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**Assessment of the Economic, Environmental
and Social impact using SROI: a wine cellar
case study**



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1. Introduction

During the last years, citizens are increasingly transferring responsibility towards companies. Specifically, they are becoming more conscious and see the act of consuming as not only a financial transaction, but an interaction in which personal principles increasingly influence the consumption choice [39]. Thus, conversely to the past, today's consumers have integrated sustainable, environmental and social considerations into their lifestyle choices. Accordingly, consumers' choices are based not only on the characteristics of the product that satisfy their needs but also on how these products affect the society and the environment in global terms. Inequality and climate change are examples of concerns which are directly influenced by organizations and, then, taken into account by consumers. In addition to this, also more and more financial institutions and investors show an interest in operating with those companies and new entrepreneurship projects that can prove they can create measurable social and environmental impacts, as well as financial returns, through a more sustainable long-term business strategy [39]. Investors need some accurate information about how money is creating social value [34]. Hence, social value now, as well as in the longer term, is arguably the priority for our society and, given the massively increasing threats to wellbeing the challenge has never been greater [22]. Stakeholders expect companies to solve real problems and contribute to build the world that they imagine with the resources available.

In order to meet the stakeholders' new expectations and truly connect with them at a deeper level, companies must be able to generate economic value in a way that it also produces value for society by responding to its main challenges. This approach implies that social and human value is directly integrated into the company's core business process through the design and execution of their business models. In this regard, Corporate Social Innovation (CSI) describes corporations who integrate social innovation into their corporate activities, so that

they can create long-term value through integrating a corporate social innovation strategy, which is based on the proactive design of new business models [39,40].

These raising awareness and requirements pose the need to measure on a triple bottom line (Financial, Social and Environmental) the impact generated by the companies' activities [26]. Although environmental and social concerns are becoming increasingly important, the economic impact has been, so far, the only type of value that has usually been measured and accounted for, even when the generated value actually goes far beyond what can be captured in financial terms. As a consequence, decisions made by companies have been based on incomplete information about full impact and, in turn, they may not be as good as they could have been [27].

In order to overcome the imperfection of accounting only the strictly financial results and to include valuing what actually matters, several methodologies have been developed for measuring and accounting for this much broader concept of value [26]. Among these, Social Return on Investment (SROI) has emerged internationally as a viable approach to measure the extent to which social impacts are being achieved [34]. SROI is an investment appraisal technique that is explicitly designed to include these social and environmental effects into the activities assessment [21]. The value can be thus measured as a collective value reflecting the economic, social and environmental impacts (positive being referred as benefits and negative being referred as costs). It captures the economic value of social and environmental outcomes by translating qualitative objectives into financial measures and focuses on the most important sources of value as defined by stakeholders. This kind of analysis helps organizations understand and manage the social, environmental and economic value that they are creating [26]. The conceptual starting point of an SROI analysis is a modelling effort to identify the theory of change, or the so-called impact map, which can be said to be the story of how the interventions of an organization generate the final social impact. The theory of change is

defined as an outcomes-based approach which applies critical thinking to the design, implementation and evaluation of initiatives and programs intended to support change in their contexts [29]. For what concerns the environmental impact, over the last years the adoption of a circular economy model has been identified as fundamental to the achievement of the sustainable development goals [10]. Thus, several organizations worldwide are changing their business models to increasingly move towards circular economy practices, such as renewable energy use and elimination of the use of products that harm the environment [13]. They are coming up with amazingly clever solutions to create value by reusing and recycling products. Such greater value generated in environmental terms can be captured through a SROI analysis which can facilitate the evaluation of circular economy strategies from an extended value creation perspective. Mainstreaming an SROI approach for investments across all sectors would represent a way to shift the focus from purely financial accounting towards a more comprehensive accountability of value created, including social and environmental impacts, as well as incorporating stakeholder engagement and involvement [29].

Today it is applied in the Private as well as in the Public and Third Sector [23]. The technique can be used for an entire organization, a project, or a small activity, and for almost any kind of sector, since they are all involved and contribute to outlining the importance of social and environmental outcomes [21, 29]. As one of the oldest activities, wine production has a high relevance in the economic, cultural, social and environmental dynamics in several regions worldwide, but especially all over Italy, which is a world leader in wine production and the ancient beverage remains a staple of the Italian economy. Italy produces 20% of the world's total production output. Several factors contribute to Italy's success: a thousand-year-old tradition of winemaking, a tremendous diversity of grape varieties, quality-oriented vinification techniques and a favorable climate and terrain. Today, the wine industry has a leading role in the development of production practices that have the lowest possible

environmental impact. This is reflected in the numerous national and international initiatives to monitor and communicate eco-friendly production, and in the creation of certification and labelling schemes by industry associations [10,41]. On the other hand, the growing awareness among consumers of the negative effects that traditional cultivation practices have on both human and environmental health has led to a growing demand for natural products that are perceived by consumers to be better and safer and able to reduce the environmental concerns. Sustainability in wine production, however, is not limited to environmental impacts. Consumers have embraced a wider definition of sustainability and now demand supply chain transparency and evidence of social performance [41]. In recent years, wine consumption habits have changed profoundly as a result of growing consumer concerns about the effects of conventional agriculture on both human health and the environment. More frequently, several studies show that attitudes towards organic or sustainable wines, providing information on the externalities of agricultural practices, are generally positive and that numerous consumers indicate that they are, indeed, willing to pay a premium price for such wines [42].

