.108	0.382*	1.000						
INV	0.08	0.440*	0.333*	1.000					
AIS	0.062	0.470*	0.081	0.312*	1.000				
FINREP	0.066	0.579*	0.225*	0.462*	0.560*	1.000			
SIZE	0.240*	0.154*	0.208*	0.131	0.083	0.109	1.000		
LEV	-0.178*	0.088	0.057	0.003	-0.056	0.134	-0.017	1.000	
CAR	-0.099	-0.077	-0.234*	-0.079	-0.081	-0.071	-0.354*	0.080	1.000
CLR	-0.038	-0.073	-0.263*	-0.088	-0.089	-0.118	-0.124	-0.261*	0.288*

Note: * indicate significance level of 5%.

4.3. Linear Regression Models

Table 10 presents the regression results, assuming profitability as the only dependent variable in all models. The control variables were included when estimating models 2, 3 and 4.

Equation 1, considers five explanatory variables related to financial management practices (FMP): Working Capital Management (WCM), Financing decisions (FIN), Investing decisions (INV), Accounting Information Systems (AIS), and Financial Reporting and Analysis (FINREP); equation 2, considers FMP as independent variables and company-related variables such as firm size (SIZE), financial leverage (LEV), current

asset ratio (CAR) and current liability ratio (CLR); in equation 3 the explanatory variables considered are FMP and individual-related variables (GENDER, educational background on financial/management/ economy (ECO_EDUC) and responsibility within the firm (MAX_RESP)); finally, equation 4 considers all the above mentioned. α represents the constant, β the coefficients to estimate and ε is the error term.

Results show that respondents' perceptions regarding the firm's financial management practices do not have a statically significant relation to companies' profitability. It is not possible to conclude that companies in which respondents report to employ more financial management practices register higher levels of profitability.

TABLE 10 - Linear Regression Model Results

Variables	**(1)** FMP	**(2)** FMP+ Company	**(3)** FMP+ Individual	**(4)** All
WCM	0.079	0.098	0.048	0.062
	(0.489)	(0.619)	(0.295)	(0.382)
FIN	0.075	0.051	0.064	0.040
	(1.214)	(0.783)	(0.994)	(0.605)
INV	0.026	0.016	0.030	0.018
	(0.295)	(0.187)	(0.339)	(0.196)
AIS	0.033	-0.024	0.060	0.021
	(0.327)	(-0.245)	(0.542)	(0.198)
FINREP	-0.013	-0.004	-0.006	-0.001
	(-0.116)	(-0.038)	(-0.052)	(-0.006)
SIZE		0.134**		0.142**
		(2.260)		(2.506)
LEV		-0.879**		-0.897**
		(-2.066)		(-2.154)
CAR		0.065		0.076
		(0.272)		(0.309)
CLR		-0.184		-0.212
		(-0.591)		(-0.669)
GENDER			-0.247	-0.296
			(-1.232)	(-1.596)
ECO_EDUC			-0.155	-0.229
			(-0.856)	(-1.219)
MAX_RESP			-0.267	-0.171
			(-1.325)	(-0.885)
Constant	-0.679	-2.053**	-0.332	-1.822**
	(-1.449)	(-2.316)	(-0.676)	(-2.018)

Observations	140	140	140	140
R-squared	0.018	0.092	0.036	0.113

Note: *,** and *** indicate significance levels of 10%, 5% and 1% respectively. Robust t-statistics in parenthesis

Hence, obtained results do not support the theoretical framework that believes that financial management practices play a central role in firms' performance, especially in microenterprises, as they face greater financial constraints.

According to these results, performing activities related to Working Capital Management such as the preparation of cash budgets and their use in the decision-making process, the review of bad debt levels, or the internal management of inventories do not necessarily imply higher levels of profitability. These findings are in line with the study of García-Teruel & Martínez-Solano (2007), which did not identify a statistically significant impact of account receivables on profitability. However, it contradicts other studies such as Jose et al. (1996), Deloof (2003), Valadas (2005), Gomes (2013), and Pais & Gama (2015).

Additionally, investing decisions are, as supported by the literature, decisive to the financial success of the firms and extremely important for microenterprises (Brigham, 1995) as they require the commitment of funds that are usually generated internally, directly impacting liquidity. Yet, results show that despite the extent of capital budgeting techniques applied, they are not statistically significant to profitability.

