Factors promoting and hindering the adoption of management accounting tools. Evidence from Italian manufacturing SMEs

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Abstract

This paper aims to provide empirical evidence of the factors considered relevant in promoting the adoption of Management Accounting (MA) tools, and those able to hinder their spread in Italian manufacturing small and medium-sized enterprises (SMEs). This study represents a bridge between theory and practice as it allows us to investigate which MA tools are adopted in a firms daily practice and which are the main factors fostering/hindering MA tools implementation. In 2018 a questionnaire was sent to a total population of 1,100 Italian manufacturing SMEs; 102 responses were obtained. The findings show that SMEs mainly use budgeting tools, customer satisfaction, benchmarking analysis, economic and financial indexes. Additionally, the principal variable promoting the adoption of MA practices seems to be the competition increase, which is an input deriving from outside rising the information needs of entrepreneurs. Internal firm-specific factors significantly contribute to favouring the adoption of MA tools, particularly a corporate culture oriented to the management control to support decision-making processes, promoted by entrepreneurs and employees. Contrary, the lack of knowledge concerning the potentiality of MA tools and the lack of resources would seem to hinder the spread of these tools. Thus, the role of entrepreneurs, employees, and Universities in promoting knowledge transferring and sharing becomes pivotal to adopt effective MAS.

Keywords: Management Accounting tools, Management Accounting System, Small and Medium-Sized Enterprises.

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1. Introduction

Notwithstanding the growing interest in management accounting literature, studies regarding the Management Accounting (MA) tools in Small and Medium-sized Enterprises (SMEs) are still limited (López and Hiebl, 2015; Mitchell and Reid, 2000).

To date, most of studies mainly focus on analysing how a well-structured approach to measuring performance in SMEs could improve strategic control (Hudson et al., 2001), or how MA tools differ depending on the corporate size (Brierley, 2011) and, how the implementation of an effective information system helps to grow the firm's revenue (Hughes, 2005).

Moreover, Ng et al. (2013) have developed a framework for the systematic examination of management accounting practices in small businesses using a revenue management perspective. Additionally, the MA and the Management Control (MC) practices have been investigated within family and non-family businesses by providing findings on how these practices seem to be generally more or less relevant depending on the ownership (Senftlechner and Hiebl, 2015; Cesaroni and Sentuti, 2019). Instead, other Authors (Broccardo et al., 2017; Cinquini et al., 2016) by investigating management and implications issues about performance measurement systems (PMSs) in Italian SMEs, highlighted the strategic importance of managerial tools for a firm's management, growth, and improvement, especially regarding budgeting tools. More recently, Azudin and Mansor (2018) have analysed the impact of contingency variables on the MA practices, with a focus on Malaysian SMEs. Other Authors (Danes et al., 2008; Halabi et al., 2010) stated that the MA and the information systems of SMEs are informal and simple, and mainly used for operational purposes (Aureli et al., 2012). Moreover, according to López and Hiebl (2015), which have reviewed about 73 articles belonging to several management accounting journals during the period 1985-2012, numerous significant variables emerge such as company size (Allattar et al., 2009; Becker et al., 2011; Cocca and Alberti, 2010), environmental issues (Allattar et al., 2009; Durden, 2008; Marc et al., 2010), sector of activities (Benjaoran, 2009; Chand and Dahiya, 2010; Saccani et al., 2006), organizational factors (Chiarini, 2012; Laitinen, 2011) able to influence MA and the adoption of new MA techniques (Kober et al., 2012; Manville, 2007; Zengin and Ada, 2010). Finally, the analysis conducted by Pelz (2019) revealed that organizational characteristics, professional features and the presence of external investments are the main elements useful to explain the adoption of MA.

Let us try to fill the gap existing in literature examining the factors considered relevant in promoting the adoption of Management Accounting (MA) tools, and those able to hinder their spread in Italian manufacturing small and medium-sized enterprises.