In this study, the SROI methodology was employed to evaluate the effects of a wine cellar products, services and activities on its stakeholders, i.e. clients, services users, suppliers, third parties and local community. The Italian wine cellar analyzed is called Crealto and based in Monferrato (AT), Italy. An SROI indicator was applied with reference to the outcomes generated on the stakeholders previously mentioned.

The paper is organized as follows. The next section gives a theoretical background by discussing the Theory of Change concept, the Circular Economy model and the Social Return on Investment (SROI) framework. It also identifies key steps and procedure to calculate the SROI ratio and emphasizes the benefits and potential limitations of the process. The third section, called the Italian wine industry, describes the first part of the research. This was conducted on the general situation on the Italian wine industry through the administration of a

questionnaire to a small sample of Italian wine cellars. The aim of the first part of the research is to get a comprehensive overview of the Italian wine industry state of the art. The third chapter also includes two interviews to privileged stakeholders of two Italian wine cellars, which provide a further confirmation of the results obtained. The fourth section presents the SROI case study performed on the Crealto wine cellar. The analysis will document results and will discuss the benefits the organization has achieved from the SROI analysis. The fifth and final section discusses the findings and puts forward conclusions and limitations to the study. Moreover, it highlights future developments.

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2. Theoretical Background

2.1 Theory of Change (ToC)

Nowadays, organizations are increasingly required to meet some ethical standards from a social and environmental standpoint. In doing so, they need to report on their impact on society and environment, work with transparency and commit to being accountable to all their stakeholders. However, while organizations work incredibly hard, it is no surprise that they can sometimes be so focused on their day-to-day activities that they lose sight of what they are trying to achieve [1]. Moreover, because change takes time, successes are not always recognized when they occur and, as a consequence, final goals cannot easily be measured. They involve change that happens too gradually or change that happens in the lives of people who are difficult to track. When organizations do try to think about their goals or try to measure their impact, they may struggle. As a result, communicating to others exactly what they are trying to accomplish and how they will know that they are actually making progress can be difficult [2]. Theories of change are the foundation of every organization's ability to achieve impact. Without them, it is hard to work out how well an organization is doing and how to improve. A ToC can help organizations to refocus, weigh up their priorities and begin to measure their impact [1].

2.1.1 What the Theory of Change is and its aim

In this regard Theory of Change (ToC) turns out to be an essential part of a successful community transformation effort [3] and a crucial tool to organizations that have social and environmental purposes and want to make a long-term change through their activities and resources. A ToC helps an organization to show how it makes a social impact, what it aims to change, and how that change occurs [1]. This is possible because it documents the impact that

an organization is seeking to achieve, as well as all the intermediate steps to make sure that its activities and resources are well aligned with said change [4]. Because Theories of Change show all the intermediate steps that lead to the end goal, they can help organizations work out whether they are making a difference towards that end goal, by measuring the intermediate steps. Therefore, this allows management to think about how important each of the activities is, and what resources should be invested in them [1]. It is a cause-effect relation mechanism used to connect the dots between the intended outcomes and the actions taken [5] and shows the path from needs to activities to outcomes to impact. It describes the change you want to make and the steps involved in making that change happen. Hence, ToC is a crucial basis for impact measurement because it provides a theoretical framework that can be used to assess whether an intervention is working as planned and how it can be improved [1].

The importance of the concept was well illustrated in a 1995 paper – Nothing as Practical as Good Theory: Exploring Theory-Based Evaluation. Stakeholders of complex community initiatives typically are unclear about how the change process will unfold and, therefore, place little attention to the early and mid-term changes that need to happen in order for a longer-term goal to be reached. The lack of clarity about the ‘mini-steps’ that must be taken to reach a long term outcome not only makes the task of evaluating a complex initiative challenging, but reduces the likelihood that all of the important factors related to the long-term goal will be addressed. Thus, the methodology helps organizations better articulate the connection among their actions and their mission/vision via intermediate steps that result in outcomes [6].

Setting up a ToC is like making a roadmap that outlines the steps by which organizations plan to achieve their goals. A theory of change offers a picture of important destinations and guides on what to look for on the journey to ensure the organization is on the right pathway. As Alice observed in Wonderland, “If you don't know where you are going, any road will take

you there." In other words, without a ToC, a community is vulnerable to wandering aimlessly. Communities and their partners have too much at stake to be aimless, amorphous, or random in their actions [2]. In the same way that a Theory of Change is a good basis for an organization's impact measurement, it can also be used to help a group of organizations in a particular sector to think about how they might measure common outcomes together. For an evaluation or measurement framework to be successful, it has to measure the right things. Because a ToC shows what an organization is trying to achieve and how it is planning to get there, organizations can work out whether they are achieving their intended outcomes. If measurement is not based on a ToC, it risks not measuring the most important things and therefore wasting money. By contrast, a ToC can identify key outcomes that absolutely have to be measured.

Furthermore, in ToC organizations not only describe the assumptions and logical arguments in favor of their initiatives but also lay down all the possible scenarios that can result from their impact actions. Thus, the purposes of the process are to allow people in organizations to think about what must be changed before actually doing it and communicate succinctly about their works and the change they make. It offers a practical and realistic method of mapping out the change organizations are looking to bring about, helps identify any potential issue, and provides a clear road map for any type of stakeholder [1].

