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**THE APPROACHES OF SMES TO EU FUNDING
OPPORTUNITIES: AN ANALYSIS OF THE WOOD
FURNITURE SECTOR OF MARCHE REGION**

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Abstract (English)

The European Union offers instruments to help the Small and Medium-sized enterprises (SMEs) to support competitiveness, to develop innovation activities and to grow in domestic and international markets. Given the fundamental role of SMEs to territorial development and the importance of European funds as the main instruments to overcome the well-known difficulties to access to finance, the present work explores which are the main barriers to access to the support instruments provided by European Commission and the main perceived impacts on different areas of business activities.

In detail, the study focused on the approaches of SMEs operating in one of the most relevant sectors in Italy, the wood furniture one, belonging to the Marche Region, center of one of the main wood-furniture districts in Italy. The final goal is to provide insights on possible policy routes to promote the participation of SMEs. For these purposes first an empirical survey was sent to 2047 SMEs of the wood furniture sector in Italy. The survey was answered by 270 SMEs involving 95 SMEs of the Marche Region. Second, interviews were conducted involving a representative of Cluster initiative in supporting SMEs, a Project Manager and consultant that held the role of chief executive of the development agency of Marche Region, and the technological center Cosmob that provides services to SMEs of the territory. The selection of these actors has been guided by the objective of collecting different perspective from those figures that play an active role in the definition of the regional policies and in supporting SMEs in participating to European projects as services providers.

The dissertation is structured in five chapters. Chapter 1 introduces the topics and provides an overview of the main instruments (direct and indirect) available at a European and Regional level, with a brief presentation of the main characteristics of the programmes. Chapter 2 presents a review of the recent contributions on the topic, aimed at identifying the main approaches to the theme and at identifying the obstacles and the main perceived impacts evidenced by recent research as a forward base for the empirical study. Chapter 3 describes the characteristics of the

wood furniture sector contextualized in the region of Marche and provides an overview of the main regional policies developed by the policy makers for the sector. Chapter 4 presents the quantitative study on SMEs of Marche Region and operates a comparison between the approaches of these SMEs with other SMEs located on the Italian territory. Chapter 5 presents the qualitative study and the results of the interviews. The final Chapter summarizes the finding of the previous chapters and some recommendations are outlined. Finally, limitation and future areas of research are pointed out.

In line with the evidence provided by the main studies on this topic, SMEs from the wood furniture sector of the Marche Region are partially aware of the opportunities linked to EU projects but are still not familiar with their accessibility and use, especially when it comes to European direct funds. In fact, they find difficulties in managing the entire process from the research phase to the financing reporting phase. The tendency is in line with trends of SMEs located in other Italian regions. Furthermore, SMEs that have experienced the use of EU funds registered positive effects after the participation in projects, mostly in terms of investments in fixed aspects and on innovation activities. These findings are confirmed by the actors involved that agree with the fact that the SMEs are far away in seizing all the opportunities provided by European Union, and the main obstacles are linked to their short-term mindset that is at the basis of their organization of work and does not allow them to approach to long term project such as the research and development ones. The region must support a deeper change in the vision of SMEs. The study contributes to the research regarding the impacts of accessing European projects and about the difficulties linked to the participation that is still limited. Furthermore, the work provides a contribution about the topic considering as focus of the analysis a specific sector and a specific regional territory.

Keywords: SMEs, EU Funds and Programmes, Marche Region, Wood Furniture Sector

Abstract (Italian)

L'Unione Europea predispone strumenti finalizzati a sostenere la competitività, lo sviluppo di attività innovative e ad incoraggiare i processi di crescita sui mercati nazionali e internazionali delle Piccole e Medie Imprese (PMI). Data l'importanza del ruolo delle PMI per lo sviluppo territoriale e la rilevanza dei fondi europei come principali strumenti per superare le ben note difficoltà di accesso ai finanziamenti, il presente lavoro esplora quali sono i fattori che ostacolano l'accesso alle risorse fornite dalla Commissione Europea e i principali impatti percepiti su diverse aree dell'attività aziendale.

In dettaglio, lo studio si è concentrato sugli approcci delle PMI del legno-arredo localizzate nella regione Marche, centro di uno dei principali distretti del legno-arredo in Italia. L'obiettivo della tesi è quello di fornire spunti su possibili linee di intervento per promuovere la partecipazione delle PMI ai progetti finanziati dall'Unione Europea. A tal fine è stata condotta un'indagine empirica su 2047 PMI del settore del legno-arredo in Italia. All'indagine hanno partecipato 270 PMI italiane, 95 delle quali appartenenti alla Regione Marche. In secondo luogo, sono state condotte interviste che hanno coinvolto un rappresentante dell'iniziativa Cluster a sostegno delle PMI, un Project Manager e consulente che ha ricoperto il ruolo di amministratore delegato dell'Agenzia di sviluppo della regione Marche, e il centro tecnologico Cosmob che fornisce servizi alle PMI del territorio. La scelta di questi attori è stata guidata dall'obiettivo di cogliere spunti di riflessione da parte di quelle figure che svolgono un ruolo attivo nella definizione delle politiche regionali e che hanno una funzione rilevante nel supportare le PMI nella partecipazione a progetti europei come fornitori di servizi.

Il lavoro è così strutturato. Il Capitolo 1 fornisce una panoramica dei principali strumenti (diretti e indiretti) disponibili a livello europeo, nazionale e regionale, con una breve presentazione delle principali caratteristiche degli stessi. Il Capitolo 2 presenta una rassegna dei recenti contributi sull'argomento, finalizzata a delineare i principali approcci al tema della partecipazione delle PMI ai progetti europei e ad identificare gli ostacoli e i principali impatti percepiti come base per la

realizzazione della ricerca empirica. Il Capitolo 3 descrive le caratteristiche del settore legno-arredo contestualizzato nella regione Marche e fornisce una panoramica delle politiche regionali a supporto del settore. Il capitolo 4 presenta lo studio quantitativo sulle PMI della regione Marche e opera un confronto tra gli approcci delle PMI marchigiane e delle PMI ubicate sul territorio nazionale. Il capitolo 5 presenta lo studio qualitativo e i risultati delle interviste. Infine, l'ultimo capitolo riassume i risultati dei capitoli precedenti e presenta alcune raccomandazioni di policy. Infine, vengono evidenziati i limiti e le aree di ricerca future.

In linea con i principali contributi sul tema della partecipazione delle PMI ai progetti Europei, le PMI del settore del legno arredo della regione Marche sono parzialmente consapevoli delle opportunità legate ai fondi erogati dall'UE ma non ne conoscono ancora l'accessibilità e l'utilizzo, soprattutto quando si tratta di fondi ad erogazione diretta. Le principali difficoltà sono legate alla gestione dell'intero processo di gestione del progetto, dalla fase di ricerca alla fase di rendicontazione finanziaria. La tendenza è in linea con gli approcci delle PMI ubicate in altre regioni italiane. Inoltre, le PMI che hanno sperimentato l'utilizzo dei fondi hanno registrato effetti positivi dopo la partecipazione ai progetti, principalmente in termini di investimenti su macchinari e su attività di innovazione. Gli intervistati hanno validato i risultati del questionario e concordano con il fatto che le PMI sono lontane dal cogliere tutte le opportunità offerte dall'Unione Europea e che uno dei principali limiti è rappresentato dalla visione a breve termine che caratterizza l'organizzazione e la strategia delle PMI che non consente l'avvicinamento a progetti a lungo termine come quelli di ricerca e sviluppo. La regione deve sostenere politiche volte a promuovere un cambiamento più profondo nella visione strategica delle PMI. Lo studio contribuisce alle ricerche sugli impatti dell'utilizzo dei fondi europei e sulle difficoltà legate alla partecipazione che risulta ancora limitata. Inoltre, il lavoro fornisce un contributo sul tema considerando come focus d'analisi uno specifico settore e uno specifico territorio regionale.

Keywords: PMI, Fondi e Programmi dell'Unione Europea, Regione Marche, Legno-Arredo.

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To my mother,
thank you for the care and
for teaching me the real meaning of love.

To my sister,
thank you for making me appreciate the value of the life
through your truthful smiles.

I miss you.

INTRODUCTION

The financial funds managed by the European Union, both directly and through the involvement of local Institutions of the various member countries, are the main sources for planning and realizing structural interventions for the economic and social development of specific territories of the European Union (European Commission, a www.ec.europa.eu). These resources constitute the first reference for the business world, mainly linked to the SMEs system, in which it is crucial to plan and develop policies aimed at enhancing the industrial research and the development of technological innovations to enable SMEs to remain competitive in a context that is increasingly complex and globalized (Clifton et al., 2015). In fact, one of the priorities of the European Commission is precisely to support the activities of small businesses both in financial and non-financial terms as the main way to stimulate the development of the territories (European Commission, a www.ec.europa.eu; Wilson, 2006; Appiah et al., 2019).

The European Commission, in fact launches a series of programmes and supporting tools addressed to SMEs that can take advantages from a variety of interventions (European Commission, 2020; Kiełek-Więcławska, 2016; Popa et al., 2013; Zaneta & Joshua, 2015; Čučković & Vučković, 2018; Visković, & Udovičić, 2016). In detail, the SMEs can have access to *Direct funds* managed by European Institutions (by way of illustration: Horizon 2020, COSME, SME Instrument, Erasmus +, Life) and *Indirect funds* that are indeed managed by national and regional authorities mainly through Structural and Investment Funds (for example Regional Operational Programmes and National Operational programme).

Accessing these support tools means for small businesses to obtain the necessary resources to invest in growth and innovative solutions (Visković & Udovičić, 2016; Popa, 2013; Zaneta & Joshua, 2015). In this scenario, the many difficulties in accessing these important and strategic opportunities mainly linked to the manufacturing world and Small and Medium-sized enterprises are well known. The

characteristics of the projects, both direct and indirect form of financing, make the involvement into the programmes very hard for companies: this is particularly true for SMEs. The important difficulties in interacting with community tools are evident in all phases of the life of the projects: from the design of the proposal and the creation and management of international partnerships, up to the development, monitoring and reporting phases of the projects.

The nature of the difficulties is linked to multiple aspects, both related to some firm-specific characteristics and for the factors related to the bureaucratic complexities of the procedures. On the one hand, those linked to the typical characteristics of Italian manufacturing companies, are related to: the relevance of internal constraints linked to the limited size both in terms of turnover and employees, organizational-management methods and models of small businesses (Aykan, 2013; Hessels & Parker, 2013). Furthermore, the scarce involvement in research and development activities (Aykan, 2013) and the difficulties to develop innovations projects (Faber & Rijnsoever, 2015) are other factors that influence the ability of SMEs to participate in complex projects. On the other hand, the external barriers are related to the complexity of the projects and administrative procedures are not easy and immediate to understand for SMEs (BrzÁková & PŘidalová, 2015; Bussi et al., 2017; Gilmore et al., 2013; Faber & Rijnsoever, 2015; Visković, & Udovičić, 2016; Medve-BÁlint & Šćepanović, 2019; Hunya, 2011; Labudová & Jánošová, 2019). Especially the projects financed by direct funds, are complex and characterized by high innovation content and complex structure with specific objectives and tasks that make hard the accomplishment of all the formal obligations (Ciarmatori et al., 2018).

Despite the barriers, the use of public funds represents an important opportunity for SMEs that can benefit on different areas or business activities. The participation in EU funds allow SMEs to increase investments in various actions: through the funds managed (in direct and indirect way) by European Commission, SMEs may invest and benefit from the acquisition of new machinery and equipment's (Dvouletý et al, 2018; Radicic et al., 2018) or they may invest in process and product innovations (Radicic & Pugh, 2015; Lewandowska et al., 2015; De Prato et al., 2015).

Furthermore, SMEs may have access and consequently acquire new skills and competences (Lewandowska et al., 2015; Faber & Rijnsoever, 2015) and take advantage of new relationships with other actors (Faber & Rijnsoever, 2015; Caloffi et al., 2014; Radicic et al., 2018; Nepelski & Piroli, 2018). The SMEs, thanks to the use of these funds, increase the investment in research and development activities (Bedu & Vanderstocken, 2019; Čučković, & Vučković 2018; Catozzella, Vivarelli, 2011; Almus & Czarnitzki, 2003; De Prato et al., 2015; Faber & Rijnsoever, 2015, Radicic & Pugh, 2015). In general, the different economic benefits are perceived as positive and will be deepened in the thesis (to cite some: 2018; Nilsson et al., 2007; Stewardson et al., 2003; Boratynska et al., 2018; Lewandowska et al., 2015; Bedu & Vanderstocken, 2019; Mikołajczak et al., 2017).

In this line, this study was aimed at investigating, with respect to the various intervention programmes provided by European Union, mainly aimed at the promotion and development of technological innovation and the competitiveness of manufacturing companies, the various critical aspects that severely limit the active participation of SMEs, as well as at evaluating the repercussions at the level of individual companies that are direct beneficiaries of the interventions in terms of the impacts on companies activities.

Specifically, after the definition of the context scenario through the identification of the possibilities available at the European level, the study focused on the research and innovation processes of one of key sectors of the manufacturing industry, the wood-furniture one, with focus on the Marche region, center of one of the main districts of the selected sector. The wood furniture assumed over the years an important role in terms of productivity and employment, and it is a sector that is characterized by the constant need for innovation related to aspects of quality and to respond to the changing needs of consumers (Renda et al., 2014; European Commission, i www.ec.europa.eu). The processes that characterize the production should progressively adapt to the new trends linked to higher quality, eco-compatibility, product diversification and innovation of production methods (Cdp, 2020). In fact, companies that manage to generate innovative solutions create a real differential factor from the point of view of technological development that makes these companies able to compete in international markets and responding

in the most effective way to the expectations and needs of consumers (Renda et. al., 2014; Cdp, 2020).

The objective of the thesis was centered on the identification of the main criticalities and real opportunities connected to the European planning for the SMEs in the wood furniture sector. The research intended to investigate the different moments linked to the management of European planning, with the aim of identifying proposals for operative solutions and policies recommendation for encouraging a more dynamic and active participation of SMEs in this broad scenario of innovation opportunities and growth represented by European planning. The aim is to provide insights on how to reduce as much as possible all the issues identified during the analysis phase and on how to reinforce the collaboration with the research world and with the international networks that would favour the exchange and the sharing of technological knowledge, that are particularly relevant for the competitiveness of the manufacturing sector in general.

Related to these issues, the following research questions have been identified:

RQ1: Which are the main perceived barriers that wood furniture SMEs of Marche region must face in participating to EU funds?

RQ2: Which are the main perceived impacts in participating to EU funds on different areas of the organization?

RQ3: Are there differences in participating to EU funds on the approaches of Marche region SMEs with other SMEs located on the Italian territory?

In addition to these issues, mainly related to the activity of SMEs, we have tried to focus also on some other factors that can influence participation. In detail, we deepened the role of stakeholders that play an active part in the definition of policies and those who have a role in supporting companies in the participation to European funds opportunities.

Indeed, two additional questions have been identified:

RQ4: Which are the main support services available to SMEs of Marche region?

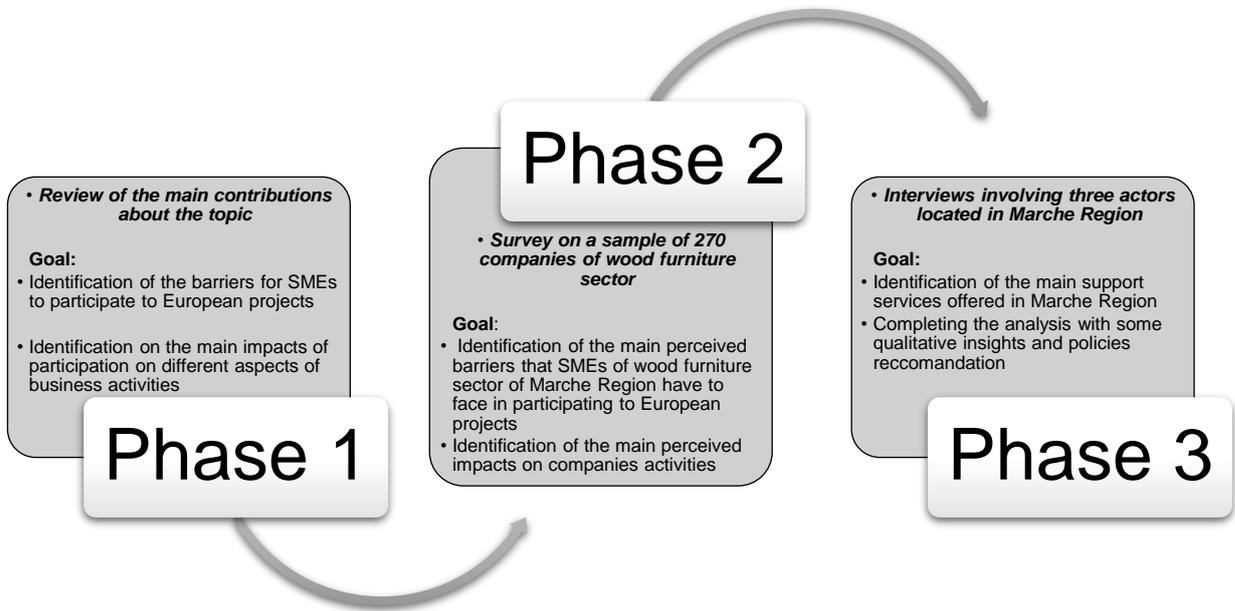
RQ5: Which are the main instruments and strategies that the policy system can implement to encourage SMEs' participation to European programmes?

The work has been carried out in collaboration with the Cosmob technological laboratory, closely connected to the world of SMEs in the Marche region with specific reference to the Pesaro wood furniture district.

The work was developed in a three year period. During the first year, in addition to specific courses in the Ph.D. programme that have been attempted, the research focused mostly on the activities related to the definition of the context of the analysis aimed at identifying the role of SMEs at the European level and the main European projects available at international, national and regional scenario in the last 7 years of programming period. During the second year the work focused on the analysis of the literature on the obstacles to the participation and on the identification of the areas in which it is possible to evaluate the impacts on company activities. The analysis was followed by a deep overview of the Marche wood furniture sector and related policies. During the second year the questionnaire was up and the dataset to be used for the empirical sections was selected. During the last year the quantitative and qualitative analysis were conducted. For the quantitative analysis, a questionnaire survey on a sample of 270 companies belonging to the wood furniture sector has been developed. For the qualitative part of the research, the three interviews to the key actors located in the territory have been used.

The research design is summarized in the following figure (Figure 1).

Figure 1. Research design



The work has been divided in five chapters.

Chapter 1. The first chapter introduces the topics that are object of the analysis. As first step, the definition of SMEs according to the classification of European Union is provided. Secondly, the chapter provides an overview of the main instruments available at European and Regional level, divided into two main categories (*direct and indirect*) with a brief presentation of the main characteristics of the programmes.

Chapter 2. The second chapter presents a review of the recent contributions on the topic, aimed at identifying the main way in which the literature has approached the theme of SMEs participation to European programmes. In line with the objectives of the thesis, the chapter describes the main evidence by recent research as a forward base for the empirical study.

Chapter 3. The third chapter describes the characteristics of the wood furniture contextualized in the region of Marche. In detail, main key features of production

processes and the trends that characterize the sector have been presented. Furthermore, the chapter provides an overview of the main regional policies developed by the policy makers for the sector in the last 7-year programming period.

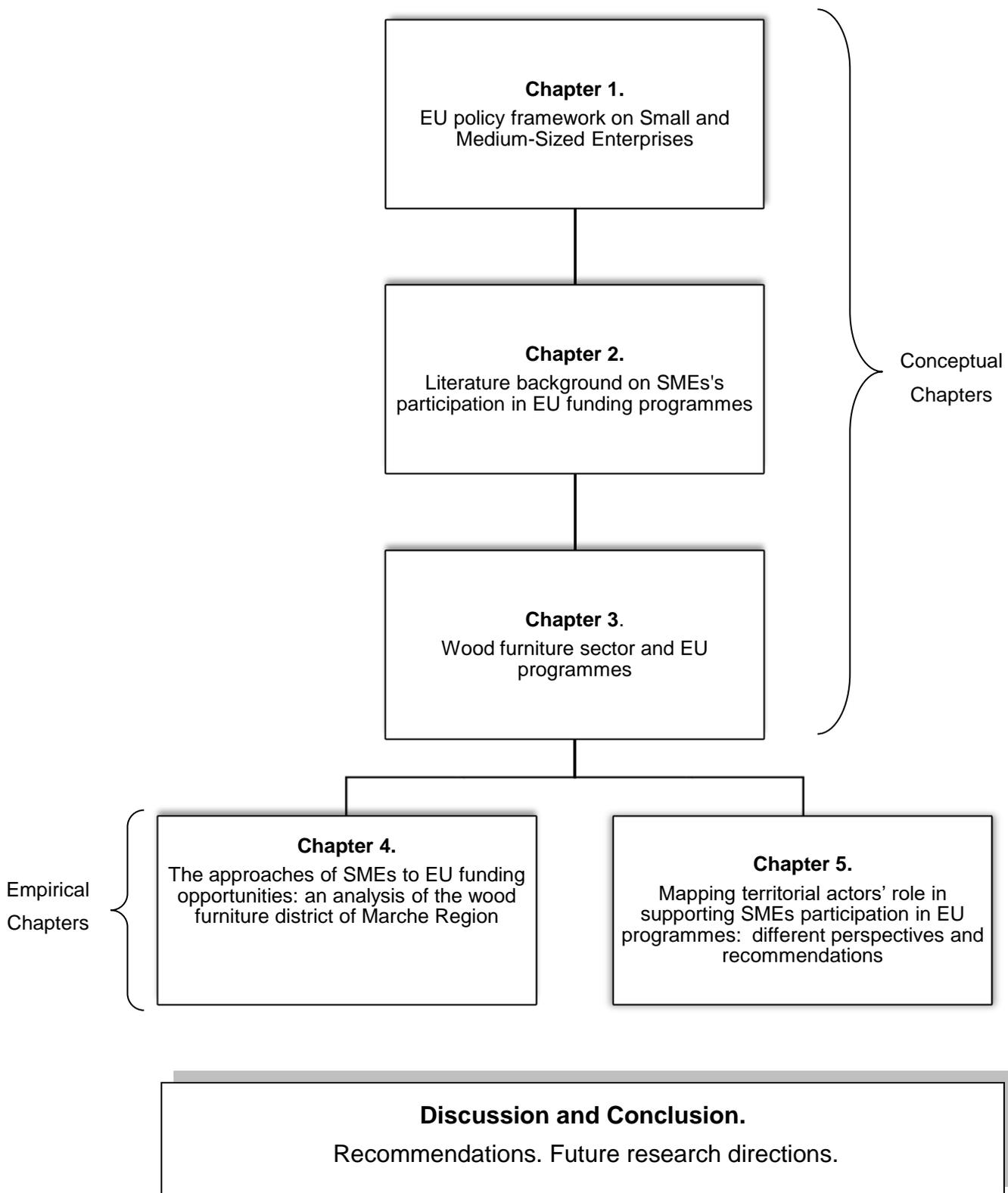
Chapter 4. This chapter presents the quantitative study on SMEs of Marche Region. In detail, the results about the main motivations, the barriers to participation and the main impacts on some areas of organizations have been presented. The end of the chapter operates a comparison between the approaches of the Marche region SMEs with other SMEs located on the Italian territory.

Chapter 5. The chapter presents the qualitative study and the results of the interviews that have been conducted to some key actors located in the Marche Region.

Conclusion and discussion. The final chapter summarizes the findings of the previous chapters and some highlights are outlined together with insights for future research.

The structure of the thesis is summarized in the next figure (Figure 2).

Figure 2. Structure of the thesis



Chapter 1. EU policy framework on Small and Medium-Sized Enterprises

Introduction

Micro, Small and Medium-sized Enterprises (SMEs) located on the EU territory are about 25 million, representing the 99.8% of all European companies (European Commission, 2019). Their role in the territories assumes a considerable importance in the economic and social context of European Union and for the life of its citizens. SMEs are considered as the first source of employment and innovation activities in the local and regional territories (Gilmore et al., 2013; Labudová & Jánošová, 2019): the SMEs represent the most active players in terms of new products, services and processes (Čučković & Vučković, 2018) and their activities are crucial for the development of the territories and at the basis of the formation of the “entrepreneurial spirit” of a country (Labudová & Jánošová, 2019; Staniewski et al., 2015).

In parallel, SMEs must overcome the challenges linked to complexity of the business environment characterized by rapidly changing and globalized markets, and to firm-specific characteristics that made the SMEs most vulnerable in front of the competition in a context that needs high level of technologies and competences (Clifton et al., 2015). Supporting SMEs has become one of the top priorities of the latest programming activities of European Commission, as the main vector of economic and social development of the territory (European Commission, a www.ec.europa.eu).

The main aim is to create a “business-friendly environment” for SMEs supporting their growth, their innovation activities, and their role on global markets (Labudová & Jánošová, 2019). Public policies at different levels are fundamental to provide the right environment for the development of SMEs through the creation of a supporting system capable of sustain their financial and non-financial activities (Wilson, 2006; Appiah et al., 2019).

Hence, the funds that European Commission provides for SMEs through regional or national programmes aimed at improving the performance in terms of competitiveness and innovation capability are the first source available to SMEs. The support system developed by the Commission is complex and characterized by different categories of interventions to sustain SMEs activities (Kielek-Więcławska, 2016; Popa, 2013). Having access to these programmes means for SMEs to obtain the resources necessary to create new products, services or infrastructure or obtain assistance (Visković & Udovičić, 2016) for non-financial activities (Popa, 2013; Zaneta & Joshua, 2015).

The reminder of this chapter is structured as follows: after this brief introduction, the next paragraph will provide a definition of SMEs according to the European Commission indication. Then, the key features of European SMEs will be presented in terms of importance in the European context. The last two paragraphs will introduce the main instruments available for SMEs provided by European Commission, exploring the main characteristics and the share of participation in European countries.

1.1 SMEs Definition

Over the years, the economic literature has tried to define the notion of Small Enterprises through quantitative definitions (therefore considering aspects such as the number of employees, turnover, number of investments) and through qualitative definitions, hence describing which are the peculiarities of its nature (Marchini, 1995). From a qualitative point of view, the conceptual definition places emphasis on the way in which these companies are governed and on the

organizational structure that characterizes them. According to this definition, the main features of the SMEs are (Marchini, 1995):

- the structure is simple and flexible;
- the decision-making power and the control are in the hands of one person (generally the entrepreneur);
- the hierarchical structure is limited and there are few members in the staff;
- the roles are not well defined;
- the strategies are short term-oriented;
- the communication takes place informally within the company members.

Supporting the SMEs is one of the main objectives of the European Commission to favour the growth targets in the long run and to reach the objectives of economic and social cohesion. Therefore, the European Commission undertook to provide a common and unambiguous definition to ensure coherence and effectiveness of the support programmes for SMEs and to improve their access to all the programmes available at European, national, and regional levels.

Using the words of European Commission: “The definition of a SME is important to ensure their access to finance and to other EU support programmes targeted specifically at these enterprises” (European Commission, a www.ec.europa.eu). SMEs need a different type of assistance from other companies and are faced with unique challenges and market failures in relation especially to financing, research, innovation, and environmental regulations (European Commission, a www.ec.europa.eu). Furthermore, SMEs must overcome structural barriers related to the lack of management skills and well-defined expansion strategies in international markets (European Commission, a www.ec.europa.eu). These support programmes, although represent the main sources for SMEs activities and investments, are relatively scarce and the access is limited: establishing the boundaries of the notion was the first step in guiding SMEs access to these funds and programmes.

The new definition was implemented in January 2005, based on the Recommendation from Commission No 361 of May 2003 (Commission

Recommendation No 2003/361/CE concerning the definition of micro, small and medium-sized enterprises).

The recommendation states that a company can be considered as a SME if it fulfils the three requirements listed below (European Commission, 2019).

- **Autonomy.** The company must be **independent**: it can be completely independent or have one or more minority shareholdings (less than 25%) with other companies. The **associated companies**, that have significant partnership relations, also comply with this requirement if none of the partners exercise direct or indirect control over the other (the shareholding reaches 25% but does not but does not exceed 50%). The same goes for the companies (so-called **linked companies**) that are part of a group that directly or indirectly controls most of the capital or the voting rights, or that has the ability to exercise influence (the holding with other companies therefore exceeds the 50%) (European Commission, 2019).
- **Staff headcount requirement.** A company falls into the category of SME if employs less than 250 people in the staff. Personnel employed full time, part time, or on a temporary and seasonal basis are considered “effective workers”. The same goes for the owner-managers and partners who carry on regular activities in the company. Therefore, people involved in apprenticeship contracts, students, and employees on maternal or parental leave are not considered effective workers (European Commission, 2019).
- **Financial requirement.** The annual turnover of the SME must not go above 50 million euros, OR the annual balance sheet total must not exceed 43 million euros. While the employment requirement is mandatory to be considered a SME, a company can choose which criterion to refer to between the two (turnover or annual balance sheet) and still belong to the same business category (European Commission, 2019).