There is a need to realize a comprehensive investigation of these factors to provide a theoretical approach appropriate for SMEs. Moreover, the elements hindering the adoption of MA tools should be unveiled to help firms in overcoming the difficulties (López and Hiebl, 2015). Therefore, this study wants to represent a link between theory and practice. This research aims to investigate whether and how SMEs adopt these practices and what are the factors hindering/fostering their practical application, considered that their usefulness is widely recognized in theory.

Therefore, the research questions are the following: (RQ1) Which are the factors promoting the adoption of MA tools among Italian SMEs? (RQ2) Which are the factors hindering the adoption of MA tools among Italian SMEs?

This paper can be considered original for two reasons. First, the literature on management accounting mostly focused on the effects of specific factors, individually considered, on the adoption of management accounting, such as company size, environmental issues, key staff features, organizational structure (Pelz, 2019; Lopez and Hiebl, 2015). However, when it comes to summing up all these factors to understand which of them are the most relevant, studies result in poor fragmentation. Therefore, this study is the first attempt to investigate the influence of several factors on MAS, to unveil the main barriers, and to identify the most critical drivers of usage in SMEs (Lopez and Hiebl, 2015). Secondly, this research takes into account both traditional accounting tools and innovative accounting practices.

Moreover, considering that, in Europe, these enterprises account for the 99% of the total amount of operating enterprises, generate around 50% of employment and up to 60% of value-added (European Commission, 2017), it would be interesting to analyse their specificities when it comes to management accounting. Especially in the current social, political, and economic environment characterized by uncertainty and growing competition, the adoption of MA tools becomes a success factor for SMEs' survival.

The paper is structured as follows: in section two, a brief literature review regarding studies on management accounting system (MAS) is shown; in part three, the research methodology is described; finally, findings, discussion, and conclusions are illustrated.

2. Literature background

The term "Management Accounting System" (MAS) refers to the systematic use of MA practices in supporting decision making processes to achieve the firm's goals. MAS takes part in the broader "Management Control System" (MCS), which also includes external information related to markets, customers, competitors, non-financial information (Chenhall, 2003), as suggested by Becker et al. (2011).

The traditional technical-accounting system, mainly based on economic and financial dimensions as measures of organizational success, does not entirely satisfy the corporate information needs to face today's business environment (Cinquini, 2017; Cooper and Kaplan, 1999). The implementation of an advanced technical-accounting system could allow a much broader and more interconnected performance evaluation in terms of value creation as well as flexibility, quality, research, and widespread value (Marasca, 2013; Pavan, 2019). We refer to innovative MA practices (Simon, 2006; Cadez and Guilding, 2008) such as activity-based costing, time-driven activity-based costing, life-cycle costing, balanced scorecard, benchmarking, integrated performance measurement, target costing, value chain costing, quality cost management, customer profitability analysis, and others. Consequently, the adoption of MA tools plays a vital role, even for SMEs, especially in the current market (Santini, 2017; Palazzi et al., 2019; Del Baldo et al., 2019; Mancini, 2018). An effective MAS promotes a continuous flow of information among entrepreneurs, stakeholders, and the reference environment, developing a proactive decision making, less intuitive and well informed (Aureli et al., 2019; Branciari, 1996; Marchini, 1998).

However, SMEs are characterized by difficulties concerning the adoption of MA tools due to the scarcity of resources, mainly financial and human resources (Mitchell and Reid, 2000; López and Hiebl, 2015). SMEs seem to adopt less sophisticated and formalized MA tools than larger businesses (Aureli and Del Baldo, 2016; Askarany et al., 2010; Becker et al., 2011; Hudson et al., 2001; Quinn, 2011; Saccani et al., 2006).