These findings also suggest that the financing management practices perceived to be applied by the firms do not impact profitability. When analysing the capital structure of the firms, it is possible to observe that the majority relies on internal funds, as microenterprises commonly face greater limitations when accessing external markets. Hence, firms might not perform financing-related practices frequently, reducing its importance in explaining profitability.

Results also found that accounting information systems and financial analysis and reporting are frequently used by the firms, however, there is no evidence that they impact profitability. These results can be explained by the fact that, despite being obligated to disclose financial information, decision-makers might not fully understand the reports and, therefore, not use them in an efficient way (Marcos, Naia, & Silva, 2001; Dang, Marriott, & Marriott Pru, 2006).

In sum, only 1.8% of the variability in profitability is explained by financial management practices. Even when considering control variables, 88.7% remain unexplained (Table 10).

Therefore, there are other factors that could play a role in explaining firms' performance. For instance, some scholars believe that *gut feeling* is frequently used as a capital budget technique (Danielson & Scott, 2006; Ekanem & Smallbone, 2007; Harjoto & Paglia, 2012). Gut feeling is based on the extensive learning experience of the decision-maker and as previously seen, most of the decisions are based on the owner-manager experience (Annex V). Therefore, this technique might not be applied only to investing decisions, but to all dimensions of the firm, impacting profitability.

Simultaneously and according to Barney (1986), the long-term success of SMEs depends on one controversial concept: luck. Despite being considered by some as "less-scientific", others believe it has a determinant role in defining competitive advantage and firm performance (Ma, 2002).

Furthermore, data retrieved from the survey do not provide a comprehensive view of firms' practices. It only reflects the perceptions of the firm's owner, accountant or financial professional, which may not entirely reflect reality.

Regarding control variables, SIZE and LEV are statistically related to profitability in equations 2 and 4. Size presents a positive relationship with profitability. It can be

assumed that firm profitability increases as size increases. These results are consistent with previous studies (Aldrich & Auster, 1986; Yang & Chen, 2009; Fonseca, Guedes, & Gonçalves, 2022). Leverage, on the other side, is negatively related to profitability. It is expected that an increase in leverage decreases profitability. This result can support the idea that firms act accordingly to the Pecking-Order Theory, implying they mainly use internal financing over external financing to accomplish higher profitability levels.

CHAPTER 5 - CONCLUSION

Microenterprises are considered the backbone of economies, contributing to both social and economic development. Due to their size and characteristics, these firms face specific financial constraints and challenges that make them more vulnerable to failure.

Financial management practices are considered by the literature as a beneficial tool in improving performance and overcoming some of those constraints. However, the evidence on the impact of these practices on profitability is limited.

Following the literature review and using a linear regression model to study the possible relation with company's profitability, 12 variables were studied: 5 variables related to financial management practices (working capital management, investing decisions, financing decisions, accounting information systems and financial reporting and analysis), and 7 control variables related to the company and to the individual (firm size, leverage, current asset and current liability ratios, gender, economic background of the respondent and if he/she was the maximum responsible for the firm). Profitability was measured by the return on assets. Data for the financial management practices and individual characteristics were collected via a questionnaire held online; the link was sent via e-mail to a set of companies whose contact was given by Informa D&B.

Results show that firms reported to perform some of the financial management practices on a regular basis, highlighting the ones related to accounting information systems and investing decisions. The role of the owner-manager is, as expected, extremely pronounced, especially during the financing decisions and investing decisions.

When analysing the regression model, it was possible to conclude there is no impact of perceived financial management practices on firm's profitability. These results contrast with some previous research and indicates there are other factors that help explain profitability, for example, the use of *gut feeling* during the decision-making process.

Some limitations of this study are related to the use of a questionnaire for collecting data. The low response rate of the questionnaire (4.4%) and the fact that it is not possible to ensure that it was done by the owner-manager or someone in the financial department. Additionally, the method used to evaluate the firms' performance of financial management practices can also be pointed as a limitation to the study, since it was a self-reporting and self-perception scale. This may cause a bias between the reported practices and the ones performed in reality. Therefore, results should be interpreted carefully.

Nevertheless, if objective measures of performance were to be used, those would likely constitute a limitation, since they would be extremely difficult to obtain in such detail. These could be interest issues for future research to try to overcome.