Table 1. SMEs definition

| Category (size) | Staff headcount requirement | Financial requirement | |
|--------------------|--------------------------------|-----------------------|----------------------------|
| | N° of employees | Turnover (€) | Balance sheet total (€) |
| Medium | <250 | ≤ 50 m | ≤ 43 m |
| Small | <50 | ≤ 10 m | ≤ 10 m |
| Micro | <10 | ≤ 2 m | ≤ 2 m |

Elaboration on European Commission, a www.ec.europa.eu.

The above definition relates to all support systems, policies and programmes that the European Commission draws up and runs for SMEs (European Commission, a www.ec.europa.eu). The companies that meet the criteria are eligible for EU business support programmes mainly targeted for SMEs: they consist of research, competitiveness and innovation funds or analogous national support tools and special benefits, such as reduction of administrative compliances (European Commission, a www.ec.europa.eu).

The companies that fall into this definition are currently 25 million and involve 61.4% of the total workforce and about 56% of the value added generated by the non-financial business sector (European Commission, a www.ec.europa.eu). As the following table shows, the largest share of enterprises is represented by micro enterprises (93.0%), however the share of added value is the same between the three categories of enterprises.

Table 2. Number of Enterprises in Europe

| Enterprises (Number) (%) | | | | |
|--------------------------|------------|--------------|------------|-------------|
| ALL SMEs | | | | |
| (n) 25.032.008 (%) 99.8 | | | | |
| Micro | Small | Medium-sized | Large | Total |
| 23.323.938 | 1.472.402 | 235.688 | 47.299 | 25.079.312 |
| 93.0% | 5.9% | 0.9% | 0.2% | 100% |
| Employment (Number) (%) | | | | |
| ALL SMEs | | | | |
| (n) 97.738.952 (%) 66.6 | | | | |
| 43.527.688 | 29.541.260 | 24.670.024 | 49.045.644 | 146.784.592 |

29.7%

20.1%

16.8%

33.4%%

100%

Elaboration on European Commission, 2020a.

As stated in the SME annual Report (European Commission, 2020a) Europe has a density of 58 SMEs for every 1000 members of the population: in particular, the countries with the greater number of SMEs are Czech Republic, Greece, Lithuania, Slovakia, Portugal, Netherlands, Slovenia and Poland (mainly micro business), while the countries with the lowest number of SMEs are Austria, Germany, Denmark, Croatia, and Romania, which however have a large share of medium-sized enterprises (European Commission, 2020a).

Focusing on Italian production system, it is characterized by the presence of small businesses. The SMEs in Italy provide almost at the 70% of the added value in the non-financial sector, generating 78% of the employment (European Commission, 2020a). The companies that meet the requirements defined by the European Commission in terms of employee, turnover and balance sheet assets are 159,000, of which 132,000 are small businesses, while 17,000 are medium-sized enterprises, employing in total 4,2 million of people. The 30.4% of the added value of SMEs is generated by the manufacturing sector (European Commission, 2020a). The manufacturing sector is characterized by a constant growth due to government efforts in incentivising innovation, digitalization and in promoting the technologies of Industry 4.0 (European Commission, 2020a). Policy efforts are also aimed at supporting internationalization and the entry into foreign markets (European Commission, 2020a).

According to the ISTAT report (ISTAT, 2019), the 2019 saw an increase in the birth of new companies, especially innovative companies with high technological and knowledge value. The new companies are born above all from the push of the young, female, and foreign entrepreneurs. The 2020, on the other hand, due to the pandemic, saw a contraction of business birth rates and the increase in the number of companies that have ceased the activity, a trend that was already evident before the outbreak of the pandemic (ISTAT, 2019).

1.2 European SMEs: key feature and the role of public policies

The SMEs play an important role in the economic and social context of the European territory. As specified in the previous paragraph, they represent the first source of employment and are fundamental for the development of European territory (European Commission, 2020a). The SMEs are the key to structural change and industrial renewal, and the first source of innovation in the national and local territory (Schumpeter's, 1934; Gilmore et al., 2013; Labudová & Jánošová, 2019; Mina, et al., 2021), contributing to develop the *entrepreneurial spirit* of a territory (Staniewski et al., 2015). SMEs are in fact a source of product innovation, new processes (in managerial or production fields) generated by themselves or thanks to their networking capacities that influence the transfer of new knowledge from other companies. This key role is provided by the characteristics of SMEs, their flexible and simple structure, and the centrality of the role of the owner-manager that make the processes spontaneously faster than big companies (Blažková, 2016).

Therefore, SMEs need the help of public funds, including European funds, to finance research and development activities, internationalization and their growth in general and for these reasons are subjects that receive particular attention from public support policies (Čučković & Vučković, 2018). The first resource available to SMEs to increase the innovation capability are in fact the European fundings available at regional and European level oriented to improve the competitiveness of SMEs in line with the objectives of European priorities which will be presented in the following paragraphs. This is translated into the launch of various programmes and call for proposals that cover all the sectoral areas: research, agriculture, security, energy, transport. These programmes represent for the beneficiaries, and for the SMEs that represent a large portion of the recipients of this kind of projects, a real opportunity and at the same time a big challenge for the companies. These programmes represent an opportunity because SMEs can overcome their difficulties linked to the lack of financial capabilities and have access to different skills e information thanks to the collaboration with the partners involved in the

different projects. At the same time, these programmes are complex by nature and for this reason may be difficult for SMEs to have access to them.

1.3 Supporting SMEs: exploring the application of the main instruments of European Union

European SMEs are considered the pivot of the economy: several authors have pointed out the importance of SMEs in the European context, emphasizing the Commission's effort to provide a deep availability of programmes to support their activities (Viskovic & Udovičić, 2020). The analysis of the policies in favour of SMEs clearly shows that these businesses are treated as *special entities* by the Commission (Lewandowska et al., 2014). The final strategic objective is to reduce the differences between countries and regional territories encouraging the growth of SMEs (Lewandowska et al., 2014). Over the last few years, the design and elaboration of different policies, measures, tools and services for SMEs have taken place. SMEs are in fact receiving increasing attention from the Commission and from the institutions of the EU territory. The EU provides support to SMEs through a variety of interventions, both of financial and non-financial nature. The first category includes grants, loans and guarantees to invest in new products, services or infrastructures (Visković & Udovičić, 2016); the second one includes all the business assistance programmes and services (Popa, 2013; Zaneta & Joshua, 2015).

1.3.1 Typologies of projects

The support system is a complex scheme characterized by a very huge availability of interventions. The categories of programmes can be distinguished according to main topics, according to the geographical areas (regional, national, international) or according to the type of funding and the means of access (direct or indirect). In

this work we will refer to the current programming period (2014-2020) i.e., at the Europe 2020 strategy, which main objectives are (European Commission, 2020b):

- Smart Growth (knowledge and innovation-based economy);
- Sustainable growth (resource efficient green and competitive economy);
- Inclusive growth (promote the social and economic cohesion and improve the labour market).

For the purpose of this work, we distinguish the typologies of fund according to the access modality which is linked to the geographical distinction of the funds; furthermore, the programmes that mainly affect the SMEs will be described in the next paragraphs.

- **Direct funds.** They are managed by European institutions and concern particular programmes and areas (environment, research, education). They can be implemented by submitting an application form to apply to transnational, sustainable with high added value. The general principle that distinguishes this method of support is that of co-financing: The European Union provides subsidies that cover only part of the costs of the project (European Commission, b www.ec.europa.eu).
- **Indirect funds.** They are programmes managed by national and local authorities and consist of almost 80% of the EU budget, mainly through Structural and Investment Funds (European Commission, b www.ec.europa.eu).

Moreover, there are several services in support of the SMEs to provide information and general support on European Union policies and initiatives. The Enterprise Europe Network is an example. It is a network that unites more than 3000 expert offices and “helps SMEs to innovate and grow internationally” (European Commission, c www.ec.europa.eu). Thanks to the territorial proximity that characterizes the spread of these centres, SMEs can receive accurate assistance from all the centres belonging to the network. The main tasks are (European Commission, c www.ec.europa.eu):

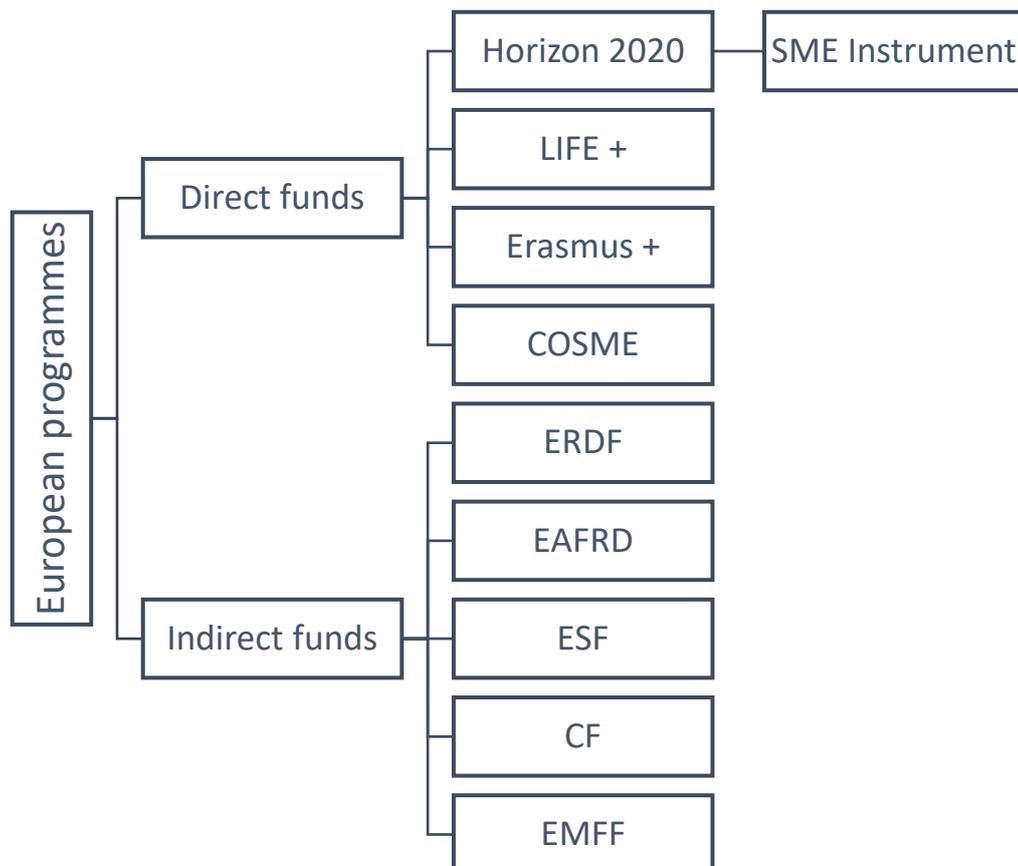
- informing about European policies, programmes and legislation;

- supporting the partner research phase;
- supporting the technology transfer;
- informing about the tools available for SMEs.

Among the services available to provide general information and support on policies and initiatives of European Union, it is worth mentioning the National Contact Points, set up as a part of some programmes to support the potential participants. The support is provided on request or through the dissemination of information by means of specific guides or dedicated events (European Commission, b www.ec.europa.eu).

The next sections will present the characteristics of direct and indirect funds with special focus on the programmes that have greater impact on SMEs.

Figure 3. European Programmes



Own elaboration.

1.3.1.1 Direct funds

SMEs can apply and participate directly at programmes such as COSME and HORIZON 2020 (Viskovic & Udovičić, 2020). This kind of programmes are European funds and are more "relevant" in terms of the amount of the fund than the regional ones (the amount of the fund ranges on average from 5 to 10 million euros).

The programmes developed at EU level have a total allocation of more than 200 billion of euro for the 2014-2020 programming period and covers an extremely wide range in terms of themes (European Commission, 2020b). These programmes have a transactional nature and are directly managed by the European Commission. Their aim is to implement EU policies promoting the cooperation between subjects belonging to different countries of the Community territory (European Commission, d www.ec.europa.eu).

These instruments represent an opportunity for SMEs to face the new level of competition in a global scale benefiting from (European Commission, d www.ec.europa.eu):

- the access to know-how and advice, knowledge and networking opportunities deriving from cross-border collaborations;
- the access to new financial resources to invest in development, human capital and managerial activities;
- the reinforcement of the link between research centres and universities promoting the innovation activities;
- have access to global markets.

European programmes are normally defined in terms of objectives, eligibility, type of interventions and allocation of funds for a period of seven years. They have a transnational nature: it is normally appropriate to involve partners from several countries, demonstrating that the project can have positive impacts on the community in general, and the proposals must be written in English (Greco, 2015). The main principles that are at the basis of the European programming are partnership, consultations, collaboration between different subjects (Greco, 2015).

The beneficiaries can be associations, non-governmental organizations, foundations, public bodies, local authorities, universities, education and research centres, trade associations, social partners and businesses. Furthermore, the proposal must be implemented by a partnership of different actors from at least two or three different countries (European Commission, 2011).

The trans nationality of the projects and partnerships are at the basis of the European added value. Using the words of European Commission, the expression *European added value* means “the value resulting from an EU intervention which is additional to the value that would have been otherwise created by Member State action alone” (European Commission, 2011), i.e., the capacity of the project to produce effects on different countries and in general on the territory of European community as a whole. Projects of a purely national, regional, or local nature are not eligible for these kinds of programmes, because they can be funded by the structural funds: the proposal shall demonstrate that the project brings substantial benefits. The projects are often multidisciplinary, and the activities are well structured, with specific objectives and tasks, taking the form of projects (Ciarmatori et al., 2018). Furthermore, other characteristics of these programmes are the innovativeness of the proposals, their replicability in different contexts and countries and the sustainability of the projects i.e. their capacity to produce benefits much longer than the duration of the project itself (European Commission, d www.ec.europa.eu). The programmes are structured according to a well-defined methodology: The Project Cycle Management (Bussi & Russo, 2017) that will be deepened further ahead.

HORIZON 2020

Horizon 2020 (H2020) is one of the European programmes for research and innovation: with an amount of 80 billion euros is the largest of the European programmes for the 2014-2020 programming period (European Commission, e www.ec.europa.eu). H2020 was conceived in line with the objectives of the Europe 2020 Strategy and with the initiative "Innovation Union" aimed at increasing Europe's global competitiveness. The program is not devoted just to financing of SMEs, but the potential beneficiaries are a variety of actors: research institutes,

universities, non-governmental organizations and businesses (European Commission, 2020e).

The priorities of this program are (European Commission, 2020e):

- Excellent Science: the objective is to achieve the primacy of European research sector worldwide and the dissemination of best ideas in all the member States;
- Industrial Leadership: the objective is to support the research and innovation of European industry, with a strong focus on enabling technologies and investments in favour of SMEs (key enabling technologies, information and communication technologies);
- Societal Challenges: The Commission has identified some priorities and challenges that research and innovation can meet for the benefit of Europe as a whole.

The next section will summarize the main characteristics of the SMEs that took part in Horizon 2020 in terms of country of origin, size, and industrial sector. We used the CORDIS dataset (CORDIS dataset <https://webgate.ec.europa.eu>) that contains information about projects funded by the EU under the grants of Horizon 2020 and includes information about each project, the participating organisations and summarize all the macro data at European and country levels.

The H2020 signed grants by SMEs were 14.077 involving a total of 32.171 participants, constituting the 44.27% of total H2020 for the first value and the 20,00% of the total share of participation to H2020 funded projects (in total the H2020 signed grants were 32.171 that involved 160.837 participants) (CORDIS dataset <https://webgate.ec.europa.eu>).

The SMEs that are more active in participating in H2020 come from Spain, Germany, France, United Kingdom, Italy, Netherlands, Belgium, Austria, Denmark and Sweden that are the top participating countries (CORDIS dataset <https://webgate.ec.europa.eu>).

Figure 4. Number of participants in H2020

Number of project participations and Net EU Contribution/EU Contribution by country - region

| Country | Q | H2020 EU Contribution | H2020 Net EU Contribution | H2020 Participations |
|----------------|---|-------------------------|---------------------------|----------------------|
| Totaux | | € 10.378.874.542 | € 10.401.860.514 | 32.171 |
| Spain | | € 1.203.157.310 | € 1.206.479.045 | 4.148 |
| Germany | | € 1.179.044.441 | € 1.197.173.094 | 3.484 |
| France | | € 1.020.495.256 | € 1.001.807.969 | 2.729 |
| United Kingdom | | € 919.637.744 | € 924.357.901 | 2.829 |
| Italy | | € 901.580.377 | € 902.597.640 | 3.508 |
| Netherlands | | € 864.934.357 | € 875.857.061 | 2.199 |
| Belgium | | € 510.348.430 | € 507.987.303 | 1.638 |
| Austria | | € 328.948.719 | € 329.310.439 | 1.040 |
| Denmark | | € 328.400.962 | € 328.798.858 | 759 |
| Greece | | € 318.709.991 | € 323.479.258 | 1.171 |
| Sweden | | € 311.739.345 | € 313.028.730 | 799 |
| Ireland | | € 273.107.107 | € 277.870.804 | 685 |
| Switzerland | | € 270.670.099 | € 270.005.952 | 917 |
| Finland | | € 270.797.694 | € 268.144.490 | 589 |
| Israel | | € 259.251.199 | € 258.551.844 | 513 |
| Norway | | € 225.489.027 | € 223.940.381 | 471 |
| Portugal | | € 209.085.193 | € 209.535.257 | 790 |

CORDIS dataset <https://webgate.ec.europa.e>.

The **SME Instrument** is part of the programme H2020: was introduced in 2014 to support high innovative SMEs in their innovation activities with the final aim to spread the knowledge in the territory and to reach high levels of excellence (Di Minin et al., 2016; European Commission, f www.ec.europa.eu). It is addressed to SMEs with a strong propensity for development, growth and internationalization, or those who intend to develop innovations to increase their competitiveness on international markets (European Commission, f www.ec.europa.eu). The SME instrument provides funds to support the implementation of risky ideas (Di Minin et al., 2016) and to support the main phase of an innovation project. The marketing stage is also indirectly supported through facilitated access to debt and equity instruments (European Commission, f www.ec.europa.eu).

The support program covers the entire life cycle of the project and is organized in three phases (European Commission, f www.ec.europa.eu):

1. SME instrument phase 1: provides support in the technological and economic feasibility phase of the innovative idea for a specific industrial sector;
2. SME instrument phase 2: provides support in all the phases of the innovation project development (prototyping, design, experimentation) to make the product/service ready to be introduced in the market;

3. SME instrument phase 3: provides support for the marketing. This phase does not involve direct funding, but companies receive support for participation in other projects;
4. Mentoring and coaching: beneficiaries can benefit from training support during phase 1 and phase 2 (for a maximum of 12 days).

The total amount allocated under this programme is 2869,22 million. The table 3 shows the top 10 participating countries in terms of companies participating in the programme; within the 5487 companies funded under the SME instrument, the largest part comes from Spain, Italy, United Kingdom, followed by Germany and France (EASME, SME Instrument data hub www.easme-web.eu).

Table 3. Number of programmes financed under Horizon 2020

| Nation | Participants (N) | Nation | Participants (N) |
|-------------------|---------------------|----------------------|---------------------|
| 1. Spain | 934 | 6. Israel | 268 |
| 2. Italy | 702 | 7. Netherlands (The) | 258 |
| 3. United Kingdom | 464 | 8. Sweden | 255 |
| 4. Germany | 385 | 9. Denmark | 213 |
| 5. France | 353 | 10. Switzerland | 206 |

SME Instrument data hub www.easme-web.eu.

COSME

COSME (Competitiveness of enterprises and Small and Medium-sized Enterprises) is the EU program for competitiveness for the 2014-2020 period: the program aims to promote the activity of businesses and entrepreneurship Europe, with particular reference to SMEs (European Commission, g www.ec.europa.eu).

The beneficiaries of this programme are would-be entrepreneurs: the goal is to facilitate access to finance for SMEs at all stages of their life. The main objectives are therefore (European Commission, g www.ec.europa.eu):

- facilitating access to credit through Loan Guarantee Facility (LFC) and Equity Facility for Growth (EFG);

- facilitating access to markets through the establishment of a network, the so-called Enterprise Europe Network. The network consists of more than 600 offices in over 50 countries;
- improving the conditions for businesses through the creation of competitive industries in areas with high growth potential;
- supporting entrepreneurship by supporting specific groups of people (young people, women, the elderly).

The potential beneficiaries of the program are both organizations providing support to businesses active at local, regional, or national level (European Commission, g www.ec.europa.eu).

The total budget for this programme was 2.3 billion € (European Commission, g www.ec.europa.eu). The table below (Table 4) show the top 10 participants in terms of number of companies involved in the projects. As shown in the tables below, the largest part of participants within the 1820 comes from Italy, Spain, France, Germany and France (COSME data hub, www.easme-web.eu).

Table 4. Participation to COSME by country

| Nation | Participants (N) | Nation | Participants (N) |
|-------------------|-----------------------------|-------------------|-----------------------------|
| 1. Italy | 251 | 6. United Kingdom | 81 |
| 2. Spain | 236 | 7. Poland | 66 |
| 3. France | 150 | 8. Portugal | 62 |
| 4. Germany | 131 | 9. Turkey | 59 |
| 5. Belgium | 89 | 10. Greece | 56 |

COSME data hub www.easme-web.eu

Erasmus +

The Erasmus program is the EU program for education, training and sport: most of the resources of the program are dedicated to the mobility of people, but also to the exchange of good practices between education and training centers, associations and other types of organization (European Commission, 2020 d). The main areas of intervention are school education and vocational education, higher

education, education and training of young people and adults, teaching and research activities and sports (European Commission, 2020d).

The Erasmus program includes the following key actions (European Commission, 2020 d):

- Individual mobility: student and staff mobility, masters, granting of loans;
- Collaboration on innovation and exchange of good practices: promotion of transnational strategic partnerships to support sectoral alliances, alliances for knowledge between educational institutions;
- Support for policy reform and knowledge in the education, training and youth sectors.

The main beneficiaries of the program are people -students, trainees, apprentices, adult learners, young people, volunteers, professors, teachers, trainers, youth workers, professionals from organizations active in the fields of education, training and youth (European Commission, 2020d). However, the Program reaches these people through organizations, institutions, bodies, or groups that are involved in the organization of these activities (European Commission, 2020d). In this sense, SMEs can be involved in these projects.

LIFE

The Life Programme is the main tool provided by European Commission to be totally dedicated to environmental projects. It aims to protect the environment, to promote efficient and sustainable use of natural resources, to support the fight polluting emissions and to protect human health (European Commission, h www.ec.europa.eu). The LIFE programme involves several beneficiaries: associations, non-governmental organisations, public and private companies at all levels, so long as the projects are carried out on the European Union territory (EASME, Life data hub www.easme-web.eu). The programme is managed by the EASME Executive Agency.

The types of activities funded under LIFE programme are (European Commission, h www.ec.europa.eu):

1. Projects: grants for specific actions carried out in specific sectors for different types of projects (projects for the sharing of good practices, information or knowledge sharing).
2. Other forms of financing: they are minority actions in terms of allocation of funds and are constituted by grants to support organizations in carrying out specific studies or services.
3. Other financial Instruments: for example, loans. The main tools are Natural Capital Financing Facility (NCFF) and Private Finance for Energy Efficiency (PF4EE).

The total budget allocated for this programme was €3.4 billion. The table below show the top 10 countries that took part in the LIFE program. Within the 3247 companies involved from different countries, the largest part come from Spain, Italy, France and Germany (EASME, Life data hub www.easme-web.eu).

Table 5. Top 10 participants in Life Programme

| Country | Participants (N) | Country | Participants (N) |
|----------------|-------------------------|-------------------|-------------------------|
| Spain | 737 | Netherlands (the) | 129 |
| Italy | 714 | Portugal | 118 |
| France | 241 | Belgium | 103 |
| Germany | 169 | United Kindgdom | 85 |
| Greece | 147 | Sweden | 78 |

Elaboration on EASME,Life data hub www.easme-web.eu.

1.3.1.2 Indirect funds

Structural funds are used to finance projects and interventions in European regions in line with the Cohesion Policy, which aims to reduce the gap between European regions by achieving a balanced degree of economic, social and territorial development in the various countries that tend to be significantly different

in terms of economic and social development, influenced by geographical, cultural and historical characteristics (European Commission, i www.ec.europa.eu). They are funds that are jointly managed by the Commission and European countries, involving national and regional actors. The structural funds are implemented in addition to regional and national funding (European Commission, i www.ec.europa.eu).

The *national funds* are managed directly by the Governments or by individual ministries. In Italy, for example, among the funding bodies at the national level, the central role is played by the Ministry of Economic Development (Mise, www.mise.gov.it). The other financial bodies are for example: Cassa Depositi e Prestiti (CDP, www.cdp.it), Invitalia (the National Agency for the attraction of investments and business development owned by the Ministry of Economy, www.invitalia.it), the Chamber of Commerce system (www.camcom.gov.it) and Simest (Simest, www.simest.it) for internationalization.

The structural funds are therefore managed by authorities operating at national and regional level (for this characteristic they are called indirect funds). The ending point of the programming phases of the Structural Funds are the Operational Programmes (POR and PON)¹, which are valid at national and regional level. The categories of the structural funds are (European Commission, i www.ec.europa.eu):

- European Regional Development Fund (ERDF). It promotes stable growth in the different territories the Europe;
- European Social fund (ESF). It supports employment projects across Europe and investments in human capital;
- Cohesion fund (CF). It finances projects in the transportation and environment sectors in territories where per capita gross national income (GNI) is less than 90% of the Europe;
- The European agricultural fund for rural development (EAFRD). It supports rural development strategies, the implementation of sustainable practices, and knowledge and innovation transfer;

¹ Regional Operational Programme and National Operational Programme.

- European Maritime and Fisheries Fund (EMFF). It supports the transition to sustainable fishing development.

Table 6. Structural funds

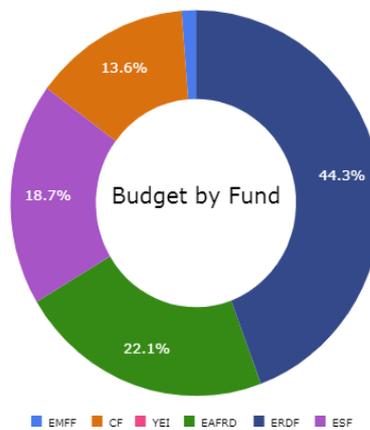
| | Name | EU | IT |
|--------------|------------------------------------------------------|--------------------------------------|-----------------|
| ERDF | European Regional Development Fund | 200 million € | 21,5 million € |
| EAFRD | The European agricultural fund for rural development | 100 million € | 10. 5 million € |
| ESF | European Social fund | 84,5 million € +YEI 8.5 million € | 10 million € |
| CF | Cohesion fund | 61,5 million € | - |
| EMFF | European Maritime and Fisheries Fund | 5,6 million | 0,5 million |

Elaboration on European Commission, i www.ec.europa.eu.

The figure 4 shows the total budget allocated by Fund. The SME Competitiveness priority is the one that sees the most funds for allocation, for a total of 71.6 million (Figure 4).