According to the systematic review of literature realized by Lopez e Hiebl (2015), the factors influencing the management accounting system in SMEs can be classified into four categories as environmental factors, company size, key staff characteristics, and organizational structure. While, according to Pelz (2019), who conducted a systematic literature review on 67 empirical papers in 25 journals, found out that the factors leading to adopt MA are usefully divided into organizational and professional characteristics

and the presence of external investments. Chenhall (2003) identify several factors that can increase or decrease the spread of MA tools in SMEs: environmental issues, national and organizational culture, technologies, corporate strategies, organizational structure, and company size. In this work, we classify the relevant variables into external environmental factors and internal firm-specific factors (Anderson and Lanen, 1999; Kajüter and Kulmala, 2005), according to the strategy-structure-performance paradigm (Anderson and Lanen, 1999).

Several studies have investigated the external environmental factors influencing the adoption of MA tools. Specifically, factors such as changes in political and social systems (Amat et al., 1994), environment uncertainty (Alattar et al., 2009; Gul, 1991), the reference society and corporate culture (Hopper et al., 1999; Joshi et al., 2003), competition (Amat et al., 1994), technology (Mancini, 2016) and finally, SMEs internationalization (Marc et al., 2010) seem to influence the MAS usage. Moreover, the impact of the last global economic crisis on international social and economic trends set up the foundation of a change in the MA practices driven by environment transformations, as is shown by Pavlatos and Kostakis (2015). These Authors found out that, in Greece, the importance and the usage of ABC systems, planning, strategy, and MA techniques increased during the crisis; contrary, the utilization of traditional cost accounting techniques was decreased. According to Reid and Smith (2000), the cash-flow crisis and shortfall in finance enhance the MAS usage in SMEs.

Moreover, also the relationship between firms and stakeholders profoundly influence MA practices. Amongst several types of stakeholders, Universities deserve particular attention as Botes and Sharma (2017) suggest. They have identified the gap between education and practice by highlighting the role that Universities should take in filling that void. Additionally, the reference society and corporate culture are variables influencing the design of MAS (Ciambotti, 2001; Martin, 1992).

Additionally, there are many studies providing evidence on the effects of internal firm-specific factors on MA practices. Specifically, the overlapping between ownership and control, characterizing SMEs, can significantly influence the MCS (Marchini, 1998). According to Senftlechner and Hiebl (2015), MA and MC practices seem to be less relevant to family businesses than to non-family ones, because family firms are characterized by mutual trust, family-specific goals, the centralization of power and the informal organization. Contrary, the growing complexity due to the processes of succession and professionalization as well as the transfer of knowledge across generations and between the owner family and the man-

agement team, set up the need to change in favour of a formal management control system (Giovannoni et al., 2011).

About employees' characteristics, the human capital is pivotal to promote the adoption of MA techniques. Specifically, highly-skilled employees and a great sense of responsibility, as well as the attitude of entrepreneurs, foster the usage of MAS (Sousa et al., 2006; Ismail and King, 2007; Ng et al., 2013; Ritchie and Richardson, 2000). Also, the entrepreneur without an accounting background cannot appreciate the advantages, that these tools have, in supporting internal making-decision processes. The lack of knowledge and skills in finance and accounting by employees can reduce the use of MAS (Benjaoran, 2009; Halabi et al., 2010). Instead, the presence of a non-founder CEO or CFO is positively associated with the adoption of MAS (Dávila, Foster, 2007). Moreover, some factors such as complex organizational structure (Becker et al., 2011) or a decentralized business organization (King et al., 2010), belonging to the manufacturing sector (Askarany et al., 2010; Lopez, Hiebl, 2015; Cinquini et al., 2011) can foster the adoption of MAS. Additionally, an advanced information system sustains the development of MAS (Chenhall, 2003; Azudin and Mansor, 2018). Furthermore, the features of corporate strategies (reactive, defensive, proactive, and analytical) are strictly related to specific MA tools (Ciambotti and Dellacecca, 2016).