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ANNEXES

ANNEX I – Financial Ratios

Ratio	Description
Profitability Ratios	
$Gross\ Margin = \frac{Gross\ Profit}{Sales}$	Reflects the ability to sell a product for more than the cost of producing it.
$Operating\ Margin = \frac{Gross\ Profit}{Sales}$	Reveals how much a company earns before interest and taxes from each euro in sales.
$Net\ Profit\ Margin = \frac{Net\ Income}{Sales}$	Shows the fraction of each euro in revenues that is available to equity holder after interest and taxes.
Liquidity Ratios	
$Current\ Ratio = \frac{Current\ Assets}{Current\ Liabilities}$	Assesses if the firm has sufficient working capital to meet its short-term needs.
$Quick\ Ratio = \frac{Quick\ Assets}{Current\ Liabilities}$	Assesses if the firm has sufficient assets in cash or equivalent to meet its short-term needs.
$Cash\ Ratio = \frac{Cash\ Assets}{Current\ Liabilities}$	Assesses if the firm has sufficient assets in cash to meet its short-term needs.
Working Capital Ratios	
$Accounts\ Receivable\ days = \frac{Accounts\ Receivable}{Average\ Daily\ Sales}$	Evaluates the speed at which a company turns sales into cash.
$Inventory\ Turnover = \frac{COGS}{Inventory}$	Evaluates the speed at which a company sells inventory.
Leverage Ratios	
$Debt - Equity\ Ratio = \frac{Total\ Debt}{Total\ Equity}$	Evaluates the speed at which a company sells inventory.
$Debt - Capital\ Ratio = \frac{Total\ Debt}{Total\ Equity+Total\ Debt}$	Computes the fraction of the firm financed by debt.
$Debt - Envterprise\ Value = \frac{Net\ Debt}{Enterprise\ Value}$	Computes the fraction of the firm financed by debt.
Valuation Ratios	
$P/E\ Ratio = \frac{Share\ Price}{EPS}$	Indicates the value of equity to the firm's earnings (if share is under or overpriced)
Operating Returns	
$Asset\ Turnover = \frac{Sales}{Total\ Assets}$	Evaluates how effectively companies are using their assets to generate sales.
$ROE = \frac{Net\ Income}{Book\ Value\ of\ Equity}$	Provides a measure of the return the firm has earned on its past investments.
$ROA = \frac{Net\ Income+Interest\ expense}{Book\ Value\ of\ Assets}$	Assesses of efficient a company uses the assets to generate profits.
$ROIC = \frac{EBIT\ (1-tax\ rate)}{Book\ Value\ of\ Equity+Net\ Debt}$	Compares the after-tax profit generated by the business itself and the capital raised.

ANNEX II –Sample Description

	Frequency	Percentage
Gender	**140**	**100**
Female	47	33.6
Male	93	66.4
Age	**140**	**100**
30 years old or less	3	2.1
31 – 40 years old	19	13.6
41 – 50 years old	48	34.3
51 – 60 years old	40	28.6
61 – 70 years old	27	19.3
More than 70 years old	3	2.1
Academic Level	**140**	**100**
Until Middle School	3	2.1
High School	18	12.9
Undergraduate Degree	91	65.0
Masters Degree	23	16.4
PhD	5	3.6
Financial Education Background	**140**	**100**
Yes	109	77.9
No	31	22.1
Maximum responsible of the firm	**140**	**100**
Yes	84	60.0
No	56	40.0
Role performed in the firm	**140**	**100**
Directors and executive managers	79	56.4
Accountants, Financial Professional, Advisors	61	43.6
Number of years working with the firm	**140**	**100**
5 years or less	34	24.3
6 – 10 years	31	22.1
11 – 15 years	19	13.6
16 – 20 years	21	15.0
21 – 25 years	16	11.4
26 – 30 years	14	10.0
31 – 35 years	4	2.9
More than 35 years	1	0.7
Company's age	**140**	**100**

5 years or less	7	5.0
6 – 10 years	34	24.3
11 – 15 years	30	21.4
16 – 20 years	18	12.9
More than 20 years	51	36.4
Number of employees of the firm	**140**	**100**
2 employees or less	77	55.0
3 – 6 employees	38	27.1
7 – 10 employees	25	17.9
Activity Sector	**140**	**100**
Agriculture, farming of animals, hunting and forestry	1	0.7
Accommodation and food service activities	7	5.0
Administrative and support service activities	3	2.1
Consultancy, scientific and technical activities	27	19.3
Information and communication activities	5	3.6
Human health and social work activities	2	1.4
Financial and insurance activities	13	9.3
Real estate activities	41	29.3
Wholesale and retail trade; repair of motor vehicles and motorcycles	16	11.4
Construction	7	5.0
Education	1	0.7
Electricity, gas, steam, cold and hot water, and cold air	1	0.7
Mining and quarrying	4	2.9
Manufacturing	7	5.0
Transportation and storage	5	3.6
Family Firm	**140**	**100**
Yes	48	34.3
No	92	65.7