Figure 5. Total budget allocated by fund

ESIF 2014-2020: Total budget by Fund, EUR billion (daily update)



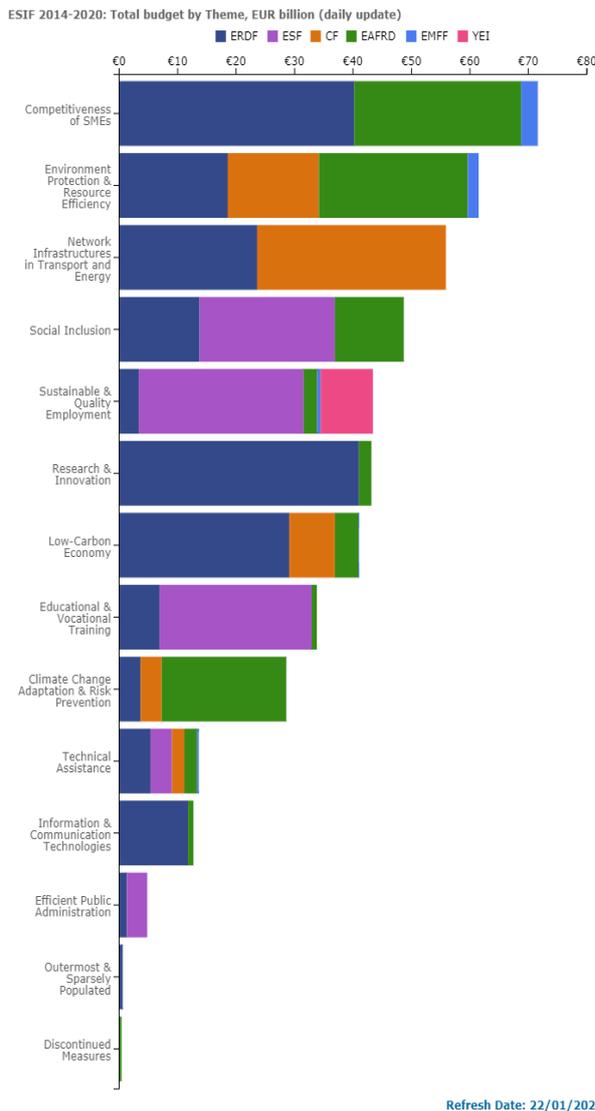
Refresh Date: 22/01/2021

European Commission, i www.ec.europa.eu.

The distribution of these funds is carried out at national and regional levels. It is planned that the largest part of these funds is expected to be devolved to less developed regions (PIL \leq 75% or 90% of the EU average) and for the sectors

identified as priorities in the 11 thematic objectives. Each country prepares an agreement, in cooperation with the European Commission, which explains how the funds are intended to be allocated for the reference period (European Commission, i www.ec.europa.eu)

Figure 6. Allocation by theme



The structure of these funds makes it possible to ensure greater proximity between those in charge of managing the funds and the beneficiaries, putting the needs of the national territory in the foreground. These features make easier the access to this type of funds and the presentation of the project itself by the actors involved (Liu & Rammer, 2016). Moreover, for the SMEs the access to these funds is easier and immediate: it is sufficient to emphasize that the management of the entire participation process is managed in the national language. All these funds are managed by the countries themselves, through partnership agreements. Despite the Structural funds are smaller in size and are linked with the territory of reference for SMEs, this form of funding result to be more attractive to SMEs that want to have access to

additional financial resources.

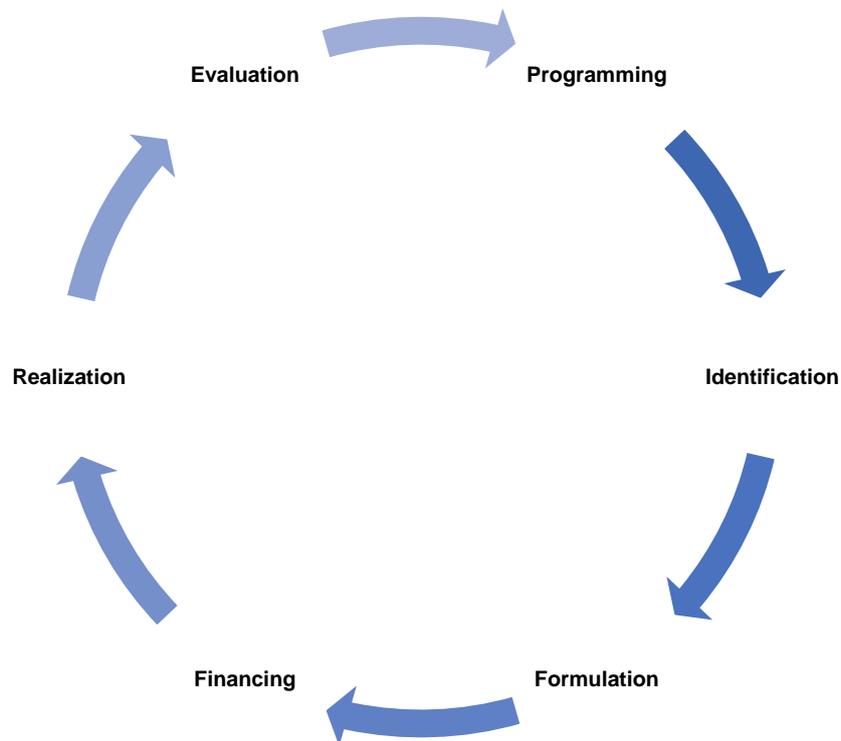
European Commission, i www.ec.europa.eu.

1.3.2 The structure of European Projects

The European programmes are complex projects from different point of view: first of all, for the availability of a wide range of programmes for SMEs that makes difficult the identification of the best source for the activity to be carried out; secondly, the complexity of the "programme governance", due to the intervention of different actors –institutional and private– who must converge towards a common goal of Development (Greco, 2015). In fact, projects funded directly by the EU must, in most cases, be carried out in a European partnership with the involvement of a variety of organizations based in different countries and therefore with the involvement of representatives of all stakeholders, and the access to European funding and the formulation of "winning" projects require multiple skills.

The partnership is made up of several organizations working as a team in a multicultural and multitasking environment characterized by complementarity and synergy of skills and experience and must guarantee a geographical coverage (European Commission, 2004). The projects are often multidisciplinary and the activities are well structured, with specific objectives and tasks, taking the form of projects (Ciarmatori et al., 2018). Finally, the structure of the project of the direct funds: they are structured according a well define methodology: The Project Cycle Management, a set of tools that the European Commission introduced in the early 1990s to ensure greater effectiveness of the projects and programmes and an overall improvement of management mechanisms of the same programmes (Bussi & Russo, 2017; European Commission, 2004). It consists of six phases: Programming, Identification, Formulation, Financing, Implementation and Evaluation (Greco, 2015; European Commission, 2004). The system is "circular" as it is fed thanks to the results of the evaluation of the previous phases.

Figure 7. Project Cycle



Elaboration on European Commission, 2004.

As we can see in the figure 7, according to the methodology of Project Cycle Management the phases of the realization and preparation of the projects are six (European Commission, 2004):

1. Programming phase. It is at the basis of every project and is linked to the preparation of the call;
2. Identification phase. It is the phase in which there is the definition of the first project idea presented in a call;
3. Formulation phase. It includes the development of a feasibility study and in this phase the project proposal has a well-defined structure and describe in detail different aspects like financial ones;
4. Financing. In this phase the project can start;
5. Realization. This is the phase of the implementation of the project and include monitoring and evaluation activities to check the state of the

achievement of the proposal and to verify the efficient management of the resource;

6. Assessment. This is the final phase, and it is at the basis of the introduction of programmes implementation or provide useful elements for the identification of further project-ideas within the program.

According to this methodology, the project must be (European Commission, 2014); *Relevant* in the choose of the content that must be in line with the priority identified by European Commission; *Feasible* in terms of the presence of tangible results that can benefits the target groups and *Well Managed* in terms of good quality management of the project (European Commission, 2004). The methodology expects the involvement of the stakeholders and the use of different tools such as the Logical Framework Approach, and all the phases must be conceived in the key of quality assessment criteria (European Commission, 2004).

1.3.3 Participation in European projects

The management of a European funded project, especially in the case of direct funding, is a long process divided into several phases (European Commission, 2004). The actual implementation of the project also follows the phases of the Project Cycle Management methodology: the European Commission conceives the projects in phases that must also be followed in the implementation of the projects by the users of financial resources (European Commission, 2004). First, the entity willing to present a project idea to obtain funding, must be able to seek the most appropriate source of funding. Concretely, one of the first phases is represented by the monitoring of the calls proposed both at regional and European levels and the choice of the source of financing: this represents in fact the main activity that is needed precisely to be able to identify the opportunities according to the methods and times scheduled by European Commission (European Commission, 2015). In fact, as we have previously underlined, the forms of financing are many and very often the vastness of availability represents a real obstacle for companies that want to participate in a tender, together with the lack

of knowledge of the programmes. Mainly, funding opportunities can be intercepted through *institutional channels* (i.e., the sources made available to the European community, or through other channels that offer the service of cataloguing the various calls for tenders and facilitating access to information selected (European Commission, 2015). Having identified the most appropriate financing source, the working group is selected (European Commission, 2015).

The next step, following an initial project eligibility check, is to prepare the application for funding. The forms to be presented are pre-set and are very often complex and require specific skills (European Commission, 2015). This is especially true for projects funded directly by the European Union, while for projects managed at the regional level, it is often sufficient to fill in the forms correctly and attach the required documentation. Generally, the information requested in this phase concerns the objectives that the project intends to achieve and the methods, specifying the resources to be used and the timing (European Commission, 2015). The project proposal must have strategic relevance in terms of innovativeness, impact on the territory, reproducibility of results, creation and strengthening of national and international networks among others (European Commission, 2015).

The next phase is the realization of the activities foreseen by the project, and from the reporting phase (European Commission, 2015). Reporting activity, for projects directly funded by the European Union, is largely carried out on the website dedicated to the project to which the participants have access and is a complex phase for users. Fundamental in this phase is the definition of roles within the working group and the consistency of the reported costs with those authorized at the stage of submitting the project proposal (European Commission, 2015). The last phase corresponds to the communications and verification of the results achieved.

As we have seen so far, the participation of projects is a complex activity both for the vastness of the programmes available, and for the development activities of the projects, making companies, especially SMEs reluctant to participate and leading them to consider this type of activities as obstacles and not as opportunities. However, it is true that these funds represent the main sources of

financing for SMEs that allow them to have access to resources and to carry out different activities under different aspects.

It is evident as the European projects are complex for the structure that characterized them but also for the complexity of the topic itself: they are projects of innovation of products, processes and research that need a detailed evaluation of different aspects, including the risks. Furthermore, to be considered by European Commission as a successful project, it should meet the EU policy priorities and those defined in the project; must raise from an innovative idea and must respect all the formalization of the documents required to complete the application and during all the phases of the project. Therefore, these kinds of programmes may result less attractive for SMEs in terms of complexity (Liu & Rammer, 2016).

In the next chapter, through the analysis of the literature, the main obstacles to participation due to the characteristics of the projects just highlighted will be identified. Furthermore, the chapter will overview the reasons and therefore the decisive factors that influence the participation of companies in the European Union funded projects and the effects of participation from different points of sight.

Chapter 2. Literature background on SMEs' participation in EU funding programmes²

Introduction

The SMEs are treated with special attention by the European Commission that elaborates special tools to support their development and their innovation activities. Public funding represents for SMEs real opportunities to face the new level of competition on a global scale and to stay ahead of new trends that characterize the globalized markets (European Commission, 2020a).

In this direction, several studies have been conducted to better understand the dynamic of access of SMEs to public funding. Some researchers have focused on the awareness of SMEs towards this kind of programmes, in terms of the opportunities and the advantages linked to the participation in EU programmes;

²This chapter is written and expanded on the basis of the article D'Anghela, M., & Murmura, F. (2020). The Impacts of EU Support Programmes on SMEs: A Literature Review. In Proceedings of the ENTRENOVA-ENTerprise REsearch InNOVAtion Conference 6(1),353-364, then some extracts of the paper are incorporated in the following chapter.

other studies have indeed focused on the difficulties of small businesses to have access to these projects that are perceived as complex by them. This is somehow related to the scarce participation of SMEs to public support tools and the necessity to develop an easy access program for this kind of companies (Gilmore et al., 2013). The participation to EU programmes results to be a challenging activity for a SME, that includes, among others, the compliance with many formalities (Visković, & Udovičić, 2016; Ciamatori et al., 2018) and the collaboration with more and different actors, that most of the time is not easy (Greco, 2015; Caloffi et al., 2014). The researchers highlighted that the main access barriers are also linked to external factors, such as the difficulty of finding strategic and technical information on the EU funding programmes and the lack of clarity about the project documentation necessary in each step of its implementation (Grazi, 2012).

On the other hand, another field of research has tried to monitor the impacts of the public support program for SMEs (regional and at EU level) showing a general positive effect of participating in EU funding (Čučković, 2018, Lewandowska et al., 2015; Vojtovič, 2016; Dvouletý et al., 2018; Radicic & Pugh, 2015). In particular, the evidence of different studies shows that there are different direct and indirect positive effects on innovation activities, output, and economic performance of SMEs improving competitive position in the market (Čučković, 2018; Lewandowska et al., 2015). Other studies have pointed out that EU funds have an important role in allowing the participants to acquire knowledge that can stimulate further investment (Lewandowska et al., 2015), while other researchers have focused their attention on how these programmes improve the relationship between different actors involved (Caloffi et al., 2014). By the way, it is confirmed that the effectiveness of the use of these funds is also linked to internal and external factors that can influence the efficient use of these sources (Čučković, 2018; Lach, 2002).

The remainder of this chapter is organized as follows: after this introduction, the following section offers an identification of the main approaches of the literature towards the theme of the participation of SMEs to EU funded projects. The paragraph 2.2 describes the barriers identified by the literature, and the paragraph 2.3 summarizes the main benefits identified by the SMEs that have participated in

programmes financed by European Union in terms of impacts on economic performance, product development and knowledge transfer.

2.1 An analysis of the main research approaches on SMEs' access to EU programmes

In defining the policies, the European Commission treats SMEs with special attention both for the role they play within the European territory and their need to have ad hoc programmes that are better suited to their nature of SMEs. On the other hand, these funds represent for SMEs and for their development in general an important tool to finance their activities, allowing them to access additional resources for the realization of growth, development, and innovation projects, in normal and in times of crises (Albulescu & Goyeau, 2013).

This topic has gained attention in the last years both for the benefits that the SMEs can obtain using such funding and from a policy's point of view. This is explained by the fact that EU funds are one of the most important sources for SMEs to increase the innovation capability and competitiveness and, they may indirectly influence the regional development and growth, in line with the EU objectives.

The importance of these tools and the growing interest of SMEs have stimulated the attention of scholars to better understand which the approaches of SMEs to these funds are and to address the choices of policy makers.

Analysing the most recent studies, the main approaches of the literature towards this topic have been identified, despite the research is still scarce and have some limitations.

In the literature, the issue of the approaches of SMEs to EU funds programme has been carried out as an analysis of the level of effective use of the funds, granted to regional and national levels, and the ability to integrate these new typologies of funds in their activities (Kaufmann & Todtling, 2002, Visković & Udovičić, 2016). Some authors have indeed focused on which are the motivations and the

incentives to participations: being the SMEs limited in terms of the availability of resources and the possibility to develop internally knowledge and innovation, it may be useful for a SME to take advantage of partnerships to acquire access to the resources that are necessary to develop these kind of activities (Mikołajczak & Pawlak, 2017; Faber & Rijnsoever, 2015). The research and development collaborations make it possible to exchange the resources between partners and share the risk with others in the development of a project (Faber & Rijnsoever, 2015; Caloffi, 2014; Radicic et al., 2018).

Another field of research has focused on which are the barriers to participation to EU funding programmes (Labudová & Jánošová, 2019; Gilmore et al., 2013; Faber & Rijnsoever, 2015). Several barriers (internal and external) have been identified in the literature and will be presented in the next paragraph.

On the other hand, there is a growing field of studies that is focusing on which are the effects of public support on SMEs.

From a general perspective, the issue of the impact of public support on firms may occur on four main aspects: competitiveness, cooperation, markets, innovation.

Figure 8. Public support effects on firms: the main areas of research

| | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Competitiveness:</p> <ul style="list-style-type: none"> - Strengthening competitive positions - Attracting additional funding sources - Improving financial and economic performance - Upgrading facilities and equipment - Applying new production technologies - Implementing new management and organisational solutions for manufacturing <p>Markets:</p> <ul style="list-style-type: none"> - Extending product range - Entering new markets | <p>Cooperation:</p> <ul style="list-style-type: none"> - Expansion of cooperation links with other firms - Expansion of cooperation links with universities and/or R&D organisations <p>Innovation:</p> <ul style="list-style-type: none"> - Reducing risks associated with innovation - Launching new innovation projects - Intensifying internal innovation expenditures - Stepping up in-house R&D - Commercialisation of R&D results - Participation in the complex innovation projects |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Vlasova, 2021.

Within the SME context, there is a large and growing body of empirical studies on how the access to EU funds influence the R&D activities of SMEs, that by nature is an activity that is not easy to implement for small business. This line of research is related to the ex-post evaluation of the effects of use of EU funds.

The most recent studies agree on the fact that the impacts are positive on different aspects, such as the impacts on R&D expenditure (Bedu & Vanderstocken, 2019). Most research has tackled the issue studying the effects of public support on innovative activities, especially in terms of additionality. The term additionality refers to the increase in innovative activities as a result of public support intervention: there is a large availability of empirical studies on *additionality inputs*, i.e. on the increase in investments in innovative activities following the use of public support tools (Luukkonen, 1998; Radicic & Pugh, 2015). The studies on the *additionality output*, i.e., the analysis of the effects of public funding on the outputs, for example in terms of innovations or patent's introduction are scarce (Radicic & Pugh, 2015). These studies have underlined how the effects on the outputs are few and depend on the type of contribution: European funds have no effects, while those of the central government have positive effects on innovations (Radicic & Pugh, 2015).

Other studies have focused on how the efficient use of funds is influenced by the characteristics of the companies, for example the size (Lach, 2002) or by their level of technological development (Lee, 2011); others, have indeed focused on the ways in which resources are allocated, for example, whether they have had access to funds previously (Czarnitzki & Lopes-Bento, 2013). It is important to notice that much of the literature on effectiveness studies has been done without distinguishing the origin of the funds being very different and because it is difficult to find specific data (Bedu & Vanderstocken, 2019).

From the analysis of the literature emerged that most of the works concerning the issue of access to public funds have been written in recent years, proposing different econometric models for the analysis of the topic even if a common methodology has not been developed yet, above all due to the variability of the outcomes and the lack of clear economic indicators (Radicic & Pugh, 2015, Vojtovič, 2016). Furthermore, some difficulties are related to the fact that the

effectiveness of the use of these resources depends on internal factors (Čučković, 2018) and from the influence of external organizations (research centres, universities, consultancy agencies) which role is central in providing the right support to SMEs.

In the case of the EU funds, the literature has shown the main areas in which it is possible to investigate the effects of EU public funds are three: economic effects (in terms of profitability, employment, and competitiveness); and networking effects (in terms of improvement of relationships with partners and local actors) and in terms of technological development.

The next paragraphs will deepen the literature about the barriers to participation and the studies on the main impacts on SMEs, in line of the purpose of this work.

2.2 Barriers to participation in European programmes for SMEs

As pointed out above, the literature has approached the theme of SMEs participation to European financing programmes in terms of difficulties in accessing to EU funded programmes and in terms of ex-post evaluation of effectiveness of their use.

The characteristics of these projects, both direct and indirect form of financing, make the involvement into the programmes very hard for companies: this is particularly true for SMEs.

In general, the success of the project depends on the correct preparation of administrative documents, the correct allocation of budget and the involvement of the staff, the relevance of the output, the respect of the deadlines (Brzáková, & Přidalová, 2015) and the compliance with all the formalities (Bussi et al., 2017). Preparing the documents and meet with all the requirements, is a time-consuming process that may obstruct the participation in the programmes, which are complex by nature if we consider that they are projects of innovation that need

multidisciplinary competences and the management of national and international partnerships.

However, these types of studies are still few within the SME context. In general, it can be said that the SMEs are aware of the opportunities, above all the possibilities to benefit from cost and knowledge sharing (Faber & Rijnsoever, 2015) but are not friendly with their use (Visković, & Udovičić, 2016). This is especially true for the EU programmes for competitiveness such as COSME and HORIZON (Visković, & Udovičić, 2016).

By focusing on the main motivations that influence the participation of SMEs to EU funded projects, the studies showed that SMEs use funds for different reasons: to access to investment financing; to growth in global markets and establish their presence in foreign ones (Mikołajczak & Pawlak, 2017); to invest in human capital and in organizational activities; to invest in research and introduce innovation activities (Vojtovic, 2016); to increase production capacity (Mikołajczak & Pawlak, 2017) and to create collaboration with other actors and share knowledge.

With reference to the existing literature, a significant contribution is provided by the work of Gilmore et al. (2013) that collects the main perceived barriers to participation in R&D national and international programmes involving SMEs from 28 countries. The main barriers identified are linked to financial and administrative factors, but other important elements that have an influence on the participation are linked to the internal characteristics of the SMEs, especially the experience in previous projects and the ability to network (Gilmore et al., 2013).

The *administrative barriers* are linked to the lack of time and expertise to comply with administrative burden required to properly complete the application procedures and during the development of the project: all the procedures are in fact perceived as complex, with high commitments (Gilmore et al., 2013). The SMEs complain the lack of support for these kinds of activities, for both the identification of the right programme that fits with their needs and for the development of the project (Gilmore et al., 2013). In fact, to carry on the activities, that by nature are long term projects, there may be dedicated staff with the necessary skills to develop the project in all these phases (Gilmore et al., 2013).

The *financial barriers* are indeed linked to the difficulty to find the additional resources to co-finance the projects especially in the final stages of the project development (Gilmore et al., 2013).

By focusing on the *internal barriers*, Gilmore et al. (2013), identified some factors linked to some firm-specific characteristics. SMEs often do not have a R&D department and skilled staff available to dedicate all the work hours to these kinds of activities. Another limitation concerns the networking abilities of SMEs directly linked with the technological level of the company, which is necessary to stimulate the exchange of knowledge and external skills, indeed of innovation (Gilmore et al., 2013). Other reasons that influence the perception of SMEs to consider these programmes as viable activities for them are the difficulties to participate and collaborate with larger companies, and in general (and this is especially true for the projects directly funded by EU), managing the relationships with different international partners.

Other authors underlined that this may be a relevant factor to influence the SMEs decision to undertake projects that involve this kind of collaborations. SMEs have difficulties to find the right partners strongly depending on their involvement in existing and larger networks and to manage the relationship during the whole development of the projects (Faber & Rijnsoever, 2015).

This last aspect is not linked just to the geographical proximity, but also to cultural habits: *the match between the partners* may influence the successful management of all projects (Faber & Rijnsoever, 2015). The *matching* depends on the degree in which the SMEs are suitable to absorb complementary skills and knowledge that strongly depends on the internal resources and the technological development: if the main topic of the project or the activity of partners is very distant from the core activity of the SMEs, it can become very difficult for them to have access to this new knowledge (Faber & Rijnsoever, 2015). Furthermore, the study of Faber & Rijnsoever (2015) confirms that the other factors that can influence and discourage the participation of SMEs to EU research projects, are the necessity to find additional resources, the complexity in terms of commitment and time spending of application procedures and in with administrative burden (Faber, 2016).

Other *external barriers* are linked to the lack of an information system provided by the policy makers (Gilmore et al., 2013). A very crucial aspect highlighted by the researches is that an important role is played by the domestic Institution and other agents that can support their development (Medve-Bálintand & Šćepanović, 2019; Miller, 2010). These organizations, due to the proximity with the SMEs located in the same region must have a proactive role in supporting SMEs (Visković, & Udovičić, 2016), creating better condition and tools for their participation (Labudová, 2011) and furnishing more appropriate support services for SMEs (Hunya et al., 2011).

The study of Visković & Udovičić (2016) stresses that the SMEs are partially interested in the financial instrument provided to European Union as means to invest in new products and services, infrastructures, training activities for the staff, but are not familiar with their use (Visković & Udovičić, 2016). The main obstacles underlined by the authors are linked to the difficulty to win the competition, because the procedures and requirements to be compiled during the application phase are very demanding in terms of documents to be prepared that are perceived as complicated and often ambiguous (Visković & Udovičić, 2016). The SMEs are in fact not familiar with the formalized procedures and the involvement in complex projects, in which the formalities are the basis of creating a winning proposal may be difficult (Medve-Bálint, & Šćepanović, 2019).

As confirmed by the study of Hunya (2011) these obstacles are perceived as common also for the companies that approach structural funds, that by nature and for the characteristics of the structure, should be more accessible to the SMEs. However, the SMEs complain that the procedures are perceived as lengthy, complex, and meeting the requirements imposed by the authorities are always complicated and the eligibility criteria to participate are too restrictive (Hunya, 2011). This problem is linked to the lack of internal skills to write a successful application, and the lack of a well-trained team. Furthermore, there are not clear indications given by the authorities and this makes the procedures confusing also in terms of language used (Hunya, 2011). A problem that is common between companies, is linked to the ability in drawing up the budget: very often, during the application process may be errors in filling the budget and in the correct allocation of the resources for the activities and for the personnel to be involved. In general,

the companies have not a clear strategy or plan for using the funds and this is translated into the difficulty to identify the best source for their projects, influencing the possibility for SMEs to consider the funds as a source for their activities (Hunya, 2011).

An interesting problem identified by SMEs is also related to the way in which these funds are managed by authorities: the companies complained about the lack of transparency in the selection process, very slow response time and the lack of support (Hunya, 2011).

However, these types of studies are still few within the SME context, there is clear evidence of which are the main obstacles identified by SMEs when we talk about their participation in European programmes.

The main difficulties identified by literature are summarized in the next table (Table 7) and categorized following the clear classification provided by the study of Gilmore et al. (2013) that distinguishes the external and internal factors.

Table 7. Main barriers identified in literature

| Barriers | |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Administrative | The procedures are perceived as complex Lack of time and expertise to comply with administrative burden |
| Financial | Difficulty to find the additional resources to co-finance the projects |
| Internal | Absence of a R&D department Networking ability of the company Lack of knowledge of project management practices Lack of financial resources for professional help Difficulties in identifying the best source for finance the projects |
| External | Lack of a clear information from the policy maker and lack of transparency |

Own elaboration on Gilmore et al., 2013.

2.3 SMEs' participation in EU funding programmes: an evaluation of the impacts

As we have underlined before, different studies, mostly carried out in more recent years, have tried to investigate the effects of the use of public funds on different aspects such as technological improvements, economic performance or social effects.

According to Boratynska et al. (2018) there are three main areas in which it is possible to check the effects of the participation in public funding: product and technical areas, economic area, and financial one (Boratynska et al., 2018).

The empirical studies have shown as the use of public funds have general positive effects on SMEs (Bedu & Vanderstocken, 2019; Lewandowska et al., 2015).

In particular, the applicants that have participated in EU funds, have had positive impacts on competitiveness in terms of increased sales and consequently profits on production capacity thanks to the modernization of fixed asset and the general financing of investments (Lewandowska et al., 2015). This last aspect is underlined by different research: the participation to these programmes stimulates positive change on tangible assets thanks to the possibility to invest in equipment's, machinery and new plants (Dvouletý et al, 2018; Radicic et al., 2018) and allowing to extend the product portfolios of the companies, or to improve the existing one (Radicic et al., 2018). Furthermore, the use of public funding is useful to improve the commercialization phase of innovations (Faber & Rijnsoever, 2015).

Positive effects were also registered in terms of the improvement of products and technology (Lewandowska et al., 2015). Furthermore, an important point is that the access to EU fund can provide long-run benefits, through the upgrade of quality system or/and processes (Lewandowska et al., 2015).

The use of EU structural funds also has educational aspects (Lewandowska et al., 2015; Faber & Rijnsoever, 2015): participating to such projects allows the beneficiaries to become more comfortable in the management of the projects, and

they can use the skills and experiences gained for future projects and the management of more complex ones (Lewandowska et al., 2015; Faber & Rijnsoever, 2015). In general, use of public funds is also useful to foster business development (Bedu & Vanderstocken, 2019).

Other economic benefits that emerged from the researches are turnover increase (Čučković, 2018, Nilsson et al., 2007) and cost-saving (Nilsson et al., 2007; Stewardson et al., 2003).

Researches show that the projects have positive effects on job creation, as the SMEs that have participated in EU funded projects increase the number of employees (Boratynska et al., 2018; Lewandowska et al., 2015; Bedu & Vanderstocken, 2019; Mikołajczak et al., 2017), while a negative correlation was found with the increase of the average wage (Bedu & Vanderstocken, 2019).

Recent studies have shown how the use of public funds have had positive effects on the innovative component of SMEs which have generally increased investment in research and development activities (Bedu & Vanderstocken, 2019).

Čučković, & Vučković (2018) have analysed a series of empirical studies and in general the effects on R&D investments have been positive both in terms of innovative productivity (Catozzella & Vivarelli, 2011) and in terms of improvement of on economic performance Blažkova (2016). The positive benefits are also registered in the studies focused on the impacts on innovations activities (Almus & Czarnitzki, 2003), in terms of number of innovations introduced (De Prato et al., 2015) and on competitiveness (Becker, 2015; Vojtovic, 2016).