The adoption of MAS produces multiple effects throughout the enterprise. In particular, the adoption of MA tools by SMEs allows to make the decision-making processes more effective (Chand and Dahiya, 2010), to improve strategic analysis (Garengo and Bernardi, 2007), to control functions (Chand and Dahiya, 2010), to increase the integration between business plan and KPIs (Manville, 2007) and effectively manage resource-constraints (Villarmois and Levant, 2011). Moreover, these practices help in enabling innovation and overall performance (Garengo and Bitici, 2007; Sousa et al., 2005; Pelz, 2019), adapting to environmental changes and ensuring long-term sustainable growth (Amat et al., 1994). On the contrary, lower usage of MA practices drives to less competitiveness (Barrar et al., 2002), to business failure (El-Ebaishi et al., 2007) and less accurate costs calculation (Laitinen, 2011).

Additionally, in many cases, the effects are moderated by environmental factors (Brinckmann et al., 2010; Cassar and Gibson, 2008; Davila et al., 2015), organizational characteristics (Brinckmann et al., 2010; Burke et al., 2010; Malagueño et al., 2018), human resource management activities (Voss and Brettel, 2014), presence of external investments (Davila et al., 2015; Wijibenga et al., 2007) and strategic positioning (Davila et al., 2015).

3. Methodology

A questionnaire was sent via email, together with a cover letter, to a total population of 1,100 Italian manufacturing SMEs, which were selected from AIDA database (Bureau Van Dijk - A Moody's Analytics Company).

The total population is composed of enterprises that employ a number of persons between 50 and 249, and they have an annual turnover from 2 to 50 million euros in 2017; they belong to five specific sectors of activities (Ateco codes 2007: 13. Textile, 16. Woods, 17. Paper, 24. Metallurgic, 31. Furniture).

The survey was designed to gather background information about the firm, to identify the factors considered relevant in promoting the adoption of MA tools, as well as data pertaining the variables able to hinder the spread of these tools. Specifically, the survey asked a variety of questions in four sections as follows (table 1).

The factors favouring the adoption of MA tools can be internal or external factors that are related to categories as organizational factors, professional characteristics, environmental issues, and presence of external investments (Kajuter and Kulmala, 2005; Lopez and Hiebl, 2015; Pelz, 2019). Variables such as the entrepreneurial needs or stakeholders' requests (consultants, financial institutions, private and public institutions, and software house providers and others), the competition increase or the training activities about management accounting system, a favourable organizational culture, and pressures from external stakeholder, have been investigated. On the other hand, the factors hindering the adoption of MA tools are related to the lack of resources such as time, technologies, financial and human capital or the lack of capacity to effectively implement these tools (Kajuter and Kulmala, 2005; Lopez and Hiebl, 2015; Pelz, 2019).

All the variables are measured through a Likert scale that ranges from 1 that means not important to 7 that means very important.

Finally, the extent of utilization of traditional and innovative MA tools by Italian SMEs have been investigated (Simon, 2006; Cadez and Guilding, 2008; Lopez and Hiebl, 2015; Pelz, 2019). The investigated MA practices are about costing system, budgeting system, performance evaluation system, decision support system, and strategic management accounting.

These variables are also measured through a Likert scale that ranges from 1 that means not used to 7 that means highly used.

Table 1 - Questionnaire design

Questionnaire sections	*Area of investigations*
Firms general information	• Sector of activities • Geographic localization • Firm's revenue • Firm's employees
Factors promoting the adoption and the implementation of MA tools	• External environmental factors • Internal firm-specific factors
Factors hindering the adoption and the implementation of MA tools	
Utilization of MA tools	• Traditional and Innovative tools

4. Findings

102 completed questionnaires were returned for a response rate of 9.2 percent. More specifically, the sample consists of SMEs operating in the textile, paper, and wood sector (table 2). These enterprises have fewer than 250 employees and revenues less than 50 million euros annually (or a balance sheet total below 43 million euros), as shown in table 3. 83.33% of the sample has a number of employees between 50 and 100 (table 4). Table 5 shows the geographical distribution of the sample. The sampled enterprises are mainly located in the Northern regions (73.53% of total), 17.65% in the Central regions, and 8.82% in the Southern regions. The companies, on average, have 35 years, and they are mainly family businesses. The number of people involved in the management and control area is equal to one person for 62.75% of the sample, two persons or more for 37.25% of the sampled firms. Moreover, 70.59% of the sample relies on an external consultant to undertake activities regarding the management and control area.