ANNEX III –Owner-manager's involvement

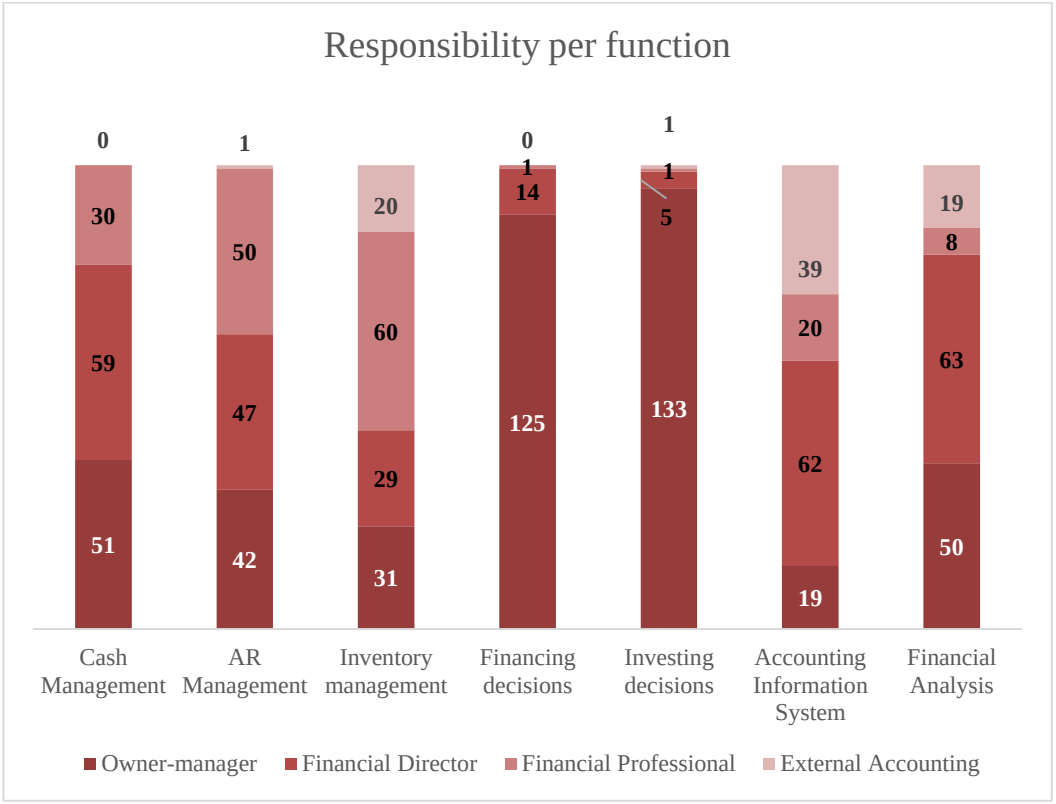
Number of responses for frequency level (1= Never, 5= Very Frequently) and mean score for question:

Owner-manager's involvement	**1**	**2**	**3**	**4**	**5**	**Mean**
1. Cash management	5	11	18	35	71	4.11
2. Accounts receivables management	6	10	20	36	68	4.07
3. Inventory management	22	21	34	25	38	3.26

4. Financing decisions	4	4	10	29	93	4.45
5. Investing decisions	2	5	8	36	89	4.46
6. Preparation of Financial Statements	14	19	23	39	45	3.59
7. Analysis of Financial Statements	5	12	15	40	68	4.10

Note: Frequency scale (1 = Never; 2=Rarely; 3=Sometimes; 4=Frequently; 5= Very Frequently)

ANNEX IV –Responsibility per function



ANNEX V –Decision-making process

Number of responses for category.

Decisions are based on:	**Theoretical Knowledge**	**Company History**	**Owner-manager experience**
1. Cash management	43	80	83
2. Inventory management	55	76	71
3. Investing Decisions	64	71	100