Therefore, the success of the use of the EU funds is influenced by internal factors of the companies such as skills, knowledge of the market (Čučković, 2018).

The study by Kielek-Wieclawska (2016) confirms that the small business participating in EU funded programmes have had positive impacts in three main areas: products and technical, market and economic and financial.

Special attention is given to the SMEs' participation in projects targeted at improving the R&D activities. This aspect was especially analysed by the papers that treated the effects of EU direct funding. The different researches highlighted

as the SMEs that have benefited by these projects have increased their private R&D spending (Bedu & Vanderstocken, 2019), have improved their technology and products development (Lewandowska et al., 2015), increased the number of innovations (Čučković, 2018; Czarnitzki, & Delanote, 2015; Venckuviene & Snieska, 2014) and expanded the probability of patent application (De Prato, 2015). In general, as stated by Radicic et al. (2018) the SMEs that participate both in national and European projects have many possibilities to boost their innovation activities (Radicic & Pugh, 2015).

Barajas et al. (2012) highlighted that the support provided by these programmes have positive effects on SMEs technological capabilities and their productivity in general (Barajas, 2012).

An important aspect of the involvement to such programmes is that the SMEs can take advantages from the partnerships and the collaboration with other partner, not just during the term of the projects, but it stimulates long-run relationships (Caloffi et al., 2014; Radicic et al., 2018). Nepelski & Piroli (2018) show as the typology of partnership that the SMEs create during the involvement in such projects can have an impact on the innovation potential of SMEs (Nepelski & Piroli, 2018). Researches highlighted that participation of SMEs increases their propensity to enhance their relationships with a variety of organizations, such as universities, and other agencies specialized in innovation activities especially the ones located in the same regional territory (Caloffi et al., 2014) and with other "knowledge providers" such as consultant and research centres (Radicic et al., 2018). These actors have a very important role in supporting the SMEs (Medve-Bálint et al., 2019; Aykan et al., 2013) in different activities (technology, training or consultancy supports) and their relationships may influence the market strategy (Aykan et al., 2013).

Despite the general positive evidence shown by most of the researches, some studies have showed that the use of public funding is not always efficient: in particular, Vojtovič (2016) shows how it is possible that the SMEs do not use efficiently the financial resources and consequently they do not achieve the economic results expected by the projects (Vojtovič, 2016) due to different

difficulties that have to face related to the lack of capital, technical or human resources, or simply a lack of strategy (Vojtovič, 2017) in managing projects.

Vojtovic's work (2016) on a series of companies underlines how the use of funds has neutral effects, i.e. the companies that have used the funds have not achieved the expected economic results. According to Vojtovic (2016), SMEs do not have the organizational, human and financial resources to access to most of the financial resources provided and allocated for them by the European Union (Vojtovic, 2016).

In this direction, the contribution of the literature provides different researches that have analysed which are the main difficulties in implementing this kind of project, and that are included in this work.

The main impacts identified by literature are summarized in the next table (Table 8) and categorized in three different main typologies: economic and financial effects, products and technical improvement effects and networking and educational effects.

Table 8. The effects of the use of public funds on SMEs

| | |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Economic and financial effects | <ul style="list-style-type: none"> Increase of sales and profits Modernization of fixed aspects Investment in equipment's machinery and new plants Job creation Turnover increase Cost-saving |
| Products and technical improvement | <ul style="list-style-type: none"> Improvement of products and technology Extension of product portfolio of the companies Upgrade quality system Patent application Innovation activities |
| Effects on relationships and education | <ul style="list-style-type: none"> Long run relationship with partners Relationship with different actors located in the same regional territory Relationships with knowledge providers |

Own elaboration.

2.4 SMEs and environmental performance using policy tools

The issues related to environmental protection such as pollution, climate change, and the use of resources are becoming increasingly relevant (Forcadell et al., 2021) and object of attention of dedicated policies, especially for SMEs that must face different challenges to start the transition to more sustainable practices. This paragraph analyses the literature available on the use of policy tools to introduce sustainable practices and the main effects on environmental performance. The environmental problem has in fact become the object of concern of governments around the world: they are increasingly committed to developing policies aimed at improving the environmental performance of companies (Journeault et al., 2021) and in stimulating new production and consumption models, in line with the Circular Economy (CE) model that aims to reduce the growth of environmental impacts and stimulating economic growth (Garrido-Prada et al., 2021).

Companies are called upon to adopt new technologies and innovative business models and integrate these new practices to the organizational culture, thus becoming part of the business strategy (Garrido-Prada et al., 2021; Forcadell et al., 2021). In this context, particular attention is given to SMEs that, representing a significant percentage of companies all over the world, play a fundamental role on environmental and pollution impacts (Journeault et al., 2021; Parker et al., 2009). In fact, it is impossible to think of effectively promoting sustainable development without considering the role of SMEs and their contribution to environmental issues (Journeault et al., 2021; Forcadell et al., 2021; Garrido-Prada et al., 2021; Pimenova & Vorts, 2004). The European Commission, aware of the central role of SMEs and of the difficulties they have in implementing innovative practices, have developed sustainable development policies directly addressed to SMEs (Forcadell et al., 2021; Journeault et al., 2021). Indeed, if it is true that SMEs have structural and organizational characteristics that make them predisposed to change (Forcadell et al., 2021), the integration of sustainable practices within SMEs is still limited due to a series of obstacles (Journeault et al., 2021; Garrido-Prada et al., 2021; Bodas-Freitas & Corrocher, 2019; Mura et al. 2020). SMEs are

more flexible, less formalized in the definition of the roles and in communication and therefore the employees have various transversal skills, an aspect that makes them predisposed to seek innovative and environmentally friendly solutions (Forcadell et al., 2021). Despite this, studies on the barriers to the implementation of sustainable practices or their integration within companies activities, have highlighted how the main barriers, in addition to the difficulty of finding financial resources and carrying out this type of projects (Garrido-Prada et al., 2021; Bodas-Freitas & Corrocher, 2019; Journeault et al., 2021), are linked to aspects such as low awareness of the impacts and benefits of sustainable practices and to the lack of time and skills (Journeault et al., 2021; Bodas-Freitas & Corrocher, 2019). In fact, very often managers are not aware of the social and environmental impacts of their companies, and consequently they think that their commitment to environmental and social protection is not relevant (Journeault et al., 2021). Furthermore, the sustainable management of the company is considered an excessive cost (Journeault et al., 2021). Lack of time is instead connected to the inability of the staff (engaged on various fronts) to fully engage in this type of activity; this last aspect therefore translates into a lack of skills within companies, which further limits the implementation of these new models (Journeault et al., 2021). Furthermore, SMEs not only do not possess this type of knowledge internally but may have difficulties in absorbing knowledge from the outside and integrating it with the in-house knowledge (Garrido-Prada et al., 2021; Bodas-Freitas, & Corrocher, 2019).

As pointed out by the study by Bodas-Freitas, & Corrocher (2019) other barriers are related to the lack of information and the possibility of accessing external support (Bodas-Freitas & Corrocher, 2019). As highlighted by the study by Mura et al. (2020) on the implementation of circular practices by SMEs, other external barriers to be found are related to regulation, which appears to be unclear for SMEs, excessive bureaucratization of practices and lack of clear indications (Mura et al., 2020). In this context, policies directly targeting SMEs represent an important key in helping SMEs to overcome both economic and other difficulties (Journeault et al., 2021; Forcadell et al., 2021). The main factors that can stimulate the implementation of sustainable practices by SMEs are linked to the availability of policies and incentives dedicated to SMEs that facilitate access to finance,

access to international projects in the field of sustainability and support tools in transversal activities (Mura et al., 2020) and support in term of information and advice (Pimenova & Vorst, 2004).

Community policies, at regional, national and community levels, have responded to this need by providing support tools for SMEs aimed at facilitating the transition to sustainable and circular models (Garrido-Prada et al., 2021). In fact, especially in recent years, different tools have been introduced, both to improve environmental control, and in order to encourage SMEs to implement new development models (Blundel et al., 2013) and new energy efficiency practices (Bodas-Freitas & Corrocher, 2019). There are in fact different types of intervention that may be useful to encourage the different types of SMEs to make environmental improvements (Parker et al., 2009). The various tools available to SMEs are aimed at supporting companies for the implementation of specific technologies and practices and for the provision of consulting services (Bodas-Freitas & Corrocher, 2019).

For this reason, several studies, albeit still limited, have been interested in analysing the reasons behind the adoption of sustainable practices and the effects of the various types of adoption support tools to evaluate the effectiveness (Bodas-Freitas & Corrocher, 2019). Some studies over time have focused on the types of activities financed by regional funds: some types of activities, for example the financing of infrastructures for renewable energy, are difficult to finance with public funds due to the high transition costs (Štreimikienė, 2016). Other studies have instead focused on the reasons that push SMEs to adopt public support: companies access financing to invest in green technologies and resource efficiency and technologies, in practices that can bring long-term benefits in terms of consumption of resources and reduction of production costs, as well as consultancy services for the acquisition of knowledge and its integration within companies, from research to marketing strategies (Bodas-Freitas & Corrocher, 2019). Other studies have tried to understand how the technological characteristics of the company influence the actual use of funds (Bodas-Freitas & Corrocher, 2019). Studies on the effects on various aspects of the organization show a general positive impact on CE activities (Garrido-Prada et al., 2021), on the implementation of measures aimed at favouring the re-engineering of

processes and the consequent reduction of costs of production, and on the introduction of waste management practices (Bodas-Freitas, & Corrocher, 2019). Also the study by Bodas-Freitas & Corrocher (2019) highlighted how external support (and therefore the use of external funds for consulting services) positively influences the corporate culture by promoting the adoption of a specific resource efficiency plan, as well as influencing the adoption of new technical solutions (Bodas-Freitas & Corrocher, 2019). The study proposed by Bostan et al. (2019) on the effects of European funds on economic, social and environmental aspects, highlighting how in general they have a positive influence on the competitiveness of organizations. In particular, the environmental effects were measured by considering the allocation of resources to recycling/collection activities, the use of clean technologies and energy and renewable sources, and the use of alternative energies. The main effects identified in the literature are summarized in the following table (Table 9):

Table 9. The effects of the use of public funds on environmental practices

| |
|----------------------------------------------------------------------------------------------|
| Effects on the implementation of solutions aimed at improving collection/recycling practices |
| Introduction of clean technologies |
| Introduction of renewable energies |
| Adoption of new solutions (environmental certifications) |

Own elaboration.

Studies on the use of funds are therefore still limited, but it is important to know how the funds can be used to allow SMEs to overcome the difficulties associated with the implementation of sustainable practices and facilitate the green transition (Journeault et al., 2021) also to stimulate the development of financing schemes in line with the characteristics of companies (Bodas-Freitas & Corrocher, 2019).

Chapter 3. Wood furniture sector and EU programmes

Introduction

In this chapter we will analyse the processes implemented by one of the key sectors of the Italian manufacturing, the wood-furniture one, with a focus on the industrial districts of the Marche region. The choice to focus the research activity on the wood-furniture sector is due both to the importance that the industry assumed over the years in terms of productivity and employment, and the problems encountered by the sector: the characteristics of SMEs as well as a decrease in demand mainly attributable to the current economic-financial situation and the difficulties for SMEs to access finance, makes the levels of competition very high. In this context, access to public funds can help the achievement of certain results in terms of innovation and competitiveness and can lead to a competitive growth of SMEs in the Marche context.

The chapter is organized as follows: after this brief introduction, we present the main features of the wood furniture sector in general, and we focus the analysis on the district located in Marche Region. In detail, we provide an overview of the industrial organization of the region, and in which terms the wood furniture sector is relevant in this region. In the last paragraph we analyse the policy system of the territory, identifying the main strategies that have regarded the wood furniture industry.

3.1 The wood furniture sector and the need for innovation and design

The wood furniture supply chain incorporates the different phases from production to enhancement of the products; it includes the procurement, processing, storage and distribution of the products on the market and implicates the involvement of different players between customers, suppliers, and distributors (Cdp, 2020, Federlegno, 2019). In addition to these players, the supply chain includes several stakeholders like suppliers of woodworking machinery and equipment, public and private financial institutions, research and development organizations and Innovation centers. (Cdp, 2020, Federlegno, 2019). The furniture sector in Europe is the world leader in the high-end segment: most of the products sold around the world belong from Europe; in this context, it is the first country with a production value exceeding 23 billion euros for the furniture sector alone and with the Italian companies of the sector that are placed as the major players of the community market (Cdp, 2020).

Considering the characteristics of the woodworking and furniture sector in general, it is considered by the European Commission as a dynamic sector characterized by a fragmented supply chain due to the dominance of SMEs (European Commission, i www.ec.europa.eu). It is in fact one of the relevant sectors in terms of employment and it is considered an important source of innovation activities due to the characteristics of the products (European Commission, i www.ec.europa.eu). Although there are differences between the industries located in each country, the sector in general is characterized by high levels of competition, and by the globalization of the value chain that makes relevant the issues of the quality of the products (Renda et. al, 2014) and the necessity to respond to the new needs and demands (European Commission, i www.ec.europa.eu). This is linked to the propensity of the whole sector to generate innovation: in fact, the industry, to survive the high levels of competition must be able to find a good balance between the implementation of new technologies and the traditional aspects that are at the basis of the heritage of the style and reputation of the whole sector (European Commission, I www.ec.europa.eu; Cdp, 2020).

Over the last few years, the wood furniture industry has been experiencing a path of transformation both at an industrial level, therefore in terms of organization of the production, and from the point of view of market demand, which becomes more and more dynamic and characterized by the request for versatile and multipurpose solutions (Cdp, 2020). In this context, companies that focus on innovative solutions will be able to compete and create added value for their consumers (Cdp, 2020; Renda et al., 2014).

At the level of organization of production, the wood furniture industry is moving towards the search for solutions based on the digitization of production processes and on more “agile” organization of logistic (Cdp, 2020). This is translated on the research of high-quality standards by exploiting the new technologies of industry 4.0 (rapid prototyping, robotics, IoT, digital manufacturing) and on the introduction of multi-channel commercial strategy to reconcile the online and offline strategy (Cdp, 2020). The trends regarding the demand side are related to the dynamism of new consumers, the increasing attention to aspects such as high-quality standards, safety and design and the attention to the environmental issues (Cdp, 2020). These characteristics results into the continuous research of innovative materials for the creation of original and multi-functional solutions that respect the principles of the circular economy (Cdp, 2020). Such processes made quicker due to the pandemic crisis, that spurred the need for rethinking the spaces of everyday life and made the need to encourage more evident transition to sustainable development (Cdp, 2020).

To keep up with the times and meet the needs of the changing trends, the companies must invest in research and development activities, but being a sector dominated by the presence of SMEs that are limited in terms of access to financial and non-financial resources, it can be difficult to maintain high levels of innovation for the companies of the sector. These needs are subject of special attention from the European Commission at national and regional level, that recognize the necessity of the whole sector to improve the competitiveness. In this context, the European and regional funding schemes are important elements to support research innovation in this sector: in particular, the strategies individuated by the Commission represent an opportunity for the companies to promote innovation, especially because of the presence of SMEs.

3.2 The relevance of the sector in Italy

The wood furniture sector is one of the pillars of the Italian manufacturing industry and is considered one of the sectors that make up the 4 "A" together with the Agri-food, Automation and Clothing sector (Federlegno, 2019). The sector is characterized by design, quality, and lifestyle, and it represents a true symbol of Italian-style that contributes to define the concept of Made in Italy in the world (Cdp, 2020, Chinello, 2016). In Italy the wood-furniture supply chain is wide and includes all the activities that allow the passage from the raw material to the finished product (Cdp, 2020, Federlegno, 2019). Considering the general characteristics of the sector, the wood-furniture supply chain can be divided in two macro sectors: furniture that includes, in addition to furnishings in general, also semi-finished products, lighting, furniture for the office and bathroom (Cdp, 2020, Federlegno, 2019). The wood sector includes the production and forest management carried out by owners and companies of use and the first transformation which includes the production of cork, packaging and pellets, building products and interior finishes (Cdp, 2020, Federlegno, 2019)

The wood supply chain furniture in Italy is one of the foremost sectors of the economy, an example of innovation and design on the national and international territory and a symbol of the Italian soul of the world (Chinello, 2016). The sector is characterized by the presence of small and medium-sized enterprises, structured in industrial districts, a set of specialized companies connected and interconnected between them. The industrial districts of the wood-furniture supply chain are in different areas of the Italian territory: the most relevant furniture districts are in Forlì province, in Tuscany and in Pesaro Urbino province, while for example Basilicata and Puglia regions host the Triangle of the lounge (Federlegno, 2019; Chinello, 2016). The entire supply chain in Italy includes about 75,000 companies, involve about 314 thousand employees and, in 2018, generated a turnover of over 42 bn euros, of which about 65% for furniture (Federlegno, 2019). The whole sector bearers of a strong and Italian identity and has always contributed to the economic and cultural development of the country in the whole world (Federlegno, 2019). The sector is characterized by a strong propensity to export: even though

the main share of products is absorbed by the countries of the European Union, including France that is the 1st market with around €2.5 bn, Germany with around 1.8 bn, United Kingdom and Spain, the non-EU countries have a relevant role too (Federlegno, 2019). Within the non-EU countries that can be considered as the first clients of Italian wood furniture products there are the USA that reaches almost € 1.5 bn, then Switzerland and China that are very attracted by the Made in Italy products of the Italian wood furniture sector (Federlegno, 2019). The furniture sector was one of the few sectors to show a recovery process during the pandemic emergency: the sector in July 2020 showed a positive return in turnover and a recovery on the foreign markets with export growing by 2% that has been driven by the industrial districts (Intesa San Paolo, 2021).

3.2.1 Wood furniture sector in Marche region and the policy system

Considering in detail the Marche region, it is characterized by a strong production structure in some sectors of specialization, mostly in traditional ones which are wood-furniture, mechanical, footwear, clothing (Confindustria, 2018, Regione Marche, 2014). The economic system is characterized by the presence of strong industrial districts in line with the sectoral specialization and the strong presence of SMEs (Regione Marche, 2014). The region is characterized by a significant propensity for entrepreneurship and a strong sector incidence of manufacturing specialization (Regione Marche, 2014).

One of the most relevant sectors is the wood furniture one, involving in total 2.395 enterprises (Federlegno, 2019) and employing in total 19,450 workers. Half of the companies are operating in the Pesaro Urbino province (1,099 companies), followed by the province of Ancona with 455 companies (Federlegno, 2019).

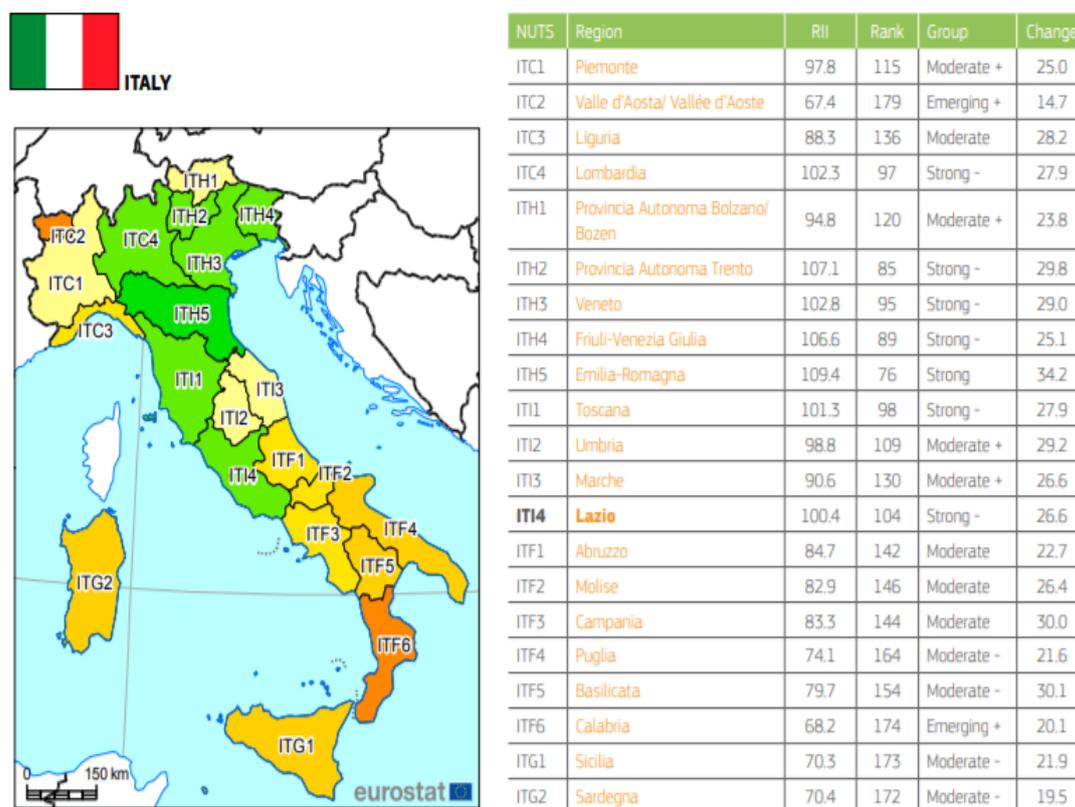
In line with the trends relevant for the sector in general, it is characterized by the necessity of improving the sectoral competitiveness. The needs deriving from this sector, reflect the general necessities of the Marche context of developing an innovation system and support the competitiveness of the enterprises involved.

Marche Region is one of the most industrialized regions in Europe, characterized by economic excellence and cultural richness (Regione Marche, 2014); it is an area characterized by a high propensity for the development of innovations but with a limited intensity in research and development related to the small size of the company and industrial specialization (Regione Marche, 2014). R&D activities have great potential; however, their development is still below the Italian European average (Regione Marche, 2014).

As shown by the analysis carried out by the European Commission, the Regional Innovation Scoreboard³ which allows to determine the innovation capacity of a territory by analysing various elementary indicators (the context conditions, the innovative activities carried out, the impacts), Marche region is placed in an intermediate position and is part of the "moderate innovators" (Regione Marche, 2019).

³ The Regional Innovation Scoreboard is aimed at measuring and comparing innovative performance of the different regional systems. It defines a ranking divided into 4 main groups namely leader of innovation, strong innovators, moderate innovators, modest innovators. These groups are then divided into three sub-groups: to the regions that are placed in the upper third of the ranking of the same group it is assigned a +, those positioned in the central and lower third is assigned a – (*Regional Innovation Scoreboard, 2021*).

Figure 9. Regional Performance



Map administrative boundaries: ©EuroGeographics ©UN-FAO ©Turkstat

RII: performance in 2021 relative to that of the EU in 2021. Rank: rank performance in 2021 across all regions. Group: respective sub-group. Change: performance change calculated as the difference between the performance in 2021 and 2014 relative to that of the EU in 2014.

Italy is a Moderate Innovator and includes 21 regions.

Regional performance differences are high in Italy with seven Strong Innovators, 12 Moderate and two Emerging Innovators. Emilia-Romagna (ITH5) is the most innovative region. Performance relative to the EU in 2014 has increase for all regions, and most strongly for Emilia-Romagna (ITH5).

Regional Innovation Scoreboard, 2021.

As underlined in the evaluation report, Marche is placed in the 128th place in the European ranking of moderate innovators, behind Emilia Romagna which occupies the 113th place, Lombardy (118th), the province of Trento (127th) and Friuli Venezia Julia (102nd) (Regione Marche, 2019). The good positioning of Marche is due to the high level of tertiary education of the population and the large number of registered brands (Marche Region, 2019). The weaknesses highlighted

by the research are instead identifiable mainly in the low percentage of R&D spending by both the public and private sectors (Regione Marche, 2019).

Regarding this last point, the research system in the Marche includes the presence of a variegated system of structures for public and private technology transfer (Regione Marche, 2014). In detail, the territory boasts the presence of two centers for public-private technology transfer on the national territory (Cosmob and Meccano): Cosmob, based in Pesaro, specialized in the wood-furniture sector; Meccano, based in Jesi and Fabriano, specialized in the mechanical and electronical sectors (Regione Marche, 2014). It is also worth mentioning the presence of a scientific-technological centre (TecnoMarche) based in Ascoli Piceno and Civitanova Marche (electronics and information technology) and The Hive certified incubators that are also part of the research system (Regione Marche, 2014). The aim of incubators is that of supporting the development of innovative companies (Regione Marche, 2014). The research system includes also academic spin-offs, which constitute a way to valorise the research in business contexts (Regione Marche, 2014). Regarding the presence of universities, these are four: The University of Macerata is focused on the social and human sciences, while the University of Urbino includes humanities and social sciences and hard sciences faculties (Regione Marche, 2014). Furthermore, the Polytechnic University of Marche and the University of Camerino are mainly specialized in technical and scientific disciplines.

In this context, the regional policies were defined taking into consideration the territorial context and the needs of the different sectors. In particular, the smart specialization strategy was defined to individuate the intervention priorities, at the basis of access to funds (Regione Marche, 2014). The concept of Smart Specialization Strategy (S3) was developed at a European level to address strategies at a regional level, contextualized, however, within a national vision (Foray & Goenaga, 2013). The goal is to indicate interventions that enhance the production specialization of the area but also indicate strategies that are consistent with national and EU strategies (Foray & Goenaga, 2013).

The Smart Specialization Strategy for research and innovation has also been implemented in the Marche region, through a long analysis of the territory and involving the various stakeholders of the territory (universities, companies,

research centers) (Marche Region, 2014). Considering the wood furniture sector, the strategy and the priorities identified represent an opportunity for the wood furniture sector companies to promote innovation. Being the direct European funding schemes available for SMEs already presented in the previous chapter, in the following paragraphs we will focus on the regional policy with a special focus on the actions addressed to the wood furniture sector.

During the definition of the policy at regional level i.e. the Smart Specialization strategy and the Operational program (we refer to the last 7 years programming period i.e.2014-2020), strategies and priorities have been identified that can be divided into a series of integrated actions aimed at increasing the innovative capacity of the Marche context and providing concrete answers to the entrepreneurial needs (Regione Marche, 2014). In detail, Smart Specialization Strategy of Marche region defines the strategies to enhance the excellence of the territory with prospects of success (Regione Marche, 2014).

During the definition of the regional strategy of Smart specialization in line with the participation of different stakeholders (trade associations, companies, universities, experts and centers for innovation and technology transfer located in the territory) four areas of cross-sectoral specialization were chosen (Regione Marche, 2014). The 4 areas, coherently with the regional context, reflect the commercial and economic specializations and scientific and technological excellence that are potentially innovative, in line with the objectives set by the European Union. The areas individuated are: Domotics, Electronics, Sustainable Manufacturing, Health and Wellness, and ICT as a transversal enabling technology (Regione Marche, 2016). The path through which the 4 areas of specialization were outlined, continued towards the identification of lines of development and innovation and the related enabling technological areas.

Focusing the strategy on the four areas of specialization, 10 priorities were identified based on the regional territory needs (Regione Marche, 2014). The priorities are summarized in the next table (Table 10).

Table 10. Priorities of Smart Specialization Strategy

-
- I. The promotion of the research and development involving companies, universities and the technological centers;**
-
- II. The promotion of innovation at companies and societal levels;**
- III. The promotion of the consolidation of innovative start-up, in order to develop new high-tech products and advances services;**
- IV. Engineering and industrialization of research results;**
- V. The promotion of innovation capacity of the companies in terms of digitalization, and improvement of organizational and management aspects;**
- VI. The promotion of the Made in Italy Supply chains that mainly characterize the territory favouring a cross-fertilization logic from different sectors;**
- VII. Improving the infrastructural equipment, the use of new services advanced both public and private ICT**
- VIII. Promote accessibility to alternative energy sources and integrated systems of eco-innovation between business networks;**
- IX. Support and strengthen the process of internationalization and the attractiveness of the production system**
- X. Promote innovative solutions in the agricultural and agri-food sector aimed at sustainable competitiveness of businesses.**
-

Elaboration on Regione Marche, 2014.

The identified priorities can be divided into a series of integrated and complementary actions aimed at the general objective of increasing the *innovative capacity* of the Marche context and of providing concrete answers to the needs of the territory's entrepreneurial fabric. In fact, one of the fragilities of the territorial system, is linked to the development process of SMEs, that are still informal and not structured, and are not based on the technological development and on acquisition of qualified personnel in the company. The Smart Specialization Strategy identifies in fact the key variables in research and innovation to meet some fundamental requalification and growth needs of regional SMEs (Regione Marche, 2014).