Table 2 - SMEs by sector of activities

Sector of activities	*Number*	*%*
Paper	21	20.59%
Woods	21	20.59%
Metallurgic	12	11.76%
Furniture	11	10.78%
Textile	37	36.27%
Total	102	100%

Table 3 - SMEs by revenue in 2017

Revenue	*Number*	*%*
From 2 to 5 mln	17	17%
From 5 to 20 mln	63	63%
From 20 to 50 mln	20	20%
Total	100	100%

Table 4 - SMEs by human resources in 2017

Human resources	*Number*	*%*
From 50 to 100 employees	85	83.33%
From 100 to 250 employees	17	16.67%
Total	102	100%

Table 5 - SMEs by geographic localization

Geographic localization	*Number*	*%*
North	75	73.53%
Centre	18	17.65%
South	9	8.82%
Total	102	100%

Table 6 shows descriptive statistics for the factors promoting the adoption of MA tools. Numerous factors have obtained high scores. The competition increase, the information needs, and entrepreneurial needs have the highest mean values respectively equal to 4.971, 4.873 and 4.824. Other essential factors are represented by the climate of dialogue and sharing of company policies with an average value of 4.814, the willingness on evaluating risks associated with decisions with a mean equal to 4.794, and the training of employees about management accounting and control topics with a mean equal to 4.794.

Also, the awareness of the crucial role of the control system in supporting effective decision-making processes has obtained, on average, a value of 4.696, the sharing of costs-benefits related to MA tools also favours their adoption with a mean equal to 4.676.

The favourable organizational culture is another important factor with a mean of 4.667, together with the administration and control managers requests with an average value equal to 4.627.

The implementation of advanced information systems and the collabora-

tion with external partners can facilitate the adoption of MA tools, with the mean values respectively of 4.618 and 4.539.

The need to update the informative corporate system and access to regional or European funds to improve MAS utilization promote the adoption of MA tools with a mean score of 4.5.

The relationship with universities is assessed with a mean score of 4.402, the pressures from the external stakeholders, and banks and other financial institutions weigh, on average, respectively 4.206 and 4.098. The factors that have obtained the lowest scores are the pressures from the external consultants equal to 3.99 and the suggestions from the software house with a mean value equal to 3.98.

Table 6 - Factors promoting the adoption of MA tools

Factors favouring the adoption of MA tools	Mean	Dev. Std	Min	Max
Competition increase	4.971	1.331	1	7
Information needs	4.873	1.264	2	7
Entrepreneurial needs	4.824	1.057	2	7
Climate of dialogue and sharing of company policies	4.814	1.115	2	7
Willingness on evaluating risks associated to decisions	4.794	1.18	2	7
Training	4.794	1.43	1	7
The awareness on the key role of control system in supporting the decision-making process	4.696	1.209	2	7
The sharing of cost-benefit related to MA tools	4.676	1.091	2	7
A favourable organizational culture	4.667	1.345	1	7
The administration & control managers requests	4.627	1.16	1	7
The implementation of advanced information systems	4.618	1.29	1	7
Collaborations with external partners	4.539	1.264	1	7
The need to update the informative corporate system	4.5	1.447	1	7
The access to regional or European funds to increase MA tools' use	4.5	1.501	1	7
The relationship with Universities	4.402	1.53	1	7
The pressures from the external stakeholders	4.206	1.613	1	7
The pressures from banks and other financial institutions	4.098	1.39	1	6
The pressures from the external consultants	3.99	1.65	1	7
The suggestions from the software house	3.98	1.4	1	7

Table 7 shows the descriptive statistics for the factors hindering the adoption of MA tools. The factors that have obtained the highest scores are the lack of knowledge about the potentiality of MA tools with an average value equal to 5.186, the lack of interest by the entrepreneurs with a mean of 4.931, the scarcity of financial resources with a mean value of 4.872 and the scarce propensity by entrepreneurs to delegate in management and control area with a mean of 4.794.