2.1.2 How Theory of Change works

Theories of Change are outcomes-based since they start from the desired long-term outcomes and work our way backwards to the resources put into the programs to make these impacts or changes happen. Outcomes are the intended and unintended changes that stakeholders are

experiencing or might experience with a specific intervention. In other words, outcomes are the broader benefits we work to achieve [2].

There are a number of stages in creating a Theory of Change:

1. A ToC starts by identifying a clear ultimate goal of the organization. So, the final impact is the starting point, the goal towards which everything is directed. The impact statement should clearly describe the broad or long-term difference the organization wants to see happen [2]. It is important that the goal is as clear and realistic as possible. If it is not clear, the theory of change will tend to descend into every possible activity and outcome that could happen, which it is not helpful for thinking about the appropriate strategy. If the goal is not realistic, it will be impossible to build the causal model of how to achieve it, although it should be ambitious enough to stretch the organization. Many organizations have aims that are too large for them to achieve on their own, so it is not sensible to think about how to measure them. A theory of change helps organizations focus on concrete, defined aims and outcomes, which are potentially measurable [1]. Typically, the statement which defines the final aim is broad enough to make all the stakeholders feel comfortable, included and inspired [2].
2. Next, it works backwards from the goal to establish preconditions and the intermediate outcomes, i.e. the changes that are required to happen before the final long-term outcome can occur. It is needed to work through each step backwards asking, ‘What has to happen in order for this to be achieved?’ This process generates all the intermediate outcomes required in the intervention and ensures that the focus is on what has to be done to achieve the goal, rather than on what the current activities are [1]. Specific programs are considered in order to address the ultimate impact. These may include campaigns, initiatives, collaborations, public awareness efforts, capacity-building efforts, community mobilization efforts and so on [2].

3. Establish the links between outcomes, and their order, by working out causes and effects. It is important to go through the links in detail, questioning whether one outcome really leads to the next, and the reasons for believing that.
4. Work out which activities lead to which outcomes. This is generally quite straightforward.
5. Identify what else is needed for the intervention to work. A good way to think about this is to work out what would completely derail the intervention. This can reveal important enabling factors, such as which stakeholders have to be on board.

Theories of Change also depict the assumptions that lie behind the reasoning and, where possible, these assumptions are backed up by evidence [1]. In particular, the main benefit comes from making different views and assumptions about the change process explicit, especially seemingly obvious ones [7].

Theories of Change are often shown in a diagram, allowing to see the causal links between all the steps. Of course, the world that organizations work in is in fact complex, messy and impossible to reflect comprehensively in a diagram. But that is where the theory of change approach has real value: it forces to take a clear, simple view, crystallizing the work into as few steps as possible to capture the key aspects of what is done [1].

In order to achieve this desired goal, many other types of changes must occur along the way. It would be almost impossible to determine whether progress has occurred in a community change initiative if the steps to progress were not explicitly identified. Typically, changes for individuals are the first things that occur as a result of the programs, services, actions or planned strategies of a community initiative. As individual changes reach greater scale, they may contribute to population level changes [2]. The immediate results may be tangible so that they can be showed to other people to clarify how the work is making a difference [8]. As

clear improvements are demonstrated in the achieved outcomes, it is more likely that additional stakeholders step in to help organizations scale its missions.

2.1.3 The benefits of Theory of Change

A ToC gives a clearer picture and helps organizations understand the evaluation reports from a wider perspective, prioritize between different objectives of an initiative and works as a benchmark to identify the success or failure of it [9].

Furthermore, a ToC is an excellent basis for a strategic plan because it works methodically through the path from the need organizations are trying to address to the change they want to achieve. Thinking about an organization's theory of change at the start of a strategic review can help to focus on the goal. It makes sure that causal links, supporting evidence and different stakeholders' viewpoints are considered, and instead of becoming fixated on what the organization is currently doing, it draws people's minds to the activities that are needed to achieve the goals [1].

A good Theory of Change can reveal

- whether the activities which have been carried out make sense, given the goals. The theory of change provides evidence for why the intermediate outcomes are a good way to achieve the long-term goal. This can reassure that the organization is making progress. As a consequence, organizations realize whether their work is actually contributing towards achieving the impact they envision, and if there is another way that they need to consider as well.
- whether there are things carried out that do not help the organization achieve the goals. Thus, managers can be better assured that their programs are delivering the right activities for the desired outcomes.

- which activities and outcomes the organization can achieve alone and which it cannot achieve alone.
- how to measure the impact of the organization [1].

The final result is the development of comprehensive descriptions of how and why a desired change is expected to happen in a particular context. Through the ToC approach, the precise link between activities and the achievement of the long-term goals are more fully understood. This leads to better evaluation, as it is possible to measure progress towards the achievement of longer-term goals that goes beyond the identification of program outputs [8]. Thus, the purpose of doing so is to help program staff and stakeholders to check that programs are appropriate, debate them and enrich them to strengthen project design and implementation. For this reason, Theory of Change as a process emphasizes the importance of dialogue with stakeholders, acknowledging multiple viewpoints and recognition of power relations, as well as political, social and environmental realities in the context. Hence, ToC is vital to programs' success because they become easier to sustain, bring to scale, and evaluate, since each step – from the ideas behind it, to the outcomes it hopes to provide, to the resources needed – are clearly defined within the theory [7]. In brief, a Theory of Change should help leaders lead and communities bond together with a common purpose. It should help break down silos, point out connectivity and attract collaborators working toward the same positive results in communities. It should communicate to broad audiences what organizations are trying to achieve, how they are going about it, their successes along the way and obstacles to overcome [2].