Furthermore, the economic system of the Marche region has suffered the impacts of the economic crisis due to the contraction of the internal market, also due to the

difficulty in positioning in extra European countries that are distant and less known (Vietnam, Iran, Korea, India) and the complexity that characterized the current economic scenario (Regione Marche, 2016). This scenario required more structured actions and strategies, as well as innovative, both for penetration commercial and for the maintenance of acquired positions (Regione Marche, 2016) to spread the production of Marche region, which is a good expression of Made in Italy production.

The main instruments to realize the identified priorities are the structural funds described in the operative program POR MARCHE FESR 2014-2020 and other EU direct access funds, i.e. Horizon 2020 and COSME and other resources. Furthermore, other tools are: direct incentives to companies (capital account or interest account), vouchers, human capital training and placement actions (Master, Industrial Research Ph.D., Internships), infrastructures (for research and accessibility), support for innovation through advanced services (Regione Marche, 2016). In particular, the European Regional Development Fund (FESR) is one of the European Structural Funds and aims to contribute to strengthening economic and social cohesion and foresee 6 priority intervention axes in line with the objectives of the cohesion policy and the EU 2020 Strategy (Regione Marche, www.regione.marche.it).

The next table (Table 11) shows the axes identified.

Table 11. FESR- Marche Region

| The European Regional Development Fund (FESR) | Allocation of money |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Axes: | |
| 1. The improvement of the infrastructure for research and innovation and the promotion of investments of corporates in research activities; | €104.280.668,00 |
| 2. The access and implementation of ICT in the different sectors; | € 16.887.472,00 |
| 3. The importance of increasing SMEs competitiveness, promoting entrepreneurship, developing and implementing new business models for SMEs, and supporting these companies in growing processes; | € 94.858.220,00 |
| 4. The importance of supporting the transition to a low-carbon economy in all | € 57.835.606,00 |

| | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| sectors, promoting the use of energy renewable in companies, promoting research and innovation in the field of low-carbon technologies and their adoption, supporting energy efficiency; | |
| 5. The promotion of adaptation to climate change, the risk prevention and management; | € 22.837.474,00 |
| 6. The importance of preserving the environment and promoting the efficient use of resources. | € 30.550.200,00 |
| Total | € 585.383.288,00 |

Own elaboration on Regione Marche, www.regione.marche.it.

Other two axes have been added to these 6 priorities (Regione Marche, www.regione.marche.it): one dedicated to Technical Assistance (€ 15.133.648,00) and another one dedicated to activities related to earthquake that has involved the region (€ 243.000.000,00) (Regione Marche, www.regione.marche.it). The Axes 3 is particularly relevant for the SMEs of the sector. Its main objectives were: (Regione Marche, 2013):

- promoting entrepreneurship, by facilitating the economic exploitation of new ideas and promoting the creation of new companies, also through business incubators;
- developing and creating new business models for SMEs;
- supporting the expansion of advanced capabilities for the development of products and services;
- supporting the ability of SMEs to grow on the regional, national and international markets and to take part in innovation processes;

Considering in detail the wood furniture sector during the definition of the Smart Specialization Strategy, different innovation-related factors emerged. In detail, the technological and development needs related to this sector, that have been integrated in the Sustainable Manufacturing, emerged during the phase of entrepreneurial discovery concern: the development of the furniture supply chain in terms of design evolution and automation of systems; the need of innovation in terms of product and process and integrated logistics; the need to develop environmentally friendly approaches and to improve the systems in the production

chain in order to shorten the time to market (Regione Marche, 2014). Furthermore, to compete in the current international scenario, it has been considered necessary to support the system of Marche businesses through direct incentives oriented at increasing the competitiveness in foreign market, identifying new outlet market, removing the barriers that still do not allow the companies to affirm themselves in the international markets also through system actions and collaborative platforms (Regione Marche, 2014). In this context, the European and regional funding schemes are important elements to support research innovation in this sector and the internationalization of SMEs in general. In particular, the strategy and the priorities identified represent an opportunity for the wood furniture sector companies to promote innovation, especially within SMEs. These needs have in fact reflected some actions and projects directly addressed to the wood furniture sector companies, and the general objective to improve the competitiveness of the companies involved. During the definition of the Regional Operational program special attention has been given to this sector.

The next section will provide some examples of the tools that have directly involved the wood furniture sectors.

One of the main instruments that have involved the wood furniture companies is the Action 8.1. "Support to SMEs in order to favour aggregation processes in supply chains and Made in Italy productions" belonging from Axe 3 (*Promote the competitiveness of small and medium businesses*) of the structural funds POR MARCHE FESR 2014-2020. In detail, the action 8.1 aims at promoting the development of products and services to valorise cultural and natural features of the territory, through the integration of the different sector's supply chains, in particular of the traditional and "typical" products' supply chains (Regione Marche, 2016). This action is coherent with the Smart Specialization Strategy, and with the Priority VI aimed at promoting the valorisation of Made in Italy supply chains through cross-fertilization processes between companies. The action was finalized at supporting the companies in developing new products, processes or services in the Made in Italy sectors in order to diversify the production by manufacturing improved products. This action was addressed to the fashion and wood furniture companies (Regione Marche, 2016) and the aim is to support their competitiveness.

The amount allocated to this objective was € 12.000.000,00 divided into the two different sectors at the centre of this action: the fashion and the wood furniture companies. In particular, the beneficiaries of this action are SMEs enterprises participating alone or in partnership with other companies. The next table summarizes the results of the call (Table 12).

Table 12. Action 8.1 Support to SMEs in order to favour aggregation processes in supply chains and Made in Italy productions

| Project Results Action 8.1 | |
|---------------------------------------|-----------------|
| Allocation of money | € 6.000.000,00. |
| Submitted proposal (n.) | 127 |
| Projects considered admissible | 109 |
| Approved projects | 60 |

Own elaboration on Regione Marche, 2016.

The companies involved asked for support in different activities including (Regione Marche, 2016):

- investment in R&D;
- improvement of existing products or their adaptation for different demands;
- industrial planning and study of the aesthetic characteristics of a product;
- eco-innovation solutions for furniture products;
- activities oriented to support the internationalization processes of the SMEs.

Another instrument relevant for the wood furniture sector SMEs of Marche Region, is the call “Sistema Abitare” Action 9.1.1 2 “Strategic project with regional guide addressed to productive sectors of Marche region for the development of coordinated promotion actions on global markets and/or for the implementation of internationalization strategies for products or productive systems”. The call takes part of the Axe 3 (promote the competitiveness of small and medium businesses) of the structural funds POR MARCHE FESR 2014-2020.

The amount allocated to this objective was of € 1.400.000,00 and the beneficiaries of this actions are SMEs of wood furniture sector and the maximum contribution

allowed in relation to overall costs of the project presented and admitted was of maximum € 40,000 for each participating company (Regione Marche, 2018). The objective of this call was to increment the competitiveness of wood furniture SMEs located in Marche region on international market, not only supporting the companies in covering some internationalization related costs or increasing the export percentages of the regional production but trying to increase managerial skills in SMEs developing a methodological approach and an innovation culture of these companies towards internationalization that can be replicable over time (Regione Marche, 2018).

The companies involved asked for support in different activities including (Regione Marche, 2018):

- The cost coverage for the specialist consultancy and support services for internationalization;
- The coverage of the certification fees aimed at implementing the activity of exports;
- Expenses related to the organization of business meetings and visits companies in the Marche of potential foreign business partners;
- Costs for feasibility studies for the creation of new products and/or services on foreign markets.

This action is in line with the need to increase the international competitiveness of the regional entrepreneurial and economic fabric, favouring the greater inclusion of SMEs in the global economic processes of exchange of products, raw materials, semi-finished products and know-how developing partnership with the foreign companies (Regione Marche, 2018). The general objective is in fact to improve the actions of innovation and internationalization for companies, stretching on the qualification of the offer and the implementation of advanced technological services in this sector.

The SMEs of the sector were particularly involved in other actions that promote the internationalization of SMEs. As we saw before, one of the main pillars of the European Regional Development Fund (FESR), that is one of the European Structural Funds and aims to contribute to strengthening economic and social cohesion, is the Axe? 3: promote the competitiveness of small and medium-sized

enterprises aimed at developing and implementing new business models for SMEs, for internationalization. It supports the ability of SMEs to engage in growth on regional, national and international markets and innovation processes (Regione Marche, 2013).

One of the main instruments with the objective of promoting the internationalization is the Action 9.1 “Export promotion projects for businesses and their identified aggregate form on territorial and sectoral basis” and action 9.2 “support for the consolidation of the Marche export and the development of internationalization processes” (2016 call for SMEs in the Marche region).

In particular, the action 9.2 was addressed to micro, small and medium-sized enterprises, based in or operating unit in the Marche region.

The available resources, about € 1.937.497.84 were organized in this way (Regione Marche, 2016).

- € 968.748.92 allocated to SMEs presenting projects through business networks;
- € 968.748.92 allocated to SMEs presenting projects in a single form.

The next table (Table 13) summarized the result of the first call of this action for a total of 305 project financed.

Table 13. Presented and financed projects

| | SMEs | SMEs in aggregate way |
|---------------------------------|-------------|----------------------------------|
| N. of presented projects | 492 | 71 |
| Financed projects | 234 | 71 |

Elaboration on Regione Marche, 2016.

The activities financed were:

- Consulting and support services for internationalization;
- Participation in targeted economic initiatives and mission to foreign markets;
- Participation in international fairs abroad (in aggregate or coordinated or single form), for a maximum of € 15.000.

Another more recent action is the Action 9.2.1 of 2019, which has the same aim of the previous call, but with special attention to the project that integrates into a coherent way approach of innovations and internationalization; the resources available for these actions are € 5.674.206.14 (Regione Marche, 2019), divided into furniture and fashion system.

The main instruments relevant for the wood furniture industry are summarized in the next table (Marche region, 2016):

Table 14. Wood furniture sector projects

| Action | Objective | Resource allocated | Participants | Activities financed |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Action 8.1 “Support to SMEs in order to favour aggregation processes in supply chains and Made in Italy productions” (Axe 3) | Promoting the development of products and services to valorise cultural and natural features of the territory, through the integration of the different sector supply chains. | Allocation of 12.000.000,00 divided into -furniture -fashion | 60 companies that could benefit from this instrument, for the total amount of € 6.000.000,00. | -investment in R&D; - improvement of existing products or their adaptation for different demands; - industrial planning and study of the aesthetic characteristics of a product; -eco-innovation solutions for furniture products. |
| Sistema “Abitare” Action 9.1.1 “Strategic project with regional guide addressed to productive sectors of Marche region for the development of coordinated promotion actions on global markets and/or for the implementation of internationalization strategies for products or productive systems” (Axe 3) | Incrementing the competitiveness of wood furniture SMEs located in Marche region on international market. | Allocation of 1.400.000,00 -Wood furniture companies | SMEs of the wood furniture sector and the maximum contribution allowed in relation to overall costs of the project presented and admitted was of maximum € 40,000 for each participating company (Regione Marche, 2018). | The cost coverage for the specialist consultancy and support services for internationalization; 2. The coverage of the certification fees aimed at implementing the activity of exports; 3. Expenses related to the organization of business meetings and visits companies in the Marche of potential foreign business partners; 4. Costs for feasibility studies for the creation of new products and/or services on foreign markets. |

Elaboration on Regione Marche, 2016.

As we have seen, the wood furniture sector has been involved during the process of definition of the policies as a relevant sector in Marche Region. Definitely, the tools available at European and National level for the wood furniture sector companies are different, but for the purpose of this work we focused on some projects that directly have been relevant for this sector looking how they have been used by the companies of the sector.

Chapter 4. The approaches of SMEs to EU funding opportunities: an analysis of the wood furniture district of Marche Region

1. Introduction

After contextualizing the research in the first part of the thesis, the next chapters will present the empirical evidence of this work (see Fig. 2) providing the answers to the research questions previously identified.

As highlighted before, the significant difficulties in interacting with community instruments are evident in all the different phases of the life of the projects: from the conception to the design, from the construction and management of international partnerships, up to the implementation, monitoring and reporting phases of the projects. According to the data provided by European Commission, for example the participation to European Projects, in particular the direct one, is still low between SMEs: in the last programming period 33 projects were funded under the program HORIZON 2020 (Horizon dashboard), 11 projects under the program COSME and 13 projects with the SME instrument (EISME datahubs). The nature of these critical issues is linked to factors of different nature related both to the typical characteristics of the companies and to the aspects connected

to the bureaucratic complexities of the administrative accounting procedures and documents to be filled that cannot be immediately understood and completed.

The main objective of this chapter is to provide insights about the approaches of the SMEs of the wood furniture sector in the Marche region, focusing on which are the most relevant obstacles to participating in EU funded programmes and on the main perceived impacts of the use of the funds received from EU. The end of the analysis provides a comparison between the approaches of Marche region SMEs with other SMEs located on the Italian territory.

The chapter is organized as follow: after the discussion of the research design process, we present the methodology and the results of the empirical research that was conducted by online survey sent to 2047 SMEs of wood furniture sector in Italy via e-mail. In the last paragraph we compare the results between the approaches of Marche region SMEs with other SMEs located on the Italian territory.

4.1 Research design

4.1.1 Sampling and data collection

The main objective of this study is to provide insights about the approaches of the SMEs of wood furniture SMEs in Marche region and to evaluate their experience on the use of EU fund. In detail, through a questionnaire, we analysed the following issues:

- Identifying the main perceived barriers that SMEs must face in participating to EU funds by investigating the respondent's opinions;
- Verifying the main perceived impacts on different areas of organization according to the evidence identified in literature;
- Operating a comparison between the approaches of Marche region SMEs with other SMEs located on the Italian territory.

Therefore, the following Research Questions related to the SMEs of wood furniture sector located in Marche Region have been defined:

RQ1: Which are the main perceived barriers that SMEs must face in participating to EU funds?

RQ2: Which are the main perceived impacts in participating to EU funds on different areas of the organization?

RQ3: Are there differences in participating to EU funds on the approaches of Marche region SMEs with other SMEs located on the Italian territory?

Data were collected using a questionnaire survey performed on a sample of n= 2047 companies which operate in the wood-furniture industry, using the Customer Relationship Management (CRM) database available at COSMOB, the technological centre of wood furniture industry. The administration of the survey took place by e-mail and began on February 8th, 2021, following two-step administration. After three weeks the survey was sent again, asking those companies who did not fill the survey out, the possibility to do this.

The survey was answered by 270 SMEs between February and April 2021. The survey consisted of four set of questions. The first set of questions was addressed to identify the profile of the company (number of employees, annual turnover, year of foundation, business specialization, region, and reference market). The second set of questions was aimed at understanding the level of awareness of the support tools available at national and regional level. The following set of questions had the objectives to collect respondent perceptions about the main obstacles related to the participation to EU funded projects, according to the ones identified in the literature available about barriers. The last set of questions was addressed only to the SMEs that have participated to EU funded projects. This set of questions was aimed at understanding for which activities the companies used the EU funds and to evaluate the impacts on three aspects identified in the literature available about the topic: product and technical improvement, economic and financial effects, and networking and educational effects. We added an additional question to understand if some of the funds were used by companies to introduce sustainable practices in line with the circular economy model.

To evaluate the companies' awareness and perceived barriers and impacts related to the use of EU Funds, a 5-point Likert scale (strongly disagree – strongly agree)

was used, asking respondents to evaluate if they agree or not with several statements identified in literature. The items used to build the survey are summarized in the next tables.

In detail, several barriers (internal and external) have been identified in the literature. The next table (Table 15) collect the main barriers identified in literature about the topic following the classification provided by Gilmore et al. (2013).

Table 15. SMEs barriers to EU funds participation

| Barriers | | Authors |
|-----------------------|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Administrative | The procedures are perceived as complex Lack of time and expertise to comply with administrative burden | Bussi et al., 2017; Gilmore et al., 2013; Visković & Udovičić, 2016; Medve-Bálint, Šćepanović, 2019; Hunya, 2011; Faber & Rijnsoever, 2015 |
| Financial | Difficulty to find the additional resources to co-finance the projects | Gilmore et al., 2013 ; Faber & Rijnsoever, 2015 |
| Internal | Absence of a R&D department | Gilmore et al., 2013 |
| | Networking ability of the company | Faber & Rijnsoever, 2015 |
| | Lack of knowledge of project management practices | Gilmore et al., 2013 |
| | Lack of financial resources for professional help | Gilmore et al., 2013 |
| | Difficulties in identifying the best source for finance the projects | Gilmore et al., 2013 |
| External | Lack of a clear information from the policy maker and lack of transparency | Hunya, 2011 |

Own elaboration.

With regards to the main impacts evidenced in the literature the empirical studies have shown as in general the use of public funds affects SMEs in a positive way. Bedu & Vanderstocken (2019) and Lewandowska et al. (2015) identified three main areas in which it is possible to check the effects of the use of public funds: technical area, economic area and financial one (Boratynska et al., 2018).

The “Economic and financial effects” of the SMEs obtained by accessing European funding were evaluated using questions about:

- the increase of sales and profits;
- the modernization of fixed aspects;
- the investments in equipment and machinery and new plants;
- the job creation;
- the turnover increase;
- the cost-saving.

The effects on “product and technical improvement” that SMEs entailed by using European funding were evaluated by using questions about:

- the introduction of improvement of products and technology;
- the extension of product portfolio of the companies;
- the implementation of quality systems;
- the number of patents application;
- the introduction of innovation activities.

The “relationships and educational effects” that SMEs have experienced by accessing European funding were evaluating using questions referring to:

- the creation of long run relationship with project partners;
- the creation of long run relationship with private and public actors located in the same local territory;
- the creation of long run relationship with knowledge providers;
- the introduction of project management practices.

Finally, the “environmental effects” of the SMEs that have used European funds were evaluating using questions about:

- the implementation of solutions aimed at improving collection/recycling practices;
- the introduction of clean technologies;
- the use of renewable energies;
- the adoption of new solutions such as the implementation of environmental certifications.

The next table (Table 16) summarizes the main impacts identified in the literature, that we have categorized in three different areas: economic and financial effects, product and technical improvement, effects on relationship and education.

Table 16. Effects on participation on the main areas identified

| | | |
|-----------------------------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Economic and financial effects | Increase of sales and profits | Lewandowska et al., 2015. |
| | Modernization of fixed aspects | Dvouletý et al, 2018 ; Lewandowska et al., 2015. |
| | Investment in equipment's machinery and new plants | Dvouletý et al, 2018; Radicic et al.,2018. |
| | Job creation | Boratynska et al., 2018; Lewandowska et al., 2015 ; Bedu & Vanderstocken, 2019; Mikołajczak et al., 2017. |
| | Turnover increase Cost-saving | Čučković, 2018, Nillson et al., 2007. Nillson et al., 2007; Stewardson et al., 2003. |
| Products and technical improvement | Improvement of products and technology | Lewandowska et al., 2015. |
| | Extension of product portfolio of the companies | Radicic et al., 2018. |
| | Uppgrade quality system | Lewandowska et al., 2015; |
| | Patent application | De Prato et al., 2015 |
| | Innovation activities | Faber & Rijnsoever, 2015, Bedu & Vanderstocken, 2019; Čučković, 2018; Czarnitzki, & Delanote; 2015; Venckuviene & Snieska, 2014 ;Almus & Czarnitzki, 2003; Bedu & Vanderstocken, 2019; Radicic & Pugh, 2015 ; Catozzella & Vivarelli, 2011 |
| Effects on relationships and education | Long run relationship with partners | Caloffi et al., 2014; Radicic et al., 2018; Nepelski & Piroli, 2018. |
| | Relationship with different actors located in the same regional territory | Caloffi et al., 2014. |
| | Relationships with knowledge providers Improvement of project management practices | Radicic et al.,2018; Lewandowska et al., 2015; Faber & Rijnsoever, 2015. |

Own elaboration.

To differentiate the survey between the two categories of SMEs (i.e., SMEs that have had access to EU financing resources and SMEs that didn't have access to

this form of financing), the following question was asked: “2.3 *Has your company had access to European funds in the last 7 years? It has been specified that European funds refer both to those directly disbursed by the European Union and to those managed at national and regional level under EU funds, ex. Regional Operational Program (POR) and National Operational Program (PON)*”. It is important to notice that our questions are referred to the last 7 years programming period (2014-2020). To better understand the dynamic of access to funds, SMEs were asked if they have a Research & Development (R&D) department and if they received support from external agencies (research centers, universities, private agency). The last question was addressed to understand how the experience of participation to EU funded projects somehow influence the application to other programmes.

In the next paragraph the main facts will be summarized. After a general description of the sample, the discussion will focus on the analysis of the data available for SMEs of the Marche Region, being this the focus of this work. The next step will be to operate a comparison between the approaches of SMEs of other regions and the one of Marche region, and this explained why we choose to involve in the research the SMEs of other regions.

4.2 Results and discussion

4.2.1 Process Analysis

Descriptive analysis was performed to describe the sample profile of respondent companies. A five-point Likert scale was used to evaluate SMEs awareness and perceived obstacles and impacts of the use of EU funds.

Moreover, to verify the reliability, Cronbach’s α values were computed to measure the internal consistency between items in the different scales. We considered only α values greater than 0.60 as suggested by Nunnally and Bernstein (1994). The next tables show the result of Cronbach’s computation of each scale used.

Table 17. Cronbach's Alpha values for Awareness

| | Items | Cronbach's Alpha |
|------------------------------------|------------------|-------------------------|
| Awareness (Full sample) | Structural funds | 0.883 |
| | Horizon 2020 | |
| | COSME | |
| | SME instrument | |
| | Erasmus + | |

Own elaboration.

Table 18. Cronbach's Alpha values for Motivations

| | Items | Cronbach's Alpha |
|-------------------------------------|-----------------------------------------------------------|-------------------------|
| Motivation (Full sample) | Access to finance | 0.762 |
| | Access to global markets | |
| | New growth opportunities | |
| | Investment in human capital and organizational activities | |
| | Support innovation | |
| | Create partnerships | |

Own elaboration.

Table 19. Cronbach's Alpha values for Barriers

| | Items | Cronbach's Alpha |
|--------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------------|
| Barriers (for participating companies in EU projects) | The requirements are too stringent | 0.735 |
| | Lack of project management knowledge | |
| | Complicated procedures | |
| | The company does not have the financial resource to professional help | |
| | The company has difficulty to find the additional resource to co finance the project | |
| | The company has difficulty to tighten partnership | |
| | The company has difficulty to identify the better source of financing | |
| | The requirements are too stringent | |
| | Lack of project management knowledge | |
| | Complicated procedures | |

| | | |
|------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------|
| Barriers (for non-participating companies in EU projects) | The company does not have the financial resource to professional help | 0.811 |
| | The company has difficulty to find the additional resource to co finance the project | |
| | The company has difficulty to tighten partnership | |
| | The company has difficulty to identify the better source of financing | |

Own elaboration.

Table 20. Cronbach's Alpha values for Economic and financial impacts

| | Items | Cronbach's Alpha |
|------------------------------------------------------------------------------------|----------------------------------------|-------------------------|
| Economic and financial impacts (for participating companies in EU projects) | Increase of sales and profits | 0.738 |
| | Investment in machinery and new plants | |
| | Job creation | |
| | Internationalization process | |
| | Turnover increase | |

Own elaboration.

Table 21. Cronbach's Alpha values for Products and technical improvements

| | Items | Cronbach's Alpha |
|----------------------------------------------------------------------------------------|----------------------------------------------|-------------------------|
| Products and technical improvement (for participating companies in EU projects) | Improvement of product and technologies used | 0.883 |
| | Extension of product portfolio | |
| | Upgrade of quality system | |
| | Increase of innovation activities | |
| | N. of innovation | |

Own elaboration.

Table 22. Cronbach's Alpha values for Effects on Relationships and education

| | Items | Cronbach's Alpha |
|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------|
| Effects on relationships and education (for participating companies in EU projects) | Creation of long run relationship with partners | 0.820 |
| | Improvement of relationships with universities and research centres | |
| | Improvement of relationships with technological centres and | |

consultancy agency
Improvement of project
management practices

Own elaboration.

Table 23 Cronbach's Alpha values for Effects on sustainable practices

| | Items | Cronbach's Alpha |
|--------------------------------------------------------------------------------------|----------------------------------------------|------------------|
| Effects on sustainable practices (for participating companies in EU projects) | Introduction of recycling procedures | 0.828 |
| | Introduction of clean technologies | |
| | Introduction of renewable energies | |
| | Introduction of environmental certifications | |

Own elaboration.

4.2.2 Descriptive statistic of the sample with focus on Marche Region SMEs

This section describes the main features of the companies that participated to the survey. In detail, the following table (Table 24) summarizes the descriptive statistics of the SMEs involved in the research and the main information about respondents from Marche Region (including the large companies).

Table 24. Descriptive statistics of the sample

| | Descriptive statistics of the sample (n=270) | | Descriptive statistic of Companies from MARCHE REGION (N=95) | |
|----------------------------------------|----------------------------------------------|-------|--------------------------------------------------------------|-----|
| | No. | (%) | No. | (%) |
| Company Size | | | | |
| Micro (0-10 employees) | 57 | 21.1% | 20 | 21% |
| Small (11-49 employees) | 134 | 49.6% | 47 | 49% |
| Medium (50-249 employees) | 71 | 26.3% | 24 | 25% |
| Large (more than 250 employees) | 8 | 3.0% | 4 | 4% |
| Turnover (€) | | | | |
| ≤2 Million | 70 | 25.9% | 30 | 32% |
| ≤10 Million | 126 | 46.7% | 42 | 44% |

| | | | | |
|------------------------------|-----|-------|----|-----|
| ≤50 Million | 62 | 23% | 20 | 21% |
| Over 50 Million | 12 | 4.4% | 3 | 3% |
| Region | | | | |
| Marche Region | 95 | 35.2% | - | - |
| Other Regions | 175 | 64.8% | - | - |
| Markets | | | | |
| Italy | 58 | 21.5% | 26 | 27% |
| Italy and Europe | 98 | 36.3% | 20 | 42% |
| International Markets | 114 | 42.2% | 29 | 31% |
| EU Funding Experience | | | | |
| Yes | 105 | 38.9% | 39 | 41% |
| No | 165 | 61.1% | 56 | 59% |

Elaboration on research results.

The companies that answered to the survey were 270. Half of the participants are part of the category of small companies (49.6%) followed by medium companies (26.3%) and by micro ones (21.1%). Large companies that answered to the survey are 8 (3%).

Most of the companies are located in Marche Region (35%), followed by Veneto (17%) and Lombardia (14%) (Table 25).

Table 25. SMEs region of provenience

| Regions of provenience | N. | % |
|------------------------------|----|-------|
| Abruzzo | 10 | 3.7% |
| Calabria | 1 | 0.4% |
| Campania | 6 | 2.2% |
| Emilia Romagna | 9 | 3.3% |
| Friuli-Venezia Giulia | 27 | 10.0% |
| Lazio | 5 | 1.9% |
| Liguria | 2 | 0.7% |
| Lombardia | 39 | 14.4% |
| Marche | 95 | 35.2% |
| Piemonte | 7 | 2.6% |
| Puglia | 2 | 0.7% |
| Sicilia | 2 | 0.7% |
| Toscana | 10 | 3.7% |
| Trentino-Alto Adige | 3 | 1.1% |
| Umbria | 5 | 1.9% |
| Veneto | 47 | 17.4% |

| | | |
|--------------|------------|------|
| Total | 270 | 100% |
|--------------|------------|------|

Elaboration on research results.

Considering the reference market, most of the companies involved operate in international markets (42%), while 36% of the companies operate in Italy and in Europe. The 21% of the respondents carry out their activities in the domestic market. Focusing on the companies from Marche Region, the total of the respondents to the survey were 95. Most of the respondent are small (49%), followed by medium (25%) and by micro enterprises (21%). 42% of companies operated in Italy and Europe, while the other businesses have as reference markets the international markets (31%) and domestic ones (27%).

Regarding their involvement in EU programmes of the full sample, most of the companies (61.1%) declared that they do not have access to European funds in the last 7 years, while 105 companies (38.9%) confirmed they have participated in such programmes. The companies from Marche region that have experienced the use of EU funds are 39 (41%) while most of the respondents declared that they do not have participated to the projects provided by EU in the last programming period (59%).

Table 26 shows the areas of specialization of companies that participated in the questionnaire within the wood-furniture industry. In the whole sample most respondents work in classic furniture sector (13%) followed by those producing bathroom furnishing (12.2%) and office ones (10.74%). Among the companies that are located in Marche region, most of the respondents operate in the sector of kitchen (17%), bathroom furniture (14%) followed by multiproduct producers (12%), semifinished products (10%) and office furniture (10%).