Moreover, the high complexity of MA tools is assessed as hindering factor their adoption to the extent of 4.794, together with the deficiency of human resources and the lack of time, with the mean values respectively of 4.705 and 4.637.

Also, the uncertainty about the benefits of MA tools represents a hindering factor whose mean score is equal to 4.558.

Finally, the lack of technological resources useful to support the implementation, the lack of training activities and meetings aimed to enhance the knowledge about MAS and the lack of practitioners able to support MA tool adoption in SMEs hinder the spread of these instruments, with mean values respectively of 4.529, 4.392 and 4.303.

Table 7 - Factors hindering the adoption of MA tools

Factors	Mean	Dev. Std	Min	Max
Lack of knowledge regarding the potentiality of MA tools	5.186	1.216	1	7
Lack of interest by entrepreneurs	4.931	1.336	1	7
Scarcity of financial resources	4.872	1.376	1	7
Scarce propensity to delegate in the management and control area	4.794	1.237	1	7
High complexity of MA tools	4.794	1.261	1	7
Scarcity of human resources	4.705	1.278	1	7
Lack of time	4.637	1.241	1	7
Uncertainty about tools benefit	4.558	1.382	1	7
Lack of technological resources	4.529	1.433	1	7
Lack of activities or meeting able to develop knowledge about MA	4.392	1.372	1	7
Lack of practitioner able to help the MA tools implementation	4.303	1.405	1	7

Table 8 shows descriptive statistics for the usage of MA tools. The investigated SMEs assert to largely use budgeting tools, analysis of financial

statements, benchmarking practices and customer satisfaction analysis. More specifically, budgeting tools in terms of annual, sectoral and cash-flow budgeting, on average, are respectively assessed at 4.902, 4.343 and 4.137. Moreover, approaches based on economic and financial indexes and benchmarking analysis are, on average, equal to 4.029 and 4.186. Customer satisfaction analysis and statistics based on sales and production are, on average, assessed respectively equal to 4.539 and 4.265.

Table 8 – The utilization of management accounting tools

Management accounting tools	*Mean*	*Dev.std*	*Min*	*Max*
Annual budgeting	4.902	1.638	1	7
Customer satisfaction	4.539	1.48	1	7
Sectoral budgeting	4.343	1.732	1	7
Statistics based on sales	4.265	1.61	1	7
Benchmarking analysis	4.186	1.377	1	7
Cash-flow budgeting	4.137	1.407	1	7
Economic and financial indexes	4.029	1.595	1	7
Marketing and sales planning	3.716	1.465	1	7
Financial planning (medium/long term)	3.667	1.292	1	7
Reporting	3.598	1.471	1	7
Investment planning	3.569	1.493	1	7
Business plan	3.52	1.553	1	7
Accounting for cost centers	3.245	2.271	1	7
Direct costing	3.108	2.242	1	7
Algorithm to support operational decisions	3.029	1.632	1	7
Balanced Scorecard	2.912	1.769	1	7
Life Cycle costing	2.794	1.315	1	7
ABC	2.725	1.574	1	7
ABM	2.657	1.545	1	7
Full cost pricing	2.588	2.065	1	7
Target costing	2.588	1.524	1	7
Lean accounting	2.578	1.563	1	6
Kaizen costing	2.5	1.454	1	6

MA tools, averagely used, are marketing and sales planning (the mean value is 3.716), the financial and investment planning (respectively of

3.667 and 3.569), reporting and variance analysis (the mean value is equal to 3.598) and drafting of business plan (the mean is 3.52).

The instruments of traditional cost accounting such as accounting for cost centers and direct costing are assessed with average scores equal to 3.245 and 3.108, and algorithms to support operational decisions have a mean of 3.029. Full costing is lesser used by entrepreneurs, the mean is 2.588. Also, the innovative tools are lesser spread among SMEs: the balanced scorecard (2.912), the life cycle costing (2.794), Activity-Based Costing (2.725), Activity-Based Management (2.657), target costing (2.588), lean accounting (2.578) and kaizen costing (2.5).