2.2 Circular Economy

The Circular Economy (CE) is a concept which has aroused high interest in recent years, although it is not new. This is because it has become part of long-term government strategies

to address the supply side problems of increasingly limited resources with the growing global demand for over-consumption and rapid disposal [10]. CE has been adopted by public bodies to address relevant issues and is of great concern to both businesses and end consumers [11]. The structuring concepts of CE are centered in the natural system, where it is known that in nature nothing is lost, nothing is created, everything is transformed and there is no waste [10]. On the one hand, in the living world materials flow through a series of transformations which follow one after the other one, reaching at the end of the cycle the initial conditions, as in the life cycle of many animal and plant organisms. One specie's waste is another's food, while energy is provided by the sun. Things grow, then die and the nutrients return to the soil safely. After the death of an organism, the elements fixed in its body are returned to the environment through the action of decomposers and become available to other living organisms again. In this way, living systems have been around for a few billion years and will be around for many more. Thus, this mechanism works.

On the other hand, as humans we have adopted a linear approach: we take, then we make and, at the end, we dispose. Thus, we currently live in a linear model that follows a take – make - waste pattern. For instance, as a new phone comes out, we ditch the old one. In particular, every European citizen consumes on average 14 tonnes of raw material per year and produces 5 tonnes of waste every year [12]. Each time this occurs, a finite supply or resources decreases a little more and often producing toxic waste. Moreover, the current growth in the world's population implies an increase in the consumption level and, in turn, people are going to start throwing more trash away. However, the supply of crucial raw materials is limited and, in addition to this, extracting and using them has a major impact on the environment. The final result is an increase in energy consumption and CO₂ emissions, which simply can't work long term [12].

The linear model, which has been adopted so far, is not sustainable anymore because of the negative effects it leads to, such as gas emissions, scarcity of resources and quantities of waste generated [11]. Hence, it is necessary to design products and services without pollution, which is in agreement understood as a design error in which the resources were not correctly or completely used. By accepting that the living world circular module works, then the way of thinking can be changed so that humans too operate a Circular Economy. Instead of the throw away and replace culture we became used to, we adopt a return and renew one, where products and components are designed to be disassembled and regenerated. This implies to keep products and materials in use for the longest possible time, for their highest economic value. And yet this waste, these products and these materials could be reused, repaired, recycled. In this way, there can be regeneration of material resources and systems, both in what belongs to the so-called biological cycle as well as in the technical cycle [10].

2.2.1 What the Circular Economy is

Circular Economy is a concept promoted by the European Parliament. It is a model of production and consumption in which products and the materials they contain are highly valued, unlike in the traditional, linear economic model, based on a 'take-make-consume-throw away' pattern [12]. The concept has its origin in a double scientific aspect: On the one hand in the field of engineering, centered on research related to industrial ecology, and on the other hand, in the field of ecological economics, which concerns the recycling practice and the requalification of waste, that can be reinserted in the production process. CE is also defined as “a sustainable development initiative aimed at reducing the linearity of production-consumption systems and reducing the flow of materials and energy used in the manufacture of outputs” [11]. Therefore, CE promotes sustainable development through the cooperation among different stakeholders, such as producers and consumers. It has also been defined as “a concept that guarantees a production and consumption system with minimum losses of

materials and energy through reuse, recycling, and recovery” [11]. Hence, in a Circular Economy waste streams are reshaped, since these are utilized as a source of secondary resources, and waste is recovered for reuse and recycling [13].

In particular, the Circular Economy model is based on three principles [14]:

- Design out waste and pollution
- Keep products and materials in use
- Regenerate natural systems

There are two types of materials that can be optimized through the design of products, manufacturing processes and supply chains: biological materials and technical materials. The former are biodegradable and can be safely returned to the environment as feedstock after their use (e.g. forest products), while the latter are durable materials which cannot biodegrade and enter the biosphere (e.g. plastics and metals). However, they can be reprocessed after their use and continue flowing within a closed-loop system. The circular economy aims to keep both types of these materials at their highest utility and value at all times through careful design, management and technological innovation. The overall objective is to “enable effective flows of materials, energy, labor and information so that natural and social capital can be rebuilt [15]. It aims to build economic, natural and social capital by moving away from the linear model, that has been predominant since the industrial revolution. Thus, while the traditional linear economic model expects products to be simply thrown away at the end of their use, the circular economy model includes practices, such as sharing, leasing, reuse, repair and recycling, which make the use of products an almost closed loop. It is possible to make it happen by keeping the products’ components within the economy even when they seem to have reached the end of their lives. This means that they are reintroduced in the making process to create further value [12]. As a result, the lifecycle of products is extended

to reduce the use of raw materials and the production of waste. In practice, this implies reducing waste to a minimum [16] by turning into a valuable resource what used to be considered as 'waste' [12]. In this way, the employment of natural resources in the production process ideally have an unlimited life as the waste is transformed in raw material again. This is going to reduce the demand for increasingly scarce natural resources [11]. Circular Economy aims to redefine growth, focusing on positive society-wide benefits [10]. In particular, prosperity of economy, quality of the environment and optimization of social impact are all part of the main purpose of the circular economy model. Moreover, with current advances, digital technology has the power to support the transition to a circular economy by radically increasing virtualization, de-materialization, transparency, and feedback-driven intelligence [10].