Table 26. Wood-furniture areas of specialization of respondents

| | All sample n= 270 | | Companies of Marche Region N=95 | |
|--------------------------------------|------------------------------|-------|------------------------------------------------|-------|
| | N. | % | N. | % |
| Accessories | 11 | 4 | 3 | 3.16 |
| Bathroom furnishing | 33 | 12.22 | 13 | 13.68 |
| Bedroom furnishing | 8 | 2.96 | 5 | 5.26 |
| Classic furnishing | 35 | 12.96 | 10 | 10.53 |
| Collectivity | 16 | 5.93 | - | - |
| Construction | 5 | 1.85 | 3 | 3.16 |
| Furnishing for bars and shops | 6 | 2.22 | 2 | 2.11 |
| GDO | 3 | 1.11 | 1 | 1.05 |
| Kitchen furnishing | 24 | 8.89 | 16 | 16.84 |
| Living room furnishing | 10 | 3.70 | 4 | 4.21 |
| Mattresses | 4 | 1.48 | 1 | 1.05 |
| Multiproduct | 22 | 8.15 | 11 | 11.58 |
| Office furnishing | 29 | 10.74 | 9 | 9.47 |
| Outdoor furnishing | 10 | 3.70 | 1 | 1.05 |
| Panels | 9 | 1.85 | 1 | 1.05 |
| School furnishing | 5 | 1.85 | - | - |
| Semifinished product | 19 | 7.04 | 9 | 9.47 |
| Upholstered furnishing | 15 | 5.56 | 3 | 3.16 |
| Varnishes | 6 | 2.22 | 3 | 3.16 |

Elaboration on research results.

4.2.3 EU funding experience of SMEs of Marche Region

Among the whole sample of participants in the survey (n=270). the study will focus on analysing the approaches of companies of wood furniture sector located in Marche Region (n=95). In this phase of the work, 4 companies located in Marche Region do not enter in the definition about SMEs provided by European Commission (according to employees and turnover criteria's) and are not included in the analysis, being this work focused on SMEs. Therefore, the analysis will be focused on 91 SMEs of Marche Region. Regarding the general information about the companies, most of the SMEs from Marche region are in Pesaro Urbino province (69.8%) followed by Ancona and Macerata (respectively 12.5% and 12.5%).

Table 27. SMEs location

| Province | N. | % |
|---------------|-----------|-------------|
| Ancona | 11 | 12.09 |
| Ascoli Piceno | 3 | 3.30 |
| Fermo | 2 | 2.20 |
| Macerata | 12 | 13.19 |
| Pesaro Urbino | 63 | 69.23 |
| Total | 91 | 100% |

Elaboration on research results.

As we have anticipated to differentiate the survey among the companies that have experienced the use of the funds and the companies that have not, we used a filter question (2.3), asking the company to declare if they have had access to EU funds opportunity in the last 7-years programming period.

Regarding the participation, the SMEs from this region that have experienced the use of the EU funds were 37 (40.66%), while 54 (59.4%) companies have confirmed that they do not have received EU funds in the last 7 years. The scarce participation in European projects reflect the data on participation reported by European Commission: in the last programming period, in total just 13 projects were funded under the programme named *SME instrument* and 11 projects under

the projects COSME (number that includes all the SMEs belonging from different sectors) (AESME, SME instrument data hub).

Table 28. EU funding experience

| EU Funding Experience | (N.) | (%) |
|------------------------------|-------------|---------------|
| No | 54 | 59.34% |
| Yes | 37 | 40.66% |
| TOT. | 91 | |

Elaboration on research results.

The companies that have had access to EU funds are small and medium enterprises (respectively 20.88% and 18.68%). In line with the expectation, just 1 company with less than 10 employees participated to EU programmes. On the other hand, the companies that have declared that do not have used the EU funds are most of small dimension (30.77%) and micro one (20.88%). The 7,68% of the companies that do not have experienced EU funds are medium enterprises (Table 29).

Table 29. SMEs funding experience by size

| EU funding experience | | | |
|----------------------------------|---------------|---------------|----------------|
| | No | Yes | Total |
| Small (11-49 employees) | 30.77% | 20.88% | 51.65% |
| Medium (50-249 employees) | 7.69% | 18.68% | 26.37% |
| Micro (0-10 employees) | 20.88% | 1.10% | 21.98% |
| Total | 59.34% | 40.66% | 100.00% |

Elaboration on research results.

In line with the expectations, when it was asked to SMEs to declare their level of information about the opportunities of EU funding, they mostly rated a neutral answer (neither little nor much). Just 5 companies have expressed a high level of knowledge of the opportunities of EU funding. When asking about the typologies of funds they know, respondents are familiar more with the structural funds (2.90), while with European funds they rated that their knowledge is little (see Table 30).

Most respondents are not aware of opportunities of EU funding: possible explanation may be linked to the lack of general information about the projects, above all the project like COSME and HORIZON 2020 that are less promoted in the territory. The SMEs tend to better know the structural funds, that have a simple structure and are managed by regional and national authorities, characteristics that ensure the proximity between those in charge of managing the funds and the beneficiaries (Table 30).

Table 30. SMEs awareness towards EU funding opportunities

| | Mean | Standard Deviation |
|-------------------------------------------------------------------------------------------------|-------------|-------------------------------|
| 2.1 Is your company informed about funding opportunities provided by the European Union? | 2.85 | 1.60 |
| 2.2 How much are you aware of the following funding instruments? | | |
| Structural funds | 2.90 | 1.26 |
| Horizon 2020 | 1.78 | 1.07 |
| COSME | 1.64 | 0.95 |
| SME INSTRUMENT | 1.65 | 0.92 |
| Erasmus + | 1.68 | 0.97 |

Elaboration on research results.

Regarding the typology of funds used, the SMEs had the possibility to select more option (if, for example they have participated in more than one programme, indirect and direct). Most of the companies experienced the use of structural funds (35 SMEs), while the share of participation to EU direct programmes is low: just 1 company stated to have access to Erasmus+ fund, and 2 company declared that have experienced the use of Horizon 2020. The companies that have selected the option “Other”, indicated they used the following funds: call Industry 2015, Credito d’imposta, and Sace, and Invitalia, that are the national funds available to support SMEs in the Italian context. One respondent

selected the option “Other” without specifying the typology of funds, so it is not possible to define the category of fund used (if direct or indirect).⁴

Table 31. Typology of funds used

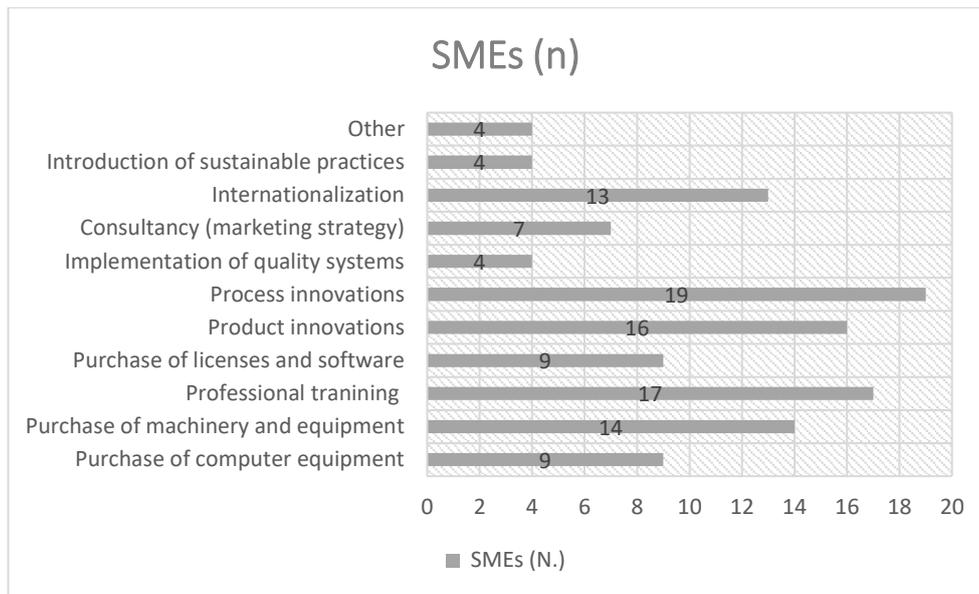
| Typology of funds used | SMEs (n) |
|-------------------------------|---------------------|
| Structural funds | 35 |
| Horizon 2020 | 2 |
| COSME | - |
| SME INSTRUMENT | - |
| Erasmus + | 1 |
| Other | 4 |

Elaboration on research results.

Considering the typologies of financed projects, the SMEs were asked to select the kind of activities financed with EU funds. They had the possibility to select different kind of activities, because most of the time the projects have different objectives. The most financed activities with EU funds are innovation activities, professional training activities, and investments to purchase machineries and equipment's.

⁴ The total sum of the points is greater than the number of respondents because they had the possibility to select different answers.

Figure 10. Typology of the financed activity⁵



Elaboration on research results.

4.2.4 Motivation to participate

Regarding the main motivations, it can be seen as SMEs mostly consider important all the reasons defined in the table 32 even if to the access to finance (3.88), the new growth opportunities (3.69) and the support for innovation (3.61). Creating partnerships is rated as less important by respondents (2.88).

Table 32. Motivation to participate

| Motivations | Mean | Standard Deviation |
|-------------------------------------------------------|-------------|---------------------------|
| Access to finance | 3.88 | 1.06 |
| Access to global markets | 3.36 | 1.17 |
| New growth opportunities | 3.69 | 1.14 |
| Investment in human capital and organizational | 3.55 | 1.10 |

⁵ The total sum of the points is greater than the number of respondents because they had the possibility to select different answers.

activities

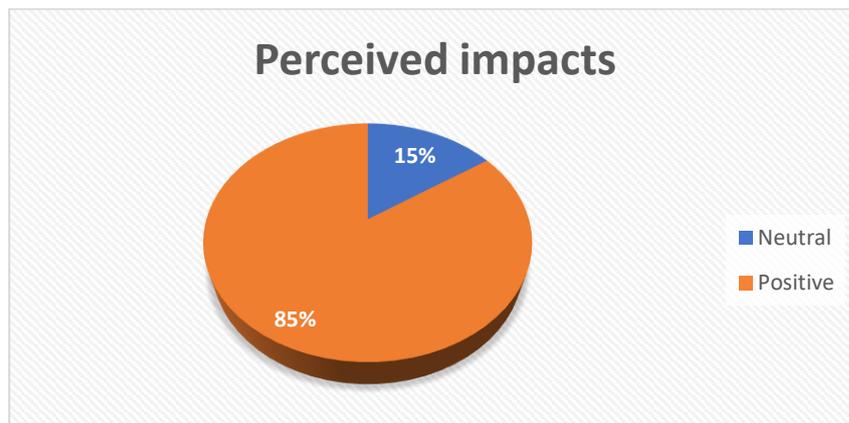
| | | |
|----------------------------|------|------|
| Support innovation | 3.61 | 1.24 |
| Create partnerships | 2.88 | 1.18 |

Elaboration on research results.

4.2.5 Perceived impacts to participation

Subsequently the main perceived impacts on SMEs have been investigated. Considering the perceived impacts on the general participation to the projects, most of the SMEs declared that they have positive effects (85%), while 15% of SMEs declare that the participation had no effects. None of the SMEs declared the impact was negative (Figure 11).

Figure 11. Perceived impacts



Elaboration on research results.

Concerning the impacts, the SMEs were asked to declare their level of agreement with a series of statements regarding the effects of the participation on 4 main areas: technical and product improvement, economic and financial effects, networking and educational effects and the effects on sustainability improvement.

4.2.5.1 Perceived impacts on economic and financial aspects

From the analysis of the data, it can be seen that the investment in machinery is the most perceived impact in terms of importance in this area “*After the participation the company increase the investment in machinery and new plants*” (3.72), followed by the increase of sales and profits (3.16), SMEs have also registered a turnover increase (3.00). On the contrary among the less important effects registered in economic and financial area there is the employment capacity of the company and the introduction of new member in the staff (2.80). This is in contrast with the evidence of the literature: a lot of authors (Boratynska et al., 2018; Lewandowska et al., 2015; Bedu & Vanderstocken, 2019; Mikołajczak et al., 2017) find as one of the most relevant effects in economic and financial areas was the Job creation. A possible explanation is that the SMEs of Marche Region that have experienced the use of funds, mostly declared to have used structural funds, that are “less important” in terms of amount of money that are allocated for the SMEs activities (Table 33).

Table 33. Perceived impacts on Economic and financial area

| Economic and financial effects | Mean | Standard Deviation |
|-----------------------------------------------|-------------|---------------------------|
| Increase of sales and profits | 3.16 | 1.18 |
| Investment in machinery and new plants | 3.72 | 1.23 |
| Job creation | 2.80 | 1.11 |
| Internationalization process | 2.97 | 1.20 |
| Turnover increase | 3.00 | 1.14 |

Elaboration on research results.

4.2.5.2 Perceived impacts on products and technical improvement

In this case, it can be seen as there are no many differences between the items, but the most relevant ones are “*After the participation, the company improves its*

product and technology used”, that is the improvement of product and technologies used (3.55) and “*After the participation, the company increases the innovation activities*”, therefore the increase of innovation activities (3.55). In line with the expectations, the SMEs that have experienced the use of funds have registered positive impacts mainly in terms of innovation activities and products and technology development. In fact, as confirmed by other studies available in literature (Čučkovic, 2018; Czarnitzki, & Delanote, 2015; Venckuviene & Snieska, 2014; Almus & Czarnitzki, 2003; Bedu & Vanderstocken, 2019; Radicic et al., 2018) most of the SMEs that have access to European funds find easy to invest in innovation improvements with regards to the products development. In fact, the products and technical improvements effects were mostly rated as quite agree with respect to other areas analysed. This is linked also to the fact that the SMEs that have experienced the use of EU funds, declared that they have used the funds to support innovation activities (Table 34).

Table 34. Perceived impact on products and technical improvements

| Products and technical improvement | Mean | Standard Deviation |
|-----------------------------------------------------|-------------|---------------------------|
| Improvement of product and technologies used | 3.55 | 1.25 |
| Extension of product portfolio | 3.11 | 1.25 |
| Upgrade of quality system | 3.11 | 1.18 |
| Increase of innovation activities | 3.55 | 1.18 |
| N. of innovation | 3.38 | 1.20 |

Elaboration on research results.

4.2.5.3 Perceived impacts on relationship and education

With regards to the perceived impacts on relationship and education experienced by the companies, the most relevant ones are the improvement of project management practices (3.44) followed by the improvement of relationships with technological centres and consultancy agency (3.08). Regarding the effects on

relationships, the respondents mostly rated as neither agree nor agree: for SMEs, the participation to EU projects do not influence the relationships with different local actors (Table 35).

As stated by Lewandowska et al. (2015) and by Faber & Rijnsoever (2015) the SMEs registered an improvement of their abilities to manage the projects after the application to tender.

Table 35. Perceived impacts on relationship and education

| Effects on relationship ad education | Mean | Standard deviation |
|--------------------------------------------------------------------------------|------|--------------------|
| Creation of long run relationship with partners | 2.88 | 1.18 |
| Improvement of relationships with universities and research centres | 2.72 | 1.16 |
| Improvement of relationships with technological centres and consultancy agency | 3.08 | 1.22 |
| Improvement of project management practices | 3.44 | 1.13 |

Elaboration on research results.

4.2.5.4 Perceived impacts on effects on sustainability practices

Almost no effects on sustainability practices where registered by the companies: all the 4 items (*introduction of recycling procedures, clean technologies, renewable energies, environmental certifications*) were almost rated as disagree. The most important effect of this area is the introduction of clean technologies (2.41). This is in part explained by the fact that just two companies declared to have used the funds to finance the introduction of sustainability practices (Table 36).

Table 36. Perceived impacts on sustainable practices

| Effects on sustainable practices | Mean | Standard Deviation |
|----------------------------------------------|------|--------------------|
| Introduction of recycling procedures | 2.13 | 1.09 |
| Introduction of clean technologies | 2.41 | 1.15 |
| Introduction of renewable energies | 2.33 | 1.24 |
| Introduction of environmental certifications | 2.02 | 1.18 |

Elaboration on research results

4.2.6 Perceived barriers to participation

Considering the obstacles to participation to EU funds, the SMEs from Marche region were able to evaluate their level of agreement to the following statements about the main barriers to participate evidenced in literature (see Table 5). Firstly, they were asked about the formalities, i.e. if the procedures for obtaining funds are complicated, if the requirements are too stringent and, considering the project preparation if they have internally the appropriate tools of project managements. Secondly, they were asked to evaluate the difficulties related to find additional funds to finance the project or to rely on experts (for example a consulting agency) and about the partnerships. The respondents, both those who experienced EU funded programmes and those who did not, rated agree to the statements about the administrative barriers: they consider as the most important obstacles the application of procedures (respectively 3.97 for the companies that used the EU funds and 3.62 for the SMEs who did not), in participating to EU funded project, the preparation of the documentation in accordance to the requirements that are too stringent (respectively 3.44 and 3.61) followed by some internal constraints that are the lack of skills in project management (3.30 and 3.51). The SMEs that have not used EU funds consider as important obstacles also the difficulty to identify the better source of financing (3.37) and the difficulties to find and manage partnerships (3.33) while it was rated almost as neither disagree nor agree from the SMEs that have experienced the use of funds (respectively 2.52 and 2.81). As it can be seen by the data, the SMEs that have already participated in European projects, identify the main obstacles in formalities and procedures that do not depend on them but from the complexity of the procedure itself. In fact, they do not consider as problematic the activities to carry on in developing the project itself. On the contrary, the SMEs that have no experienced the use of funds find as difficult all the phases of the projects, from the application phase to the development of the project (Table 37).

Table 37. Opinion of respondents on the following statements

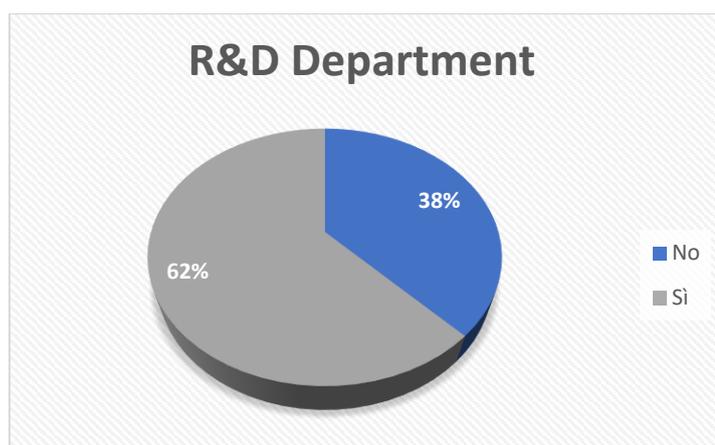
| | EU fund experience | | | | |
|----------------------------------------------------------------------------------------------|--------------------|------------------|--------------------|--------------|--------------------|
| | All sample | YES (N. 37 SMEs) | | NO (54 SMEs) | |
| | | Mean | Standard Deviation | Mean | Standard Deviation |
| The requirements are too stringent | | 3.44 | 1.10 | 3.61 | 0.91 |
| Knowledge of project management practices is limited within the company | | 3.30 | 0.82 | 3.51 | 0.98 |
| The procedures for filling in the application are complicated | | 3.97 | 0.87 | 3.62 | 1.08 |
| The company does not have the financial resources for professional help | | 2.44 | 0.98 | 2.88 | 1.25 |
| The company has difficulty to find the additional resources to co finance the project | | 2.36 | 1.09 | 3.16 | 1.25 |
| The company has difficulty to tighten partnership | | 2.81 | 1.17 | 3.33 | 1.16 |
| The company has difficulty to identify the better sources of financing | | 2.52 | 1.08 | 3.37 | 1.21 |

Elaboration on research results.

4.2.7 Management of the project

It is important to notice that most of the SMEs from Marche Region that have participated to EU funds declared to have a R&D department (62%).

Figure 12. Presence of a R&D department



Elaboration on research results.

Considering the question about the management of the project. i.e. if it was managed internally or if they asked for the support of external actors (consulting agency, universities, technological centers). Most respondents declared to have asked the support of one or more actors (34 SMEs). Just 5 companies declare they have managed it internally. The respondents had the possibility of multichoice answers: most of the projects have been carried out by SMEs through the collaboration between the staff member of the company with different actors at the same time (Table 38).

Table 38. Management of the projects

| Management of the projects | N. of answers |
|------------------------------------|---------------|
| Consultancy Agency | 28 |
| Local technological centre | 6 |
| University | 7 |
| The project was manager internally | 5 |
| Other | 2 |

Elaboration on research results.

At the end of the survey, SMEs were asked to declare if they agree or not with the following statement: *4.6 How much the experience of participating in the project can influence the decision to join future programmes?* Most of the respondents agree that the participation may influence the future application to new projects

(3.94 with st. dev. 0.79), confirming the educational effects evidenced in the literature (see Lewandowska et al. 2015; Faber & Rijnsoever, 2015).

4.3 What about Wood-furniture SMEs in Italy?

In this section, we will focus on the analysis of the answers from the respondents from other regions with the aim to check if the tendency of the SMEs from Marche Region is in line with the companies in Italy or if there are consistent differences between the approaches. The descriptive analysis of the sample has been presented in the previous paragraph.

Regarding the participation to EU funded projects, the Italian SMEs that have participated to European programmes in the last programming period were 64 (37.43%), while 107 companies declared that they do not have used the funds (62.57).

Table 39. EU funding experience

| EU Funding Experience | (N.) | (%) |
|------------------------------|-------------|--------------|
| Yes | 107 | 62.57 |
| No | 64 | 37.43 |
| TOT. | 171 | 100% |

Elaboration on research results.

In line with the expectations. when it was asked to SMEs to declare their level of information about the opportunities of EU funding, they mostly rated a neutral answer (2.90).

The SMEs tend to better know the structural funds (2.89), while most respondents are not aware of opportunities of EU funding: the project like COSME and Erasmus Plus are rated like as very low (respectively 1.60 and 1.68).

Table 40. SMEs awarness

| | Mean | Standard Deviation |
|-------------------------------------------------------------------------------------------------|------|--------------------|
| 2.1 Is your company informed about funding opportunities provided by the European Union? | 2.90 | 1.15 |
| 2.2 How much are you aware of the following funding instruments? | | |
| Structural funds | 2.89 | 1.31 |
| Horizon 2020 | 1.86 | 1.07 |
| COSME | 1.60 | 0.86 |
| SME INSTRUMENT | 1.69 | 0.90 |
| Erasmus + | 1.68 | 0.96 |

Elaboration on research results.

Regarding the typology of funds used, the SMEs had the possibility to select more options (if, for example they have participated in more than one programme, indirect and direct). Most of the companies experienced the use of structural funds (58 SMEs), while the share of participation to EU directs programmes is low: just 2 companies stated that have experienced the use of HORIZON 2020 funds, and 1 company used the funds SME instrument. The companies that have selected the option “Other”, indicated they used the following funds: Bando Inail. Simest, activities financed by Central European Bank and other typologies of funds used to participate to fairs and to finance different kinds of project. One respondent selected the option “Other” without specifying the typology of funds⁶ (Table 41).

Table 41. Typologies of funds used

| Typology of funds used | SMEs (n) |
|-------------------------|----------|
| Structural funds | 58 |
| Horizon 2020 | 2 |
| COSME | - |
| SME INSTRUMENT | 1 |

⁶ The total sum of the points is greater than the number of respondents because they had the possibility to select different answers.

| | |
|------------------|---|
| Erasmus + | - |
| Other | 6 |

Elaboration on research results.

Regarding the main motivations (Table 42), it can be seen as SMEs mostly consider as important all the reasons defined in the following table (Table 43) even if in particular to the access to finance (3.90), and they voted as important also access to new growth opportunities (3.62) and the support for innovation (3.18). Creating partnerships is rated as less important by respondents (2.25).

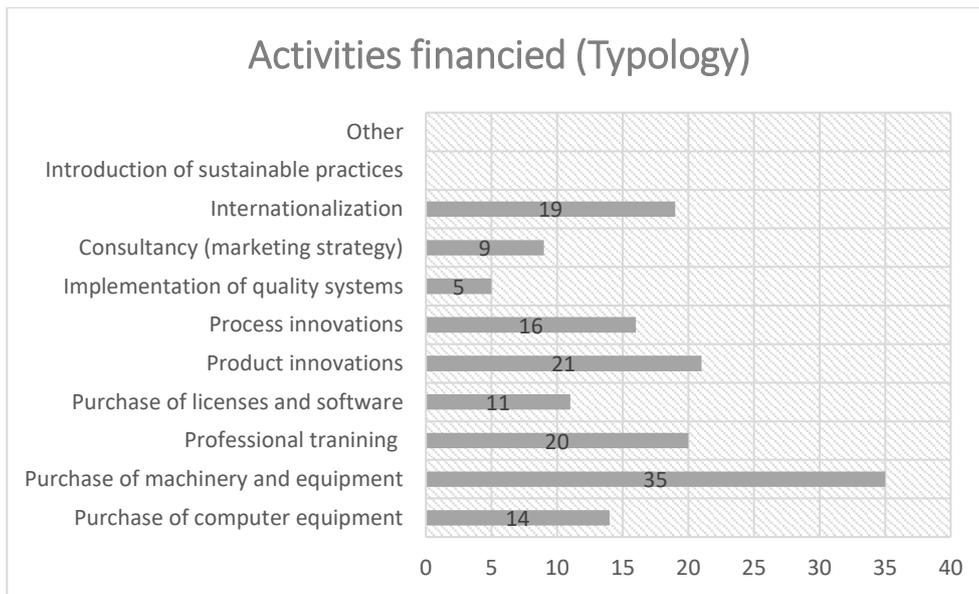
Table 42 Main motivations to participate

| Motivations | Mean | Standard Deviation |
|------------------------------------------------------------------|-------------|---------------------------|
| Access to finance | 3.90 | 1.00 |
| Access to global markets | 3.07 | 1.25 |
| New growth opportunities | 3.62 | 1.07 |
| Investment in human capital and organizational activities | 3.06 | 1.11 |
| Support innovation | 3.18 | 1.30 |
| Create partnerships | 2.35 | 1.17 |

Elaboration on research results.

Regarding the typologies of activities financed with European funds (Figure 13) SMEs declared that they invest in the purchase of machinery and equipment (35) followed by the product innovations (21) and professional training (20).

Figure 13. Typology of financed activity

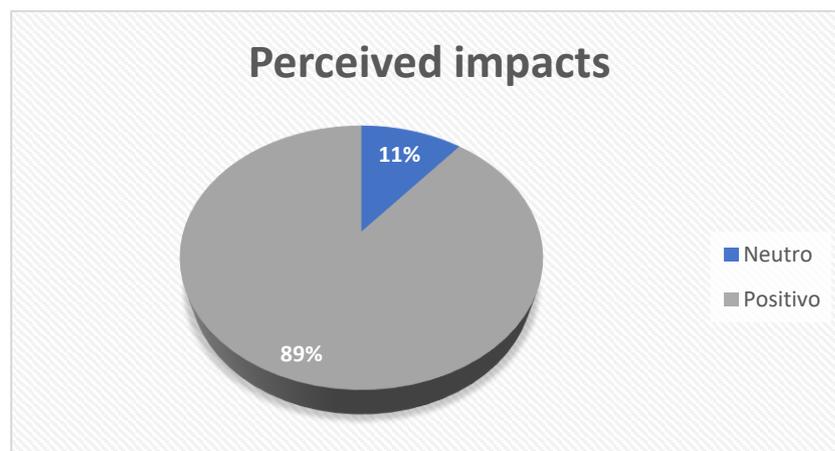


Elaboration on research results.

4. 3.1 Perceived impacts

Considering the perceived impacts on the general participation to the projects, most of the SMEs declared that they have positive effect (89%), while 11% of SMEs declare that the participation had no effects. None of the SMEs declared the impact was negative (Figure 14).

Figure 14. Perceived impacts



Elaboration on research results.