5. Discussion

This research aims to highlight the factors considered relevant in promoting the adoption of MA tools, and those able to hinder their spread in Italian manufacturing small and medium-sized enterprises. Moreover, a focus on the most utilized management accounting tools by Italian manufacturing SMEs has been done.

The main variable affecting the adoption of MAS is represented by an external environmental factor that is the competition increase, which is an input deriving from outside rising the information needs of entrepreneurs to successfully compete on markets. The higher the competition, the higher the efforts to adjust competitive strategies to the environmental changes. Therefore, the competition promotes the adoption of traditional and innovative MA tools to provide up-to-date information to support the decision-making process and increase the effectiveness of strategies.

Several internal firm-specific factors promote the adoption of MA tools such as the information and entrepreneurial needs, the climate of dialogue and sharing of company policies, the awareness on the crucial role of the control system in supporting the decision-making process, the willingness of monitoring risks associated to decisions and constant training about these themes. These factors are attributable to a corporate culture oriented to the sharing, dialogue, measurement, and control, promoted by entrepreneurs and employees.

These findings are in line with what theory suggests. Organizational and key staff characteristics and organizational culture seem to play a key role in promoting MA tools' adoption and implementation (Lopez and Hiebl, 2015; Pelz, 2019). The organizational culture comprises values and beliefs that, if are well shared amongst employees, allow increasing the efforts and

the engagement in achieving corporate goals through effective implementation of MA practices. Additionally, the organizational culture, influences the climate of dialogue and sharing of company policies, the awareness on the crucial role of the control system in supporting the decision-making process, and the willingness of monitoring risks associated with decisions that are recognised as an essential driver of MA usage.

Specifically, the entrepreneurs and firms needs are rooted in formal education (Brinckmann and Kim, 2015; Gibson and Cassar, 2002), managerial experience (Davila and Foster, 2005; Davila et al., 2009) and corporate experiences (Laitinen, 2011).

The informational needs stimulate the development of MA practices and lead to an appropriate allocation of financial and non-financial resources to sustain the implementation.

Moreover, training activities about management accounting and control are significant investments in human capital, useful to improve knowledge, skills, capabilities, problem-solving abilities. The value of human capital increases over time as a result of the learning process from experience if integrated through specific investments in staff development.

Therefore, if an organization has the intention to adopt innovative MA tools, it has, first of all, to invest in human resources, setting up in this way the foundations of competitive and sustainable growth (Ritchie and Richardson, 2000; Dávila and Foster, 2005). In this context, the role of universities, industrial associations, and consultants emerges as a critical role in encouraging the development of MA systems among SMEs, to promote rationale decisional processes based on data, instead only on intuition.

Moreover, findings show that factors hindering the tools utilization are represented by key staff characteristics and company size. These findings are in line with what theory suggests (Lopez and Hiebl, 2015; Pelz, 2019).

These categories include lack of knowledge and interest by the entrepreneurs and the scarcity of financial and human resources, due to company size, and by the complexity of MA practices (Alatter et al., 2009; Benjaoran, 2009; Sousa et al., 2005).

Therefore, the lower the knowledge of the owner/manager, the lower the usage of MA systems. A lack of training of the entrepreneurs or the key staff seems to decrease the introduction and the implementation of MA practices (Alatter et al., 2009; Marriott and Marriott, 2000).

Not only the lack of knowledge but even the lack of interest could decrease the adoption of MA tools. A possible explanation for such low awareness of the importance of MA practices can be related to the fact that in SMEs, due to lack of financial and human resources, employees and en-

trepreneurs undertake a wide range of activities, rather than focus on specific works (Benjoran, 2009). This difficulty is combined with the scarce propensity to delegate in the management. Thus, studies find out that the presence of non-founder managers increases the adoption of MA tools (Davila, 2005; Davila and Foster, 2007).