2.2.2 The European Parliament's action plan

The European Commission adopted an action plan for circular economies in order to give a new boost to employment, growth, and investment, and to develop a carbon-free, resource-efficient, and competitive economy [11]. In July 2014 the European Commission proposed an initial circular economy package. In February 2015 it presented a new package which includes an action plan for the coming years and legislative proposals on waste policy to be met by 2030. The measures promoted by the European Parliament aim to optimize the management of waste and promote innovation to support the planned changes.

The points below state the main features of the legislative proposals:

- Waste management targets which are planned to be met by 2030. This concerns municipal waste and packaging waste [12].
- Implementation of a “warning system” which is able to spot whether we are actually moving towards the targets [12].
-

- Schemes to extend producers' responsibility and differentiating the contribution that they paid according to the costs required to retreat their products when these reach the end of their life [12].
- Encouraging prevention, such as food waste, and the reuse of products [12].

Besides waste management, the action plan also includes broad areas for action:

- The Commission also planned to improve products' design in such a way that, not only they are made to be as durable as possible, but also, since the beginning, they are thought to be repairable or recyclable through the Eco design Directive and extended producer responsibility schemes. Thus, part of this model addresses the planned obsolescence issue, which is the policy of planning or designing products with an artificially limited lifespan to encourage consumers to buy them again. The European Parliament has called for measures to tackle this practice. maintain their quality and continue to be useful beyond the short life of single products. Furthermore, it aims to make resources as efficient as possible in production and create business opportunities, in particular for SMEs [12].
- Another intention is to increase awareness in consumers by informing them about products sustainability. This can be pursued through labelling, encouraging innovative consumption forms (e.g., opting for services rather than products whenever it is possible) [12].
- In order to make the use of secondary materials more popular, the Commission is working on creating new markets for those. This leads to a series of implications, such as setting new standards, which have to be met by the materials recovered from waste [12].
- Already existing instruments are also expected to be employed to promote innovation for a circular economy [12].

- Existing indicators are going to be used to make a monitoring framework to monitor circular economy [12].

2.2.3 Benefits of the Circular Economy

Effective solutions may be achieved through the CE model, as it makes economic growth and environmental protection coexist in a single plan. The closed loop may enable the economy to grow and, at the same time, the natural resources' demand to reduce. The conversion of waste into resources to make, in turn, new products leads to the economy of recovery, reuse, and recreation [11]. Transitioning to a circular economy does not only amount to adjustments aimed at reducing the negative impacts of the linear economy. Rather, it represents a systemic shift that builds long-term resilience, generates business and economic opportunities, and provides environmental and societal benefits [10]. Here some of the delivered benefits are reported:

- Reduced pressures on the environment: a circular economy would significantly reduce greenhouse gas (GHG) emissions through better waste management and reduced use of resources (such as energy, water, land and materials) in manufacturing, with positive impacts on the climate. Large-scale reuse of raw materials could help reduce landscape and habitat disruption as well as marine littering, which would in turn help to limit biodiversity loss [11-12].
- Risks associated to raw materials, such as price volatility, availability and import dependency, are mitigated by CE. “According to Eurostat data, the EU currently imports, in raw material equivalents, about half the resources it consumes” [12].
- CE is expected to lead to an increase in competitiveness, as it may save businesses and consumers through improved resource efficiency. Thus, more value will be produced with fewer materials and consumption would be altered. In particular, applying the principle of the circular economy, the European Parliament wants to increase resource efficiency in

the EU by 30% by 2030. A 2015 Ellen Mac Arthur Foundation report estimates that by 2030, the implementation of CE may reduce the spending in net resource in the EU by €600 billion per year, which would lead to the total benefits estimation of €1.8trillion per year. This also takes into account the multiplier effects. Additionally, some researches suggest that stricter environmental legislation may provide a competitive advantage to businesses [11-12].

- CE may trigger innovation in several economy sectors as materials and products are required to be redesigned for a circular use. Consumers will also be provided with more durable and innovative products that will increase the quality of life and save them money in the long term [11-12].
- Growth and jobs: a circular economy could strengthen growth and create new jobs. In 2016, the sectors relevant to circular economy employed more than four million workers, an increase of 6% compared to 2012. Moreover, it is estimated that the transition would increase GDP by 1% as minimum and 7% as maximum by 2030 and, moreover, it is going to have an overall positive impact on the employment rate. The actual GDP increase depends on the speed at which technological change will take place, while an extra 2 million sustainable jobs are expected to be created (580,000 jobs in the EU alone), although jobs in specific sectors could also be threatened [11-12].

2.2.4 Adoption of the measures

The adoption of a circular model has been identified as fundamental to the achievement of the sustainable development goals [10]. Several communications have been issued by the European Commission in order to make different countries implement the required policies which lead the CE principles to be applied in different sectors of the economy. There are two reasons why converting CE into actual implementation from society and companies is crucial: to preserve the environment and for legal imperatives [11]. This leads to the so called

Extended producer responsibility (EPR). It is an environmental policy approach whereby producers take over the financial and/or organizational responsibility for collecting or taking back used goods, as well as sorting and treatment for their recycling [17]. As society is now aware of the planet current bad conditions, the CE trend is increasingly taking importance by becoming a relevant concept in the development of politics and business [11].

New forms of action by all the active sectors are imperative throughout all the phases of the value chain [10]. This requires developing a good knowledge of the concept, the different circular economy processes and their expected effects on sectors and value chains [15]. Hence, the application of the CE principles has been object of researches which have been carried out by several organizations worldwide. These have led to the achievement of optimal trade-off between production amount and natural resources employment, also minimizing waste, through the reuse and the recycle, and emission of greenhouse gases [11]. Innovative transformational technologies such as digital and engineering technologies, in combination with creative thinking about the circular economy, are driving fundamental changes across entire value chains that are not restricted to specific sectors or materials [15]. With the interest in aligning sectoral activities with the strategic demands of the CE Action Plan, new tools and business models have been contemplated by many organizations [10]. “A business model is a conceptual tool that helps to understand how a company works and can be used for analysis, performance assessment, comparison, management, communication, and innovation” [11]. Innovation in business model is considered to be the key to produce social and environmental sustainability in the industrial system [11]. Systematic and structural changes are required in industries and their activities to effectively reach higher levels of productivity with existing resources, in addition to the development of new technologies [10]. Thus, designers are required to come up with clever solutions so that companies can create value by reusing and recycling products [18], which has to be made to be made again. The

rethinking progress explores how through a change in perspective it is possible to redesign the way economy works. By rethinking and redesigning products, components and the packages they come in, producers can create safe and compostable materials that, in turn, help grow more stuff. As they say in the movies, “no resources have been lost in the making of this material” [10].

Changing the linear economic model, that has remained dominant since the onset of the Industrial Revolution, is by no means an easy task and would entail a transformation of our current production and consumption patterns [15]. Transition to a circular economy can be very difficult, especially for the small businesses. Rethinking and redesigning the way they make stuff imply increasing costs which are supposed to be recut somewhere else. This problem could be addressed by implementing marketing actions. In particular, the sustainable practices to become more circular and eco-friendly can be taken as an opportunity to differentiate the company and attract different market segments, as customers increasingly care about sustainability. The good news is that there are already companies out there who are beginning to adopt this way of working. The circular economy is not about one manufacturer changing one product. It is about all the interconnecting companies, that form the infrastructure of the economy, coming together [10].

The reuse of resources, the transformation of waste into new materials and forms of energy and the restoration and regeneration of systems are becoming inherent stages in the production processes in order to promote their greater effectiveness [10]. Businesses are abandoning Linear Models of take, make, and dispose for this new model that enables longer use or reuse of products and technology [19]. In this way, circularity is also creating new business opportunities, leading to the emergence of new business models, and developing new markets, not only within the nation but also outside the EU. “In 2018, circular activities such

as repair, re-use, or recycling generated an added value of almost 154 billion of euros” [11]. Several companies are also considering opportunities to create greater value and align incentives through business models that build on the interaction between products and services [13]. Also, many of them have turned their business model by starting to offer services rather than products, like a lot of manufacturers do. Such a major transformation would in turn entail significant impacts for the economy, the environment and the society [15]. As a result, with creativity and innovation it is possible to build a restorative economy where waste is supposed to build capital rather than reduce it by making the goods of today become the resources of tomorrow [10].

2.2.5 Potential challenges

Several barriers may be faced in transitioning toward CE. Some of the potential challenges are reported below:

- With regard to finance, transitioning to CE is going to imply transition costs, such as R&D and investments on assets, payments of subsidies, business models promotion and public investment in waste management and digital infrastructure. For both small and medium-sized enterprises (SMEs), investing in “green” is the main barrier to the sustainable projects adoption. A huge issue is the lack of appropriate financial tools [12].
- Another challenge is the lack of key economic enablers, such as pricing systems to encourage the reuse of resources and reflect the full environmental costs, incentives for who produces or recycles and markets for secondary raw materials [12].
- New technical skills are also required to undertake CE programs. For example, the current workforce does not have the skills to design products in a way that since the beginning they are through to be recycled or reused at the end of their lives. This problem is a great barrier specially for SMEs [12].

- Consumer behavior and business models: a circular economy would require systemic shifts in consumer behavior and business models, with implications for everyday behavior, in terms of waste sorting and food waste for instance. Many industries are currently driven by fashion. As long as businesses and consumers have little knowledge about the potential benefits of CE, they tend to be reluctant to adopt new business models (e.g., leasing rather than owning) [12].
- In transitioning towards CE, also external trade aspects and existing policies of EU have to be taken into account [12].

2.2.6 Circular Economy indicators

The CE model is going to not only transform society but also make it survive in the future. This poses the need of systems which are able to assess the CE measures undertaken by organizations. The lack of indicators would always imply limitations to assess the CE impact on efficiency. Indeed, it is common that companies do not have the possibility to propose CE solutions due to the scarcity of indicators and targets as it is a new scientific branch of study. The lack of indicators reduces the willingness to implement CE practices as there is no way to measure their efficiency, get feedback and, in turn, make improvements. Hence, the definition of CE indicators is crucial both to assess the efficiency of the activities and as tools for managers and entrepreneurs in their decision-making [11].

Even the European Commission has recognized the urgent need to develop indicators able to measure circularity and spot weaknesses. Indeed, it has stated in its action plan “to assess progress towards a more circular economy and the effectiveness of action at national and EU level, it is important to have a set of reliable indicators” [11].

The monitoring framework on the circular economy as set up by the European Commission consists of ten indicators. These ten indicators are divided into the following four thematic areas:

1. Production and consumption: in order to progress towards the circular economy, monitoring the production and consumption phases may be crucial. It can help households and economic sectors decrease the amount of waste they generate. In the longer term, this behavior may contribute to an increasing self-sufficiency of selected raw materials for production in the EU [20]. This area comprises four indicators:
 - a. Self-sufficiency of raw materials for production in the EU [20];
 - b. Green public procurement (as an indicator for financing aspects) [20];
 - c. Waste generation (as an indicator for financing aspects) [20];
 - d. Food waste [20].
2. Waste management: one of the main features of circular economy is the recycling practice. In particular, the share of waste which is recycled returns to the economic cycle and keep creating value without being wasted [20]. This area concerns two indicators:
 - a. Recycling rates (the share of waste which is recycled) [20];
 - b. Specific waste streams (packing waste, biowaste, etc.) [20].
3. Secondary raw materials: the recycled waste is called “secondary raw material” as it is reintroduced into the economy cycle in order to be employed to form new materials and products. This practice avoids extraction of natural resources, thus reduces the environmental footprint and preserves raw materials for the future generations [20]. This area comprises two indicators:
 - a. Demand of recycled material [20];
 - b. Trade of recyclable raw materials between the EU Member States and with the rest of the world [20].
4. Competitiveness and innovation: the circular economy practices lead to new needs and, in turn, to the creation of new jobs. They are also leading to the development of

innovative technologies and products design improvement. Indeed, products are designed already with a view to be easily recycled or reused in the future [20]. This area comprises two indicators:

- a. Private investments, jobs and gross value added [20];
- b. Patents related to recycling and secondary raw materials as a means for innovation [20].

There are still many others indicators for the circular economy, although most have limitations. The OECD and the G8 generally use resource productivity, measured as gross domestic product (GDP) divided by domestic material consumption, as an indicator for resource use [12].

2.3 Social Return on Investment (SROI)

2.3.1 SROI Background

We live in an age where transparency, accountability, and sustainability are becoming more and more important for all organizations. Indeed, there is an increasing need and request from society to account for the social, economic and environmental value that results from organizational activities [21]. As a consequence, organizations are increasingly required to understand, reduce and account for their negative impacts and, moreover, to align their activities and even their reason for existence, to positively addressing opportunities and threats to social value. This is a pressing demand from society to account for their direct short and long-term impact on social value, and their indirect impact on the resources that underpin this [22]. To an increasing extent, organizations have to legitimize their operating (like resource deployment) and prove the social impact they have, as trust and appreciation by society is not enough to attract funding [23]. This request from all the stakeholders implies that organizations have to incorporate some unquantifiable effects in their projects' assessment. As a consequence, organizations recognize that they need better ways to account

for the social, economic and environmental value that results from their activities. The language varies – ‘impact’, ‘returns’, ‘benefit’, ‘value’ – but the questions around what sort of difference and how much of a difference is taking place are the same [24].

2.3.1.1 Economic impact centralism

In spite of this social pressure, the activities of organizations are mostly measured with respect to the financial value they create for the organization. For many decades, traditional investment appraisal techniques like, e.g., the Net present Value (NPV), Internal Rate of Return (IRR), or payback period, have focused on the assessment of the operational cash flows (financial value) of an investment project [21]. Capitalism has historically been about value creation. And yet, value creation has bent towards delivering value solely to shareholders, generating a collective tunnel vision [25]. For long, firms have been driven to maximize the shareholders’ wealth and, in the process, have overlooked the stakeholders’ interests. These stakeholders are the society, the environment and the community in which they operate [26]. In many cases, financial value creation is the key objective of the project that is undertaken [21]. Economic evaluation gained such importance because it shows effectiveness and efficiency of resource allocation [23].

2.3.1.2 Undervaluation of the true impact

However, in view of their peculiarities, social organizations are unique organizational arrangements and have responsibilities that reach beyond generation of profits. Such organizations rely on grants, volunteers etc. which might not involve any market transaction and, hence, this component might not appear in accounting reports, which is a major oversight [26].

Every action that firms take creates and destroys value; they change the world around us. Although the value they create goes far beyond what can be captured in financial terms, this

is, for the most part, the only type of value that is measured and accounted for [27]. Most managers run their businesses based on financial value and overlook the social and environmental impact their businesses create on society and human beings [26]. Potential project benefits that cannot be easily translated into cash, are usually not included in the traditional investment appraisal techniques. The same applies to the potential negative effects that cannot be translated into cash. Indeed, although some projects result in positive NPV values, they often lead to incredibly damaging effects of the environment where they are executed [21].

In the field of economics, these effects are known as externalities. Externalities occur in an economy when the production or consumption of a specific good or service impacts a third party that is not directly related to the production or consumption of that good or service. An externality can be both positive or negative and can stem from either the production or consumption of a good or service. The costs and benefits can be both private, to an individual or an organization, or social, meaning it can affect society as a whole. Externalities by nature are generally environmental and social, such as natural resources or public health [28].

Without any accounting, the level of services may decline and, in some cases, organizations might not even function [26]. Things that could be bought and sold take on a greater significance and many important things get left out [27]. As a result, non-monetary impacts fall into a non-measurable category and this also leads to the undervaluation of the true impact of the collective effort taking place in the social sector [26]. Thus, decisions are going to be based on incomplete information about full impacts and, in turn, they may not lead to the planned long-term objectives [27].

2.3.1.3 *Triple bottom line of impact: economic, social and environmental*

In order to overcome imperfection of accounting only the financial results and to include valuing what actually matters, the concept of blended value creation was stressed. The value was thus measured as a collective value reflecting the economic, social and environmental impacts (positive being referred as benefits and negative being referred as costs) [26]. The economic system too often assumes that financial wealth, income or profitability is a proxy for (or alternative to) a direct measurement of social value creation by organizations [22], since the accounting is limited to market transactions of the company and expenses related to it [26]. This assumption is now in question because the definition of value does not longer consider only financial aspects, since just some, but not all of the value is captured in market prices. Instead, the value definition also includes the different dimensions that are affected by organizational activities. Hence, for investments of time and money it is needed to account also for social returns [21].

As stated before, increased awareness about variety of impacts created, increased involvement of organizations, creditors and government providing financial aid in the third sector poses the need to measure triple bottom line (financial, social and environmental impacts) of project. Financial institutions are brought together to consider the social and environmental impact of investments and to pursue common sustainability goals [29], as investors require a transparent account of the social value which is going to be achieved with the funds that they have invested. Investors in non-profit organizations and social enterprises have now become increasingly specific about how funds are going to be utilized [26]. A wide range of stakeholders (private businesses, public sector organizations and nongovernmental organizations, among others) are engaged to endorse a principle- and value-based approach to their businesses. In this contest, the principles for Responsible Investment initiative (PRI) promote responsible investment through incorporation of environmental, social and

governance factors into investment decisions [29]. This trend has led organizations to initiatives which promote socially and environmentally conscious approaches to investment, such as Integrated Reporting (IR) and Corporate Social Responsibility (CSR) [21]. The former is a process founded on integrated thinking that results in a periodic integrated report by an organization about value creation over time and related communications regarding aspects of value creation. An integrated report is a concise communication about how an organization's strategy, governance, performance and prospects, in the context of its external environment, lead to both the financial and non-financial effects of value creation in the short and medium term, as well as for the long run. The latter is a movement that helps a company be socially accountable, to itself, its stakeholders, and the public. By practicing corporate social responsibility companies can be conscious of the kind of impact they are having on all aspects of society, including economic, social, and environmental [30]. An increasing number of such initiatives exist, which differ slightly in their approaches and methodologies but share the same vision and determination to achieve health, well-being and sustainable development through value-driven investments [29].

In turn, the need to measure the impact on triple bottom line (social, economic, environmental aspects) of an organization has become critical so that, during the past decade, the interest in measuring the social impact of projects, programs, organizations, businesses, and policies has increased overtime [26].

2.3.1.4 The obstacle: how to measure qualitative impacts

The reason why the social and environmental effects of investments are often not included in the calculation is that these effects are typically hard to quantify [26]. By their very nature, it is hard to measure social and environmental value, with the danger that such important benefits become subordinated to economic indicators that can claim greater rigor in terms of data quality [31]. At the best, these effects are labeled as “qualitative” and presented apart

from the NPV calculation [26]. Tracking such returns requires diligent impact measurement, which is an incomplete yet burgeoning science [25]. However, as a consequence of the new awareness, understanding and managing a broader concept of value is becoming increasingly important for the public and private sectors alike. This is true whether it is civil society organizations working to create value, Governments commissioning and investing in activities to create social value, investors seeking to ensure that their investments will make a difference, or private businesses recognizing both risk and opportunity in the wider effects of operations. All this means that it is also important that we have some consistency and a shared language when we talk about value [24]. And if we are ever to blur the lines between “impact-driven” and “corporate-driven” so that all sectors play a positive role in impact creation, we need to be able to measure social returns in the most-used language of value: finance [25]. The key question is how to incorporate hard-to-quantify social value into the financial project assessment?

2.3.1.5 Moving towards a solution

It is often important in appraising collective projects to distinguish between the private returns to an intervention, and the wider social returns (or ‘externalities’) that may accrue. As the third sector aims to demonstrate the achievements and impact of organizational activities, there is growing interest in developing tools that can support them, and others, in doing so. In response to such challenges, approaches have been developed for measuring value other than financial, including the Global Reporting Initiative guidelines (GRI), social impact for local economies (SIMPLE), different types of social accounting and auditing and social return on investment (SROI). Often such approaches share an understanding of impact assessment as being both a means to demonstrate achievements and to help improve organizational operations; they try to explore how social change is achieved, and how change can be demonstrated and illustrated with the purpose of proving that value has been created. Among

these, SROI has received particular attention due to a combination of its ambitious and sometimes controversial approach; it claims to be holistic and comprehensive, and it uses a monetized language, combined with qualitative narratives, to express the different types of value created. It is promoted by third sector organizations, as well as public and private bodies [31].

According to Krlev, Münscher and Mülbert (2013), Social Return on Investment (SROI) is the mostly chosen as social impact assessment method. It is a relatively new technique with less than 20 years of existence in which it has been improved by an international and multidisciplinary team [21]. SROI is designed to help bring about that consistency, while at the same time recognizing that what is of value will be very different for different people in different situations and cultures [24]. Mainstreaming an SROI approach for investments across all sectors would represent a way to shift the focus from purely financial accounting towards a more comprehensive accountability of value created, including social and environmental benefits, as well as incorporating stakeholder engagement and involvement [29]. This social ROI analysis, also termed as Impact Assessment, Performance evaluation technique, Impact Evaluation, Impact Measurement, is basically captured in Social Return on Investment Ratio (SROI ratio). The Social Return on investment (SROI) analysis helps organizations understand and manage the social, environmental and economic benefits (