Concerning the impacts, SMEs were asked to declare their level of agreement with a series of statements regarding the effects of the participation on 4 main areas. In line with the expectations, the SMEs that have experienced the use of funds have registered positive impacts mainly in terms of innovation activities and products and technology development (Table 43). In fact, all the statements related to the products and technical improvements effects were mostly rated as quite agree with respect to other areas analysed. In particular, the most rated statements are: *After the participation, the company improve their product and technology used (3.67)* and *After the participation, the company increase the innovation activities (3.37)*. About economic and financial effects, respondents mostly registered effects on the improvement of fixed assets (3.60). This is in line with the kind of the activities realized by SMEs: most of the companies declared they used funds for investment in machinery and equipment and to introduce process innovations. Regarding the effects on relationships, the respondents mostly rated as neither agree nor agree: for the SMEs the participation to EU projects do not influence the relationships with the different local actors. The SMEs almost rated that they quite agree to statement about the educational effects of participation (*After the participation, the staff improve the knowledge of project management practices*): the SMEs registered an improvement of their abilities to manage the projects after the application to tender (3.09). Almost no effects on sustainability practices were registered by the companies: all the three items (*introduction of recycling procedures, renewable energy, clean technologies, environmental certifications*) were almost rated as disagree. The respondents consider as the most important effect the introduction of clean technologies (2.65).

Table 43. Impacts on main areas

| MAIN AREAS | Mean | Standard Deviation |
|----------------------------------------|-------------|---------------------------|
| Economic and financial effects | | |
| Increase of sales and profits | 2.81 | 1.07 |
| Investment in machinery and new plants | 3.60 | 1.22 |
| Job creation | 2.57 | 1.23 |
| Internationalization process | 2.92 | 1.28 |
| Turnover increase | 2.93 | 1.12 |

| Effects on relationship and education | | |
|--------------------------------------------------------------------------------|------|------|
| Creation of long run relationship with partners | 2.76 | 1.16 |
| Improvement of relationships with universities and research centres | 1.95 | 1.13 |
| Improvement of relationships with technological centres and consultancy agency | 2.5 | 1.27 |
| Improvement of project management practices | 3.09 | 1.27 |
| <hr/> | | |
| effects on sustainability practices | | |
| Introduction of recycling procedures | 2.29 | 1.23 |
| Introduction of clean technologies | 2.65 | 1.34 |
| Investments in renewable energy | 2.10 | 1.16 |
| Introduction of environmental certifications | 2.14 | 1.35 |

Elaboration on research results.

4.3.2 Barriers to participation

Considering the obstacles to participation to EU funds, the Italian SMEs were able to evaluate their opinion about the main barriers to participate evidenced in literature. The respondents who participated to EU funded projects and had the possibility to work on all the documents, consider as most important the administrative barriers: procedures are complicated (3.64) and the requirement are too stringent (3.53). The Italian SMEs that have not used the public funds consider as the most important limitation the lack of competences in project management practices (3.59), an aspect that is linked to internal constraints of the SMEs, followed by the aspects linked to the procedures that are complicated (3.51) and the requirement that are too stringent (3.50). The difficulties related to financial resources and the management of the relationships are important obstacles for those SMEs that do not participate to an EU project, while it was rated almost as neither disagree nor agree from the SMEs that have experienced the use of funds (Table 44).

Table 44. Perceived barriers to participation

| | EU fund experience | | | | |
|----------------------------------------------------------------------------------------------|--------------------|--------------------|------|--------------------|--|
| | All sample | YES (N. 64 SMEs) | | NO (107 SMEs) | |
| | Mean | Standard Deviation | Mean | Standard Deviation | |
| The requirements are too stringent | 3.53 | 1.05 | 3.50 | 0.89 | |
| Knowledge of project management practices is limited within the company | 3.37 | 1.04 | 3.59 | 1.06 | |
| The procedures for filling in the application are complicated | 3.64 | 1.11 | 3.51 | 1.01 | |
| The company does not have the financial resources for professional help | 2.34 | 1.14 | 2.88 | 1.26 | |
| The company has difficulty to find the additional resources to co finance the project | 2.5 | 1.24 | 3.14 | 1.19 | |
| The company has difficulty to tighten partnership | 2.79 | 1.27 | 3.06 | 1.21 | |
| The company has difficulty to identify the better sources of financing | 2.57 | 1.10 | 3.34 | 1.20 | |

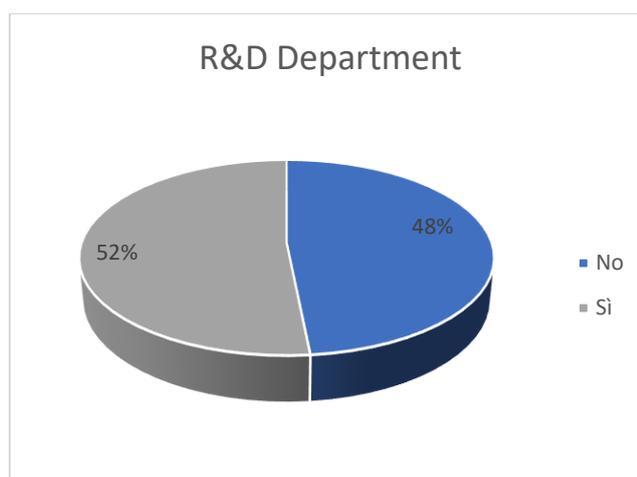
Elaboration on research results.

4.3.3 The Management of the projects

To the question 4.6 *How much the experience of participating in the project can influence the decision to join future programmes?* Most of the respondents agree that the participation may influence the future application to new projects (3.82).

Regarding the question about the presence of an R&D department, the percentage of the respondents that have a R&D department (52%) is almost the same that the ones that have not a R&D department within (Figure 15).

Figure 15. Presence of a R&D department



Elaboration on research results.

Considering the question about the management of the project (Table 45) i.e. if it was managed internally or if they asked for the support of external actors (consulting agency, universities, technological centers), most respondents declared to have asked the support of a private or consultancy agency (44), very often in collaboration with other actors at the same time (for example asking support also to universities), 15 companies declared they have managed the project internally, and just 3 SMEs asked for the support of technological centers. The other subjects were trade associations (3).

Table 45. Management of the projects

| Actors | (N) of the answers |
|------------------------------------|--------------------|
| Consultancy Agency | 44 |
| Local technological centre | 3 |
| University | 4 |
| The project was manager internally | 15 |
| Other | 3 |

Elaboration on research results.

This section provides some highlights based on the results from the analysis conducted before trying to see if the SMEs approaches towards EU funding are in line with the other SMEs of the Italian territory. In general, it can be stressed that

the main aspects evidenced by the analysis show a general tendency of Italian SMEs to approach to European funds in the same way.

As we can see from the result of the survey, the SMEs awareness towards the European funds is low within companies: both SMEs from Marche Region that the ones belonging to the other regions located in Italy, mostly rated a neutral answer when asking about the general knowledge of the instruments. In fact, they tend to be more familiar with the structural funds, in both cases. The SMEs tends to have a less awareness of the instruments provided by EU that are directed managed by the Commission. Most of the respondent are not familiar with the programmes like COSME, HORIZON 2020, SME Instruments, Erasmus +: both the categories of the respondents reported these programmes as *less known*. This aspect is reflected on the typologies of funds used by the SMEs that have experienced the participation to these funds: for example, just 4 SMEs (2 from Marche Region) of the total sample participated to the programme of R&D HORIZON 2020. 1 used SME instrument and 1 from Marche Region approached the programme Erasmus +. Considering that the number of the SMEs from Marche region is less, the number of participants in more complex projects is relevant.

Results show as the SMEs from Marche region mostly invested in process innovation activities and in professional training for the member of the staff. Different tendency is showed by the SMEs located in other territory that tend to invest in fixed aspects, on the acquisition of machinery and equipment. Other differences are linked to the investments realized sustainable practices: no one from the SMEs located in other regions have invested in this kind of activities, while in Marche Region some respondents declared they did. Regarding the main motivations, the most quoted by the two categories are access to finance and to new growth opportunities. Less important for the SMEs is the creation of partnerships, an aspect that is one of the principles at the basis of the European projects.

Respondents consider the administrative barriers as the most important obstacles to participation: documents preparation and project requirements are the most ambiguous parts in participating to a project according to the SMEs with experience in such funds of both categories of the sample. In general, another

relevant problem from the SMEs of other regions in Italy is the lack of project management skills, that is a typical constraint of small businesses that want to approach complex projects. The other barriers linked to the difficulties to identify the best source of financing for their idea, the difficulties to manage relationship with partners, the lack of internal skills are the most challenging obstacles for the SMEs that have not the possibilities to have access to these funds. These are aspects that are in common between both the categories of SMEs.

Considering the impacts, SMEs perceived as beneficial the use of the funds in activities linked to the introduction of technologies and innovation activities. In detail, SMEs from Marche region and SMEs located in other territory agree on the fact that the use of the funds have more relevant effects on the product and technological improvements area.

Regarding the management of the projects, most of the SMEs belonging from both the categories asked from the support of external actors: mostly of the respondent asked for the support of an external agency, but mostly in Marche Region, it is significant the support in this kind of activities from the Universities and local technological centers.

Chapter 5. Mapping territorial actors' role in supporting SMEs participation in EU programmes: different perspectives and recommendations

Introduction

As we pointed out earlier, the external barriers to participation are linked to the lack of an information and support system provided by the policy makers (Gilmore et al., 2013) and the underlined importance of the support of external actors in the proactive participation to European funded projects. If many of the tools are designed to help the most fragile actors, on the other hand their complexity can favour companies that are already stronger and know how to juggle the application processes (Medve-Bálintand et al., 2019). The central role of institution is not just of providing the financial resources necessary to develop innovations activities, but for their capacity to create of a favourable context in which the SMEs can easily

have access to information and have the possibility to become part of open networks and share the best practices (Wilson, 2006). Researches have highlighted how the context has direct and indirect effects on the effective implementation of the policies (Jurado & Battisti, 2019). A very important role is played by the domestic Institution and other agents that can support the development of SMEs improving the business surrounding, especially when it comes to proactive interventions (Medve-Bálintand et al., 2019; Miller, 2010; Pietrasieński & Ślusarczyk, 2015). This therefore depends on the capacity of the domestic environment to provide services to support SMEs and their applications in all phases and to promote the creation of structures such as incubators, industrial parks and clusters (Medve-Bálintand et al., 2019). These organizations, due to the proximity with the SMEs located in the same region must have a proactive role in supporting them (Visković, & Udovičić, 2016), creating better condition and tools for their participation (Labudová, 2011) and furnishing appropriate support services for SMEs (Hunya et al., 2011). Furthermore, the creation of partnerships between companies and local authorities is seen as a way to improve the ability of companies to develop projects effectively (Miller, 2010): the organization of effective and successful collaborations between the various entities of a region influences the growth and capacity of the regional territory. In general, the industrial policies are aimed to enhance the intensive share of knowledge between different entities and reinforce the networks and cooperation between SMEs, public institutions and other stakeholders (Citarella, 2018).

Starting from the obstacles highlighted by the research results and from the important role provided by the context in the efficient use of the European resources, the objective of this final chapter is to investigate the role of the actors located in the regional territory that support the participation of SMEs to European and that directly took part in the elaboration or regional policies in favours of the development of the territory. Furthermore, the objective it to try to understand which are the main actions that can help the participation of local SMEs to European projects.

The remind of this chapter is structured as follows: after a brief description of the methodology, a presentation of the actors involved and their role in regional

context is conducted. The final paragraph presents the main relevant contribution that can be useful to support the participation of SMEs located in Marche region.

5.1 Research design

To answer our research questions, the qualitative methodology was chosen to investigate some contextual situations that influence the participation of SMEs in European projects (Yin, 2009). Since the participation of SMEs is a complex issue that depends on several factors, the qualitative methodology is appropriate to in depth investigate one of these factors (Siggelkow, 2007), in this case the role of the context and the actors present in the regional territory.

To this end, the semi-structured interview tool is used (Patton, 2002) to highlight the roles of some selected actors involved in the regional policy definition and their perceptions regarding the problem of SME participation in European projects. The aim is to understand which services are available for SMEs and try to extrapolate what are the possible recommendations that can favour the development of SMEs in this sense.

Related to these issues, the following research questions have been identified:

RQ4: Which are the main support services available to SMEs of Marche region?

RQ5: Which are the main instruments and strategies that the policy system can implement to encourage SMEs' participation to European programmes?

The interviews have been conducted through the support of online platform, one was telephonic and the last one was conducted face to face. The interviews were recorded, and some notes were taken. Interviews lasted about half an hour each.

In choosing the actors, we selected as key informants (Jurado & Battisti, 2019) those who played an important role in the definition of regional strategies in the latest programming and who simultaneously played a supporting role for SMEs, as main centers of reference for SMEs. In fact, during the definition of the smart

specialization strategy and the process of the so called “Entrepreneurial discovery” (Marche Region, 2014), the Marche Region involve different stakeholders of the regional research and innovation system and some representatives of the most significant user needs, for a total of 150 actors involved (Regione Marche, 2014). The working groups involves experts from the Marche scientific system and the most representative stakeholders at the regional level (Regione Marche, 2014). In detail, the following actors have been involved:

- Business representatives;
- Institutional representatives;
- Cluster referrals;
- Research and institution representatives (professors, university researchers with technical-scientific and socio-economic and other experts);
- Officials of the competent regional structures;
- Representatives of the scientific system and for center of innovation.

The involvement of the stakeholders took place in all phases of the construction of the strategy, from the context analysis to the definition of the vision and priorities and plays a decisive role in the implementation of the planned strategy (Regione Marche, 2014). As we have already presented in the chapter of the Marche Region context analysis, the research system in the Marche includes the presence two centers for public-private technology transfer on the national territory (Cosmob and Meccano); a scientific-technological centre (TecnoMarche) based in Ascoli Piceno and Civitanova Marche (electronics and information technology) and some certified incubators. The public system of research involved four Universities (Marche Region, 2014).

Our choice therefore fell on the involvement of structures specialized in offering service to local companies. The study has engaged the R&D Director of Marche Cluster, which also deals with the service offered by the Universities of Urbino and Fermo (the Europlanning desk), the General Manager of the technological center Cosmob, and the Project Manager and Consultant Gianluca Carrabs that held the position of chief executive of the agency of development of Marche Region until last September, that is aimed at supporting the activities of the Public Administration and of the companies through the development of local, European

and international projects in compliance with the regional strategy (Svim, www.svim.eu). The questions of the interviews concerned: the role of the actors, their perceptions regarding the difficulties of SMEs, the role of the regional territory and finally the questions on possible strategies to improve participation. In detail, they answered the following questions: 1) Which is the type of service offered? 2) Does your activity include services to promote the opportunities of Communitarian instruments? 3) Does your business include training services in Europlanning? 4) What are the main difficulties that SMEs encounter? 5) For which calls do SMEs ask for the most support? 6) For which types of activities do SMEs ask for support the most? 7) What is the level of awareness of SMEs regarding the opportunities of community instruments and the possible advantages of participation on various business aspects? 8) In your opinion, does the regional territory offer a favourable environment for the development of SMEs? 9) What operational solutions and practical tools aimed at enhancing the research activity can be made available to SMEs from the Marche region? 10) How can the participation of SMEs in Community projects be encouraged?

In the next paragraph the results will be presented following the structure of the interviews.

5.2 Discussion of results

5.2.1 Actors details and service offered

The Marche Cluster was born by the will of the Regional Technological Clusters, the public-private aggregators around the themes promoted by the Regional Smart Specialization Strategy (Marche Cluster, 2021). The Marche Cluster objective is to promote the development of skills and competences within the Marche Region Innovation system, through the development of networks and collaborative activities addressed to favour the technology and research transfer within the different entities of the region (Marche Cluster, 2021). The Cluster involved within

the network different companies from the most important sector of specialization of the region:

- Agrifood (Food Farming Innovation Cluster), aimed at promoting the quality, security of the agricultural products, the sustainability of the supply chains and the precision farming withing the companies that take parts to the Cluster;
- E-living (Ambient Intelligence Innovation Cluster), aimed at promoting the security and comfort of the spaces, the use of technologies within the companies of the cluster;
- In Marche (Creativity Innovation Cluster); promotes the thematic of Made in Italy, Circular Economy in the wood furniture, textiles and footwear sector;
- Marche Manufacturing (Industrial Innovation Cluster) aimed at promoting the Industry 4.0 and the use of enabling technologies within the companies of the cluster.

The Cluster offers to SMEs the European planning desk service at the University of Urbino and Fermo which are currently not active due to the pandemic situation. The objective was to provides to SMEs a support desk to participation in European, national, and regional calls. The initiative was launched to encourage the awareness on the possibilities that the companies have in terms of access to resources and stimulate growth process of the companies and the development of the territory. The project was aimed also to encourage the dialogue between Universities and SMEs. It is important for companies to maintain contacts with an environment that can provide the access to new skills and competences and may influence the research and innovation activities, enhancing the presence of the companies on the market.

The Marche Cluster is a non-profit association that aims to help local SMEs and especially the members of the various clusters to grow and create networks both among themselves and with local institutions and universities. In detail, the services that they provide to the SMEs regards the initial phases of the application processes. In fact, they provide assistance first of all in understanding which are the possibilities they have because so many SMEs don't even know which instruments are available to develop their projects.

“The mission of the Cluster Marche is to help SMEs to extricate themselves in the “jungle” of the projects”. The SMEs are confused and do not ready to capture the full potential of the tools provided by European Union” (R&D Director, Cluster Marche).

The first support that the cluster provide is to select the calls of interest that represent the better source to finance their project.

Having made the selection, the Cluster helps to identify the actors that can support the implementation of the projects in terms of competences. For this they help to identify within the consortium which entities, which professor or center that can provide them the skills and competences to develop the projects. They support SMEs in the selection of the potential partners. This type of support is asked also by more structured companies that have an internal organization and ask help for participating in more complex programmes such as the European ones. The following step is to support the writing processes and application phases. The Cluster do not support the phases of financial reporting, but they advise professionals that may help them in the following phases once the project has been won.

“We can be of support in understanding which call can be chosen, in defining the partnership and in writing the project. Then we do not have the strength to support them in all phases, so then for the final part of the reporting they have to look for professional help” (R&D Director, Cluster Marche).

Furthermore, the important role of the Cluster is to catch the needs of the territory in a bottom-up approach to share them with political decision makers.

“Our role is also to interface with the institutions, and with the region to act as an intermediary [...] understand what the next calls will be planned and brought to the institutions, which are the needs and requests of SMEs” (R&D Director, Cluster Marche).

The Cluster offers promotion services mainly with the use of email instruments and through the Newsletter that they send to the partners to inform them of the next calls, while do not offer training services for the SMEs.

The other actor selected, is Cosmob, the technological center that provides a set of services to companies of the wood furniture sector.

“With more than 30 years of experience in the furniture and manufacturing sectors, we daily research and implement innovative services for companies, technological solutions and training activities to improve professional skills and increase the value of product and processes” (Cosmob www.cosmob.it).

The center activity started in 1983, following the will of companies and institutions of the industrial district of Pesaro, that wanted to stimulate the creation of a service provider for firms that want to have access to competences and new technological solutions. In fact, as it will be underlined in the following paragraphs, one of the points of strength of the regional territory, is linked to the production structure, which is based on relationships between companies, in a logic of partnership, network e coordination at national and international level. An important role in this context is given by the presence of specialized technological centers for the sector (Prodi, 2017): a pool of skills to support companies, especially small or medium-sized ones, in various activities that include applied research, technological innovation, quality and design, in the process of converting discoveries into scientific products and processes that businesses can market and include in the offer. Thanks to the integration of research centers in the district network, companies have directly access to scientific expertise, facilitating the processes of technology transfer (Prodi, 2017). These service centers represent an important source of innovation for companies that could not innovate alone (Prodi, 2017).

Cosmob, as a technological center, provides services to support the transfer technology, offers services for the dissemination of technological information and services related to quality such as, consultancy, certifications, laboratory tests (from 2019 is a Product Certification Body) and services of Digital manufacturing (FabLab) and advanced training for both companies and for students interested in working in the wood industry. In fact, recently the FabLab Pesaro opened, a laboratory specialized in prototyping and digital manufacturing, that makes available for companies of the territories the technologies of Industry 4.0.

A relevant part of its activities is the strategic and innovation consultancy, in fact the Research and Development department is aimed at promoting and supporting the innovation in international and nation research projects.

Regarding the last point, most of the activities of the technological center are to support the access to European funding to develop innovation projects. In this sense, most of the activities are focused on the support in participating in regional funds, and the service provided regards all the defined steps in developing a project.

“Most of the companies in fact ask for the support to access to regional calls, and the main motivations are linked to the current necessity of the company to access to finance to solve a specific problematic”. (General Manager, Cosmob).

The technological center activity does not include the organization of activities such as promotion services and training services for the SMEs.

Regarding the support activities carried out by the development agency and by the consultant that collaborate within the structure, the types of services offered represent a comprehensive package ranging from the identification of the available funds to all subsequent stages: the submission of the application, the admissibility of the same, reporting, up to project monitoring. They play a pro-active role in engaging SMEs in different projects matching the characteristics of the calls that are available with the companies that are in line with the calls in terms of firm specific characteristics. This activity is mostly carried out through promotion activities developed through online channels.

The next table (Table 46) summarize the serviced offered by the respondents

Table 46. Services offered by respondents

| | Respondents | | |
|---------------------------------------------|-----------------------------------------|--------------------------------|--------------------------------|
| | General Manager of Technological Center | R&D Director of Cluster Marche | Project Manager and Consultant |
| Service offered | | | |
| Consultancy of funds availability | No | Yes | Yes |
| Proposal writing and application submission | Yes | Yes | Yes |
| Establishment of | Yes | Yes | Yes |

| | | | |
|----------------------------------------------|-----|-----|-----|
| partnerships | | | |
| Project development | Yes | No | Yes |
| Linguistic support | Yes | Yes | Yes |
| Financial Reporting phase | Yes | No | Yes |
| Promotion | No | Yes | Yes |
| Education and training course in EU projects | No | No | No |

Own elaboration.

5.2.2 Main obstacles faced by SMEs and awareness in participating to European projects

The first obstacle that the SMEs must face is to understand which the better tool is to use to finance their project. The regional funds are perceived as simpler to understand than European ones, but after obtaining the financing the administrative requirements are too difficult to accomplish if a SME does not have internally the administrative staff that can manage the financial reporting of a project.

“First of all, the difficulties are of a cognitive type, SMEs are aware of the economic opportunities that the participation to an European project can generate, and are braked by too much bureaucracy in the phase of reporting”. (Gianluca Carrabs, Project Manager and Consultant).

The Micro and Small businesses ask for the support to regional funding, while more organized companies with an internal structure ask for the support for more complex projects (the European ones) and mainly for supporting the selection of possible partners that may participate to the projects. The companies asking for support in direct funds, are more aware of the opportunities and they already know the difficulties that must face in participating.

The respondents agree on the fact that SMEs are aware of the opportunities provided by the European Union, but SMEs are more familiar with the regional funding, while have little knowledge of other fundings.

“Nowadays, there are no doubts on the fact that one of the first objectives of European Union is to support SMEs, but there are differences on how these funds are perceived by companies” (General Manager, Cosmob).

According to the General Manager of the technological centre, nowadays there is a general awareness on the fact that the European Union do provides instruments to support the SMEs of the territories. However, the SMEs are more familiar with the tools that are managed by the local authorities that act like intermediates between the European Union and the SMEs, so the SMEs perceive the use of the funds as a regional policy line of intervention. This is translated into the evidence that the level of participation to EU direct projects is very low within the companies, while the share of participation to regional managed projects is high. As underlined by Gianluca Carrabs, among the SMEs there is a sort of mistrust in using the funds, that is also evident in the lack of availability to create partnerships within them (Gianluca Carrabs, Project Manager and Consultant).

The respondents agree on the fact that the more structured companies (that internally have a dedicated office) ask for the support for direct funds, while the regional funds are used by all the companies that want to solve a current problem. Consequently, the differences on the perceptions of the tools are moved by a different vision that is at the basis of the organization of work in different sized businesses. The European fundings are in fact attractive for the companies that want to grow in competences in some thematic areas that are well defined and with high level of innovation promoted by the European Commission; instead, the regional funds represent interesting opportunities for the companies that want to receive financing help for the development of some ideas or projects in the short term.

“The SMEs (the smallest ones) has no money and time to spend on activities that do provide a return in the long term. In regional calls the return is in a short-term, the European ones are long both as a commitment and as a vision”. (R&D Director, Cluster Marche).

“A SME that chose to participate in a European project is a structured enterprise, with more complex work rhythms, while the companies that apply for regional funds want to solve current problems (i.e. to obtain the funds for acquire a

fixed asset, such as a machineries) and not for the growth and for strategic reasons". (General Manger, Cosmob).

"Operationally, only those who have a dedicated office or a solid collaboration with a consultant are able to intercept the resources and can fully seize these opportunities. The research and design activity is a real job that cannot weigh on the shoulders of an entrepreneur and therefore it must be considered as a separate work from the core economic activity of the business" (Gianluca Carrabs, Project Manager and Consultant).

The national projects are the ones that are not considered relevant for SMEs because the management of the projects take long time.

5.2.3 The role of regional context

According to the respondents the regional territory of Marche provides a good environment for the development of SMEs and the participation of SMEs in European funds, first in the definition of a regional strategy that is in line with the real need of the companies, but there are some aspects that can be improved.

During the definition of regional policies, the policy makers in a bottom-up approach, try to understand the need of SMEs and try to structure the resources available according to the problems highlighted by the SMEs. They attempt to make available the resources to provide an immediate help to SMEs to finance their ideas (R&D Director, Cluster Marche).

An important aspect has been underlined by Gianluca Carrabs, regarding the differences in the approaches within the regional context. In fact, in the north of the region, the participation in European projects is mostly left to the personal initiatives of entrepreneurs. In fact, in the north of the region, there is not a strong investment attraction policy as is the case for depressed areas, for example the areas affected by seismic events the so called *"the seismic areas"*.

Very interesting was the point highlighted by the General Manager of Cosmob regarding the production structure. Historically the territory has been organized over the years according to sectoral specialization logics in certain industrial sectors, which create the condition for development of SMEs that work in complementarity of operations logic. Very interesting were the points underlined by the respondent from Cosmob. According to the General Manager, the real added value of the Marche Region is the presence of technical structures, such as the centres of competences, that offer advanced services to companies that need external skills to develop projects such as innovative ones (General Manager, Cosmob). There is also attention to create a “bridge” between the University world and SMEs, that are distant worlds, in terms of rhythms, timing and approaches to work. The region in fact have always developed policies aimed at stimulating collaborations and networks between public and private organizations, between universities and companies and to promote also the intersectoral collaborations in a cross-fertilization logic. During the time, in fact, the region invested in technological centres such as Cosmob and Meccano, then created a model of regional financing to coordinate the system of these advances services, and then continue to invest in business innovation centers, scientific and technological parks, technological clusters and then on technological platforms. It is evident as the region always stimulate the creation of collaboration networks, and still the European Union for the new programming period promote the investments in digital innovation hubs, but to date just some of these projects are still working. The process of creating an integrated network that unifies the world of Universities, SMEs and technical centre is still in an initial stage, because during time different models were implemented, but the right one as to be still defined (General Manager, Cosmob). To date, an analysis of the experiences should be done to understand which factors (the type of funding, the governance, the type of services provided, the managerial approach of the structures) influence the effectiveness of these models to select which successful experiences have to be taken as best practices, or if new models have to be created to make these collaborations real effective avoiding the risk to propose the same models that have not worked in the past.

5.2.4 Boosting the participation of SMEs to European Projects

According to the respondents, boosting the participation of SMEs to European Project means to focus the policies on three main aspects: providing the necessary assistance to SMEs for the administrative aspects of the participation; enhancing the collaboration networks to allow the SMEs to have access to the necessary skills and competences, and promoting a change in the vision of SMEs regarding the research and development importance.

The new community planning has scheduled a wide range of resources to Marche Region that is living a negative trend due to the decrease of regional GDP (Gianluca Carrabs, Project Manager and Consultant).

“The SMEs should be ready to seize the opportunities of the new community planning, and the Region must be able to communicate these opportunities to the stakeholders”. (Gianluca Carrabs, Project Manager and Consultant).

To enable the SMEs to catch the opportunities to the new programming period, on the one hand, the companies must be ready to use these resources acquiring the necessary skills, on the other hand, the Region must be able to communicate these chances to stakeholders.

Firstly, the SMEs participation can be encouraged by spreading the opportunities of calls (in terms of promotion) and by offering free technical assistance funded by the Region. A way is to enhance the use of the *revolving fund*, that finance the planning activities of the companies that once received the financing, they supplement the funds that can be used in the future by other companies that intent to intercept new funds (Gianluca Carrabs, Project Manager and Consultant).

The Cluster has an important role in supporting the creation of a very structured networks that includes companies and universities. Enhancing the collaboration between the different entities located in the territory is perceived as a fundamental

way to promote the participation and to acquire the necessary skills to work on European projects.

“The structure such as Clusters or innovation hubs that help SMEs to participate in these calls are being pushed a lot at European level” (R&D Director, Cluster Marche).

The necessity to promote the participation of the SMEs in these projects is a relevant necessity at European and regional level. There is a whole vein that tends to bring together European and regional funds.

“The objective of European Commission is to put together the less developed regions with the more developed ones to ensure that SMEs talk to each other and exchange best practices between less developed regions and the more developed ones” (R&D Director, Cluster Marche).

In this direction, Cluster Marche, as an organization is preparing a European project for the next programming period that is a project funded by European Union that may be classified as a hybrid program between the direct and structural funds. In practice, the Cluster is the leader and involve within the project all the small schemes carried out by the SMEs that are chose as partners. In this way, the participation process is totally guided by the Cluster and simplifies the participation of SMEs that are not familiar with the funds.

Some interesting points have been stressed from the General Manager of Cosmob. According to the respondent, if we consider regional funding, the participation of SMEs is high, because the region, to encourage the participation, brought to a very low level of accessibility the requirements. For the more complex ones, the region and the European Commission should provide different tools not only to support the participation in terms of application procedures or requirements but should support a deeper change in the vision of SMEs. The first step is to understand how much the company uses these opportunities only to manage some current problems and not for strategic purposes. Therefore, the effectiveness of the tools themselves should be measured.

“To enhance the participation to more complex projects, such as the direct ones, the problems must be tackled differently, with different tools” (General manager, Cosmob).

Firstly, the SMEs must have access to the competences necessary to develop the activities of a project. For example, with the tool of the Industrial Research doctorate or other scholarship, the SMEs can acquire the right competences that a company needs to access to this kind of financing programmes. This typology of collaboration is a winning strategy for both universities and SMEs that work on common research. In this way, the SMEs that want to participate in European projects have access to content and ways of working that are suitable for that type of work. This can stimulate the interest of SMEs to create areas within the companies that are truly aimed at developing the research and innovation projects in a strategic way (General Manager, Cosmob). This would not normally occur, because the research is in general perceived as an activity that cannot be effort for a SMEs in terms of time, financial resources and required skills.

This is linked to the necessity of SMEs that really want to growth, to bring the activities from operational issues to study and research: it means opening the SMEs to deal with things that are not familiar with their organization of work and stimulate a change of vision (General Manager, Cosmob). The companies must start to think to European opportunities in a view of growth and talk about innovation issues instead of a way to solve current problems. In this way they can start thinking to participate in European projects that are characterized by a long procedure (more or less three years). Just as the presence of specialized technology centers in the sector represents the tool to bring the world of research and technology transfer towards the business world.

“The short-term mind-set is not the way to go in Europe” (General Manager, Cosmob).

The common point is the fundamental necessity to stimulate the policies that provide knowledge that the company would not have access alone: this is a way to encourage the participation.

Another important highlight stressed by the informant from Cosmob, is the importance to think to the policies in sectoral specialization logic. To be effective, the programming must be done considering the different state of the art and technology of the sector, because the technological state is not homogeneous. This is fundamental to avoid the penalization of some industrial segments that by specific sector characteristic are low tech.

To enhance the participation, it is fundamental to address the way of thinking to research and innovation of SMEs as a way investing in those factors and tools that can guarantee continuous updating over time.

“The knowledge of the product and of the sector it is a fundamental awareness to be defended to guarantee the future of a sector, but a company should be able to understand the evolution trends to offer always innovative solutions to be in line with the times” “General Manager, Cosmob.

Innovation and research must be addressed in this way to stimulate the SMEs behaviours through innovation activities and the participation to programmes with high technological content such as the direct funded projects.

DISCUSSION AND CONCLUSION

1. General Discussion

As we have highlighted, European Commission considers SMEs as the first source of growth and innovations (European Commission, 2020; Kielek-Więclawska, 2016; Gilmore et al., 2013) and, being their difficulties in accessing to financial resources a known problem, it provides tools to support their activities through EU funds and programmes (European Commission, 2020; Kielek-Więclawska, 2016; Popa et al., 2013; Zaneta et al., 2015; Čučković & Vučković, 2018; Visković, & Udovičić, 2016). The access to these typologies of funds brings with it a series of obstacles that limit the possibilities to take advantage of all the opportunities provided by these instruments (Gilmore et al., 2013). The nature of these critical issues is linked to factors of different nature related both to the typical characteristics of the companies (Aykan, 2013; Hessels & Parker, 2013; Faber & Rijnsoever, 2015) and to the aspects connected to the complexities of the administrative procedures and documents to be filled that cannot be immediately understood and accomplished (Brzáková & Přidalová, 2015; Bussi et al., 2017; Gilmore et al., 2013; Faber & Rijnsoever, 2015; Visković, & Udovičić, 2016; Medve-Bálint & Šćepanović, 2019; Hunya, 2011; Labudová & Jánošová, 2019).

The objective of this study was to investigate which are the main reasons that may hinder the participation of wood furniture SMEs of Marche Region to EU programmes and collects the main insights about the management of the project and on the impacts on some organization areas. Results collected by the survey to 270 Italian SMEs involving 95 SMEs of Marche Region, show that the level of participation in EU programmes is still limited within the companies: most of the SMEs have not have access to European funds in the last 7 years programming period and the ones that have participated in such programmes experienced the

use of the structural funds. It follows that SMEs are partially aware of the opportunities provided by European Commission and moreover are not familiar with direct funds. SMEs of Marche region have an insufficient knowledge about the programmes, especially research and development ones as COSME and HORIZON 2020, while are more familiar with the structural funds, that are managed by local authorities that act like intermediates between the European Union and the SMEs. A possible reason may be linked to the lack of general information about the projects due to the scarce promotion of the funds: R&D programmes are not presented to companies in an efficient way. In fact, most of the SMEs declared that knowledge of direct funds is still limited. The prevailing motivations that influence the use of the funds regard the possibility to invest in innovation activities and on fixed asset such as purchase machineries and equipment's. In general, SMEs consider the use of the funds relevant to the access to finance and to new growth opportunities: while the creation of strong partnerships does not constitute a relevant reason to join to European projects. SMEs consider very difficult the entire process, although the administrative barriers are the most important obstacles for them: according to the SMEs, documents preparation and project requirements are the most ambiguous parts in participating to European projects. Other relevant obstacles are related to the difficulty to select the best source to finance their idea, and the difficulties linked to the management of relationships with international and different partners, followed by some internal constraints that are the lack of skills in project management. The regional funds are perceived as simpler to understand than European ones, but after obtaining the financing the administrative requirements are too difficult to accomplish if a SME does not have internally the administrative staff that can manage the financial reporting of a project.

SMEs tend to consider this form of financing not in line with the type of organization, above all for the lack of internal skills. These obstacles seriously hamper the interest of SMEs in these projects, notably for the SMEs that have not experienced the European projects whether if we consider those indirect funds. An interesting point is that most of the SMEs that have experienced the use of funds (above all the regional funds) declared that they asked for the support of one or more actors, foremost research centers belonging to private and public spheres.

Operationally, the SMEs who have a dedicated office or a solid collaboration with consultants can fully intercept the resources and seize the opportunities provided by European Union: research and design is a time-consuming activity that cannot weigh on the shoulders of an entrepreneurs. As confirmed by the service providers that have taken part in the interviews, the companies asked for the support in understanding which are the possibilities for financing their project, and for the writing processes and application phases. SMEs need further support in selecting the partnerships, i.e. the other actors that can provide them skills and competences to develop the projects. This type of support is asked also by more structured companies that have an internal organization and ask support for participating in more complex programmes such as the European ones, confirming how the surrounding and the services available influence the participation.

Despite the low familiarity with the instruments and the relevant obstacles that SMEs must face in participating, the SMEs that have actually had access to the funds agree on the fact that the EU support does have positive effects on the business activities. In detail, SMEs from Marche region agree on the fact that the use of the funds has more relevant effects on the product and technological improvements area. The SMEs that have experienced the use of funds have registered positive impacts mainly in terms of innovation activities and products and technology development. Most of the SMEs that have access to European funds find it easy to invest in innovation improvements with regards to the products development. Furthermore, they had the possibility to invest in machinery and introduce the fixed aspects in the companies. This is linked to the fact that most of the companies have used the Structural funds that are used to solve current problems.

In general, more structured companies are interested in direct funds, while the regional funds are used by all the companies that want to solve a current problem. The European funding's are attractive for the companies that want to grow in competences in some thematic areas that are well defined and with high level of innovation promoted by the European Commission; instead, the regional funds represent interesting opportunities for the companies that want to receive financing help for the development of some ideas or projects in the short term. On the

contrary among the less important effects registered in economic and financial area there is the employment capacity and it may be linked to the fact that most of the companies had access to structural funds, which are smaller in terms of money availability. Furthermore, for SMEs, the participation to EU projects does not significantly influence the relationships with the different local actors and on sustainability practices.

The results show that overall the main aspects evidenced by the analysis show a general tendency of Italian SMEs to approach to European funds is more or less in the same way.

2. Theoretical contributions

As we have underlined previously, the studies oriented to understand the dynamic of access of SMEs to public funding have been expanding for the last years, due to the importance of the financial resources provided by European Commission and the central role that the small business have in the territory. The topic has been approached in different ways by scholars and experts. Some authors have studied the issues related to SMEs' use of the funds as an analysis of the level of effectiveness of the tools (Kaufmann & Todtling, 2002), others have analyzed the levels of awareness of SMEs towards these tools (Visković, J., & Udovičić, 2016), other authors have focused the research on the main motivations that incentive the use (Mikołajczak & Pawlak, 2017), or on the main barriers that obstacles the participations (Gilmore et al., 2013; Labudová & Jánošová, 2019; Visković, & Udovičić, 2016; Medve-Bálint & Šćepanović, 2019; Hunya, 2011; Faber & Rijnsoever, 2015). Another field of study focused on which are the impacts on the organization activities under different point of views, such as innovation activities, economic performance, competitive position in the market (Čučković, 2018; Lewandowska et al., 2015; Bedu & Vanderstocken, 2019; Čučković, & Vučković 2018; Catozzella, Vivarelli, 2011; Almus & Czarnitzki, 2003; De Prato et al., 2015, Radicic & Pugh, 2015) or how it influences the willingness to collaborate with external actors (Faber & Rijnsoever, 2015; Caloffi et al., 2014; Radicic et al., 2018;

Nepelski & Piroli, 2018). Finally other studies have focused the analysis on which are the main external factors that influence the use of the funds, such are the role of the domestic institution and other agents that can support their activities, creating a better environment for SMEs development and furnishing support services to SMEs (Medve-Bálintand & Šćepanović, 2019; Miller, 2010; Visković, & Udovičić, 2016; Labudová, 2011; Hunya et al., 2011).

This thesis contributes to the study related to the analysis of the impacts of accessing European projects and about the difficulties linked to the participation, that are still limited within the SMEs context (Faber & Rijnsoever, 2015; Visković, & Udovičić, 2016), overall for the lack of economic indicators (Vojtovič, 2016) and for the fact that different internal and external factors can influence the efficient use of the resources (Čučković & Vučković, 2018).

Following the approaches of some of the authors mentioned above and the necessity to deepen the topic from the point of view of SMEs, this work provides contribution in three main areas. Firstly, it explores the main contributions and empirical evidence on the impacts and the obstacles that SMEs must face in accessing European funds, providing additional data and empirical evidence to propose insights on which are the impacts that can be analysed based on the evidence from a sample of SMEs. In addition, it conducts the analysis adding another area that regards the impacts on the implementation of practices in line with the circular economy model. Secondly, the research provides insights on the role of the regional territory, examining the involvement of public and private actors that can influence the participation, both in terms of definition of the policies and in terms of collaboration between different entities as way to allow SMEs to access new skills and competences (necessary for developing complex projects). Furthermore, the work provides a contribution about the topic considering as focus of the analysis a specific sector and a specific territorial system.

3. Enhancing the participation of SMEs to European projects: policies recommendation

From the policy perspective, the empirical evidence explored in this paper advises that many SMEs do not perceive participation in EU funded projects in line with the objectives or with their internal resources and abilities. SMEs need additional help and encouragement to participate: firstly, SMEs need to overcome the obstacles connected to the lack of information and to the administrative aspects directly related to the main features of the projects; furthermore, considerable obstacles are related to the availability of internal skills and to the willingness to participate to these projects, in terms of the vision and organization.

As emerged by the insights provided by the actors interviewed, boosting the participation of SMEs to European Projects means to focus the policies on three main aspects: create a specific support system for SMEs; enhancing the collaboration networks to allow the SMEs to have access to the necessary skills and competences, and promoting a change in the vision of SMEs regarding the importance of research and development activities.

In general, enhancing the SMEs participation of Marche region to European funds, means to consider the following lines of intervention:

- I. Improve the services available to SMEs in terms of training activities and promotion;
- II. Promote policies aimed at creating networks and at improving the collaboration between SMEs and Universities and other technological centers to allow SMEs to have access to new competences and skills;
- III. Support a change of vision in SMEs: it means to bring the activities from operational issues to study and research path;
- IV. Promote specialist sectoral policies;
- V. Encourage investments in innovations activities as a strategic way to guarantee continuous updating over times;
- VI. Assessing the strengths and the weaknesses of all the services structures that oversee supporting SMEs activities.

I. Improve the services available to SMEs in terms of training activities and promotion.

These objectives will require a series of activities. Firstly, to enable the SMEs to catch the new opportunities, the SMEs must be prepared to use these tools and be able to acquire the necessary skills; secondly, the Region should concern itself with the communication of the opportunities to SMEs. The SMEs complain about the lack of the information about all the financial resources available at European, regional and national level; consequently, the first obstacle is to find the right source to finance their projects. They consider the access to programmes and the documents preparation as very hard activities to be implemented internally. To overcome these difficulties, it is necessary spreading the opportunities of the calls in terms of strengthen of the promotion activities, and then offering free technical assistance and training services about the EU funds. Improving the knowledge of the tools available to SMEs and of the main features can encouraged the participation. This means to provide support to the SMEs in the identification of all the EU opportunities provided, and then supporting them in writing the projects and filling the documentations. Furthermore, the region should stimulate attraction policies throughout the region, as they do for the case of “*depressed areas*”. A way is to enhance the use of the revolving fund, that finances the planning activities of the companies that once received the financing, they supplement the funds that can be used in the future by other companies that intent to intercept new funds. Moreover, if we consider the structural funds, the Region can encourage the participation, bringing to a very low level of accessibility the requirements.

II. Promote policies aimed at creating networks and improving the collaboration between SMEs and Research world.

Encouraging the participation means stimulating an upgrade of internal skills, and a way to allow SMEs to have access to new competences is stimulating the creation of networks and collaboration. Increasing the collaboration between the different entities located in the territory is perceived as a fundamental way to

promote the participation and to acquire the necessary skills to work on European projects. SMEs must have access to the competences necessary to develop the activities of a project: collaborating with research centers or Universities (through different tools for example the Industrial Ph.D. program), the SMEs have access to content and ways of working that are suitable for that type of work. This can stimulate the interest of SMEs to create areas within the companies that are truly aimed at developing the research and innovation projects in a strategic way. This would not normally occur, because the research is in general perceived as an activity that cannot be effort for SMEs in terms of time, financial resources and required skills. It is therefore necessary to reinforce the “bridge” between the SMEs and the research world that are distant worlds, in terms of rhythms, timing and approaches to work, developing policies that stimulate the collaborations and the creation of networks between public and private organizations, between universities and companies and to promote also the intersectoral collaborations in a cross- fertilization logic. For example, it is important to underline the roles of the technological centers and other structure that provide services to SMEs and are vital to support the creation of very structured networks that includes companies and universities. The structures as Clusters, innovation hubs or technological centers are in fact valorized at European level. For example, the Cluster Marche involves the companies in a proactive way guiding them in participation of different projects in which they are involved directly as project partners. So, the participation process is totally guided by the Cluster and encouraging the participation of SMEs that are not familiar with the funds.

III. Support a change of vision in SMEs

Encouraging the participation to more complex projects such as the Research and Development ones, will require making available to SMEs not only the necessary tools to support the participation in terms of application procedures but means overall promoting a deeper change in the vision of the SMEs. The first step is to understand how much the company uses these opportunities only to manage some current problems and not for strategic purposes. To access to direct funds,

SMEs must change their vision of conceiving the development of business activities and strategies. The SMEs that really would undertake a process of growth should bring the activities from operational issues to study and research path: it means opening the SMEs to deal with things that are not familiar with their organization of work and stimulate a change of vision. The companies must start to think to European opportunities in terms of growth opportunities and innovations issues instead of a way to solve current problems. In this way they can start thinking to participate in European projects that are characterized by a long procedure (more or less three years). Supporting a change of vision in SMEs means stimulating the policies to simplify the access to knowledge that the company would not have access alone through the reinforcement of the role knowledge providers (such as specialized technological center, universities, clusters), always with the aim to bringing together the world of research and the business world.

IV. Promote specialist sectoral policies

Another important aspect to consider if the SMEs participation to European projects want to be encouraged, is to think to the policies in sectoral specialization logic. To be effective, the programming must be done considering the different state of the art and technology of the sectors, because the technological state is not homogeneous. This is fundamental to avoid the penalization of some industrial segments that by specific sector characteristic are characterized by low levels of technologies.

V. Encourage investments in innovations activities of SMEs to guarantee continuous updating over times

To reinforce the participation of SMEs to European projects with high technological content it is necessary to promote the importance of research and development

activities. The SMEs must be aware that the innovation activities developed within the companies can guarantee continuous updating over times; it means be able to stay competitive in the market and respond to the new trends of the consumers.

VI. Assessing the strengths and the weaknesses of all the services structures that support SMEs activities

During the time, the Region invested in different structures that could support the activities of SMEs within the territory. By way of illustration, the regional territory has seen the creation of technological centres, business innovation centers, scientific and technological parks, technological clusters and then technological platforms. The region worked hard to stimulate the creation of collaboration networks, but to date just some of these centers continue to provide services to SMEs. To date, an analysis of the experiences should be done to understand which factors (the type of funding, the governance, the type of services provided, the managerial approach of the structures) influence the effectiveness of these models to select the successful experiences that must be taken as best practices or if it is necessary to create new models to incentive these collaborations, avoiding the risk to propose the same models that have not worked in the past.

4. Besides this study: new areas for research

The thesis analyzed the approaches of SMEs of the wood furniture sector of Marche region and tried to define possible policy routes to encourage the participation of SMEs to European projects.

For the purpose of this work, the approaches of SMEs in the wood furniture sector were analyzed, without making a distinction among the typologies of funds. Including all the forms of financing allowed to get an overall picture on the approaches of wood furniture SMEs to European funds in general. A research line

that may provide valuable insights can be obtained by focusing the subsequent analysis by distinguishing the types of funds: this type of analysis could allow expanding the reference sample on companies that access direct funds and, by consequences, provide highlights on specific policies that can encourage the use of the funds.

Narrowing the research sample on a specific sector allowed to have a detailed analysis of the tools available for the SMEs and to outline lines of interventions that are specific for the sector and for the territory specificity. The research about the approaches of SMEs could be extended to other sectors having different degrees of technological development and may need different tools to be implemented.

This study underlined the importance of the collaborations with external actors as a way to simplify the access of SMEs to knowledge and skills necessary to approach European funds. Future research may be addressed to deepen the role of the external actors in participating to European projects, selecting one category (public and private for example). In these direction, presenting some cases of best practices it could be interesting.

In addition, it would be useful to complete the analysis of the role of territorial actors, analyzing the different typologies of models that have been implemented during the years (industrial parks model, technological clusters) to underline which are the strengths and weaknesses and identify the best practices.

As it has been stressed before, the lack of internal skills is an important factor that influences the participation. Research on the managerial methods (for example Project Management tools) that are possible to implement within SMEs to facilitate the access the European Projects is needed.

Furthermore, it would be interesting to develop a comparative analysis between Italian companies and those of other countries in approaching European funds, trying to focus the attention on internal and external factors that are relevant in influencing the level of participation of SMEs, with the aim to identify the strengths and weaknesses of our companies and of the territorial policies in general.

Lastly, given the current situation characterized by pandemic emergency that have been influencing the business activities of all types of companies during the last two years, it would be interesting to analyze to which extend the public funding have influenced the ability of SMEs to survive the crises and to identify new business opportunities.

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ANNEX 1: COMPANIES QUESTIONNAIRE SURVEY

The approaches of Small and Medium-sized enterprises to European Union funds

SECTION 1: COMPANIES PROFILES

1. What is the size of your company?
 - Less than 10 employees
 - 11-49 employees
 - 50-249 employees
 - More than 250 employees

2. What is your company's annual turnover?
 - Less than 2 million €
 - Between 2 and 10 million €
 - Between 11 and 50 million €
 - More than 50 million euros

3. What is the founding year of your company?

4. Role of the contact person:

5. In which region is your company located?
 - Abruzzo
 - Calabria
 - Campania
 - Emilia Romagna
 - Friuli-Venezia Giulia

- Lazio
- Liguria
- Lombardia
- Marche
- Piemonte
- Puglia
- Sicilia
- Toscana
- Trentino-Alto Adige
- Umbria
- Veneto

6. If you have indicated the Marche region as the region of belonging, also indicate the province (Reserved to the companies located in Marche Region)

- Ancona
- Ascoli Piceno
- Fermo
- Macerata
- Pesaro-Urbino

7. In which target market does your company operate?

- Italy
- Italy and Europe
- International Markets

8. To which sector of the wood-furniture industry do your company belong:

- Bathroom furnishing
- Bedroom furnishing
- Classic furnishing
- Collectivity
- Construction
- Furnishing for bars and shops

- GDO
- Kitchen furnishing
- Living room furnishing
- Mattresses
- Multiproduct
- Office furnishing
- Outdoor furnishing
- Panels
- School furnishing
- Semifinished product
- Upholstered furnishing
- Varnishes

SECTION 2. THE FINANCING INSTRUMENTS OF THE EUROPEAN UNION

9. Is your company informed about funding opportunities provided by the European Union? (Likert 1-5; 1 = not at all; 2 = few; 3 = indifferent; 4 = enough; 5 = a lot)

10. How much are you aware of the following funding instruments? (Five-point Likert Scale: 1 = not at all; 2 = few; 3 = indifferent; 4 = enough; 5 = a lot)

- Structural funds (managed at regional or national level, i.e. POR FESR)
- Horizon 2020
- COSME
- SME Instrument
- Erasmus plus

11. Has your company had access to European funds in the last 7 years? The expression European funds refer both to those disbursed directly by the European Union and to those managed at national and regional level with EU funds (eg POR. FESR)

- Yes
- No

**SECTION 3: BARRIERS TO ACCESS TO EUROPEAN FUNDS
(Reserved to companies that have not experienced the use of
funds)**

12. Regarding the perceived difficulties associated with accessing funds disbursed by the European Union, what is your degree of agreement with the following statements? (Five-point Likert Scale: 1=totally disagree; 2= disagree; 3= I do not know; 4= fairly agree; 5= totally agree)

- The requirements for project participation are too stringent
- Knowledge of project management practices is limited within the company
- The procedures for completing the application form are complicated
- The company does not have the financial resources for professional help
- The company has difficulty to find the additional resources to finance the projects
- The company has difficulty to tighten partnerships
- The company has difficulty to identify the best funding source

**SECTION 4: LEVEL OF PARTICIPATION IN EUROPEAN
PROJECTS (Reserved to companies that have experienced the
use of funds)**

13. Does your company have a Research & Development department?

- Yes
- No

14. Which of these funds has your company used?

- HORIZON 2020
- COSME
- SME Instrument

- ERAMUS PLUS
- Projects managed by regional and national bodies using European funds (i.e. POR FESR)
- Other

15. What kind of investments financed with European funds has your company made?

- Purchase of computer equipment
- Purchase of machinery and equipment
- Professional training of workers
- Purchase of licenses and software
- Product innovations
- Process innovations
- Implementation of quality systems
- Marketing strategy consultancy
- Internationalization projects
- Implementation of sustainable and circular development models
- Other

16. To what extent have the following reasons influenced your company to participate in European funding projects? (Five-point Likert Scale: 1= not at all; 2: = few; 3 = indifferent; 4 = enough; 5 = a lot)

- Access to finance
- Support the entry into global markets
- Access to new growth opportunities
- Investments in human capital and organizational activities
- Supporting innovation and access to ICT
- Support the development of partnerships

17. Regarding participation in one of the European programmes, what is your degree of agreement with the following statements? (Five-point Likert Scale: 1=totally disagree; 2= disagree; 3= I do not know; 4= fairly agree; 5= totally agree)

- The requirements for project participation are too stringent

- Knowledge of project management practices is limited within the company
- The procedures for completing the application form are complicated
- The company does not have the financial resources for professional help
- The company has difficulty to find the additional resources to finance the projects
- The company has difficulty to tighten partnerships
- The company has difficulty to identify the best funding sources

18. Did one or more of the following actors support participation in the project?

- Consulting agency
- Local technological centre
- University
- The project has been managed internally
- Other

SECTION 5: Impact assessment (Reserved to companies that have experienced the use of funds)

19. Regarding the participation to the European project, what kind of impact did it have on your company?

- Positive
- Negative
- Neutral

20. Regarding participation in one of the European projects, what is your degree of agreement with the following statements? (Five-point Likert Scale: 1=totally disagree; 2= disagree; 3= I do not know; 4= fairly agree; 5= totally agree)

- After the participation to the project, the company increased its profits
- After the participation to the project, the company invested in new machinery, equipment and plants
- After the participation to the project, the company has expanded its staff

- After the participation to the project, the company has started an internationalization process
- After the participation to the project, the company increased its turnover

21. Regarding participation in one of the European projects, what is your degree of agreement with the following statements? (Five-point Likert Scale: 1=totally disagree; 2= disagree; 3= I do not know; 4= fairly agree; 5= totally agree)

- After the participation to the project, the company has improved its products and the technologies used
- After the participation to the project, the company has extended its product portfolio
- After the participation to the project, the company has improved its quality system
- After the participation to the project, the company has expanded its innovative activities
- After the participation to the project, the company has increased the number of innovations

22. Regarding participation in one of the European projects, what is your degree of agreement with the following statements? (Five-point Likert Scale: 1=totally disagree; 2= disagree; 3= I do not know; 4= fairly agree; 5= totally agree)

- After the participation to the project, the company has created lasting relationships with the project partners
- After the participation to the project, the company has improved relations with universities and other research centers
- After the participation to the project, the company has strengthened relations with technology centers and other consulting agencies
- After the participation to the project, the company has improved its project management practices

23. Regarding participation in one of the European projects, what is your degree of agreement with the following statements? (Five-point Likert Scale: 1=totally disagree; 2= disagree; 3= I do not know; 4= fairly agree; 5= totally agree)

- After the participation to the project, the company has allocated resources to improve waste recycling/collection activities
- After the participation to the project, the company has introduced the use of clean technologies
- After the participation to the project, the company invested in renewable energy
- After the participation to the project, the company has introduced environmental certifications

24. How much can the experience of participating in the project influence the decision to join future programmes? (Likert 1-5; 1= not at all; 2= few; 3 = indifferent; 4 = enough; 5 = a lot)

ANNEX 2: SEMI STRUCTURED INTERVIEWS

Mapping territorial actors' role in supporting SMEs participation in EU programmes

SECTION 1: Services offered by territorial actors

1. Which type of service is offered by your organization? (Consultancy on categories of available funds, project writing, partnership establishment, application submission, project elaboration and/or development, subsequent phases to obtaining funding, development, monitoring, dissemination and communication, linguistic support)
2. Does your activity include services to promote the opportunities of Community instruments? What channels are used?
3. Does your business include training services in Europlanning (courses, Webinars)?

SECTION 2: Main difficulties of SMEs to participate in European projects

4. What are the main difficulties that SMEs encounter? At what stage of project development?
5. For which calls do SMEs ask for the most relevant support?
6. For which types of activities do SMEs ask for the most relevant support?

SECTION 3: The role of regional territories

7. What is the level of awareness of SMEs regarding the opportunities of community instruments and the possible advantages of participating on various business aspects (financial, product innovation, green technologies)?

8. In your opinion, does the regional territory offer a favourable environment for the development of SMEs? (in terms of financial and non-financial support, promotion of cooperation between the various players in the area, support for growth and innovation etc.)

SECTION 4: Recommendations

9. What operational solutions and practical tools aimed at enhancing the research activity can be made available to SMEs in the Marche region?

10. How can the participation of SMEs in Community projects be encouraged?