Overall lack of knowledge and interest by the entrepreneurs and the scarcity of financial and human resources result in being elements hindering the adoption of sophisticated MAS. Larger firms show higher usage of MA practices than small and medium-sized ones (Lopez and Hiebl, 2015).

The investigated SMEs assert to mostly use budgeting tools, analysis of financial statements, benchmarking practices and customer satisfaction analysis, together with accounting for cost centers and direct costing. Therefore, there is extensive use of basic and traditional MA tools. Most of the respondents indicated that these instruments are mainly used to support operational and productive decisions. Thus, the respondents do not recognize a strategic role to the MA tools. However, the respondents admit the usefulness of MA tools contributing to the achievement of corporate objectives and the improvement of economic and financial performance.

We can assert that the external environmental factor (specifically the competition increase) could start a change process and foster the adoption of a management accounting system, but only in companies where there exists a corporate culture oriented to sharing, dialogue, measurement, and control, promoted by entrepreneurs and employees.

6. Conclusion

This research attempts to restrict the distance between theory and practice by providing the opinions by practitioners about the MA tools employment in SMEs, as well as the factors fostering/hindering their spread.

The findings show that SMEs mainly use budgeting tools, customer satisfaction, benchmarking analysis, economic and financial indexes. Additionally, the principal variable promoting the adoption of MA practices seems to be the competition increase, which is an input deriving from outside rising the information needs of entrepreneurs. Internal firm-specific factors significantly contribute to favouring the adoption of MA tools, particularly a corporate culture oriented to the management control to support decision-making processes, promoted by entrepreneurs and employees.

Contrary, the elements able to hinder the spread of these tools are related to the lack of interest by the entrepreneurs, the lack of knowledge re-

garding the potentiality of MA tools, the lack of time, the scarcity of financial and human resources, the scarce propensity to delegate in the management and control area and, finally, the high complexity of MA tools.

Finally, the investigated SMEs seem to prefer traditional MA tools than innovative practices.

Overall there are two main levers that entrepreneurs should rely on to promote a more widespread MA tool usage: knowledge and human capital.

Both concepts are strongly related to education and to a university's role as the promoter of knowledge and its sharing to fill the gap between theory and practice.

However, knowing that MA practices are useful for firms and that universities are one of the most suitable sources to transfer that knowledge, is not enough to initiate the knowledge transfer process (Liyanage et al., 2009). But, this process requires a high level of engagement from both universities (the source) and firms (the receiver) and strong relationship between the participants, between what is known in theory and what is useful in practice. Both parties should have a willingness to share and acquire knowledge. Firms should be able to recognise and acquire the knowledge coming from universities, to produce new knowledge or improve the existant one and finally, to transform the knowledge into useful knowledge for organizational needs. Moreover, this process is influenced by company networking ability and by internal firm-specific and external environmental factors that can promote or hinder knowledge transfer on MA practices.

Therefore, universities should establish quality relationships with entrepreneurs and practitioners to stimulate and promote integration between theory and practice, providing specific courses aimed to increase student, entrepreneur and practitioner skills for the development of MA techniques among SMEs (Botes and Sharma, 2017). The universities, industrial associations, and consultants should encourage the development of MA systems among SMEs, to make the decisional processes more rationale and based on data, instead of intuitive. Moreover, the awareness of the importance of the control system by entrepreneurs is fundamental to support investments in qualified human resources and specific training. Therefore, firms should invest highly in human capital considering that companies are made up of people, which entails knowledge, skills, capabilities, problem-solving abilities, personal traits, creativity and willpower.

Several limitations could be mentioned. First, the restricted sample size due to the low response rate limits the possibility of results generalization. The second limitation concerns the geographical area covered and the respondents size by the research. The investigated SMEs are principally lo-

cated in the North of Italy and the respondents are mainly medium-sized firms; therefore, the results could potentially be influenced by the reference context. In the future, research should be extended to a sample more representative of the entire country. Also, we could investigate the relationship between the factors favouring/hindering MA tools, the adoption of MAS, and corporate performance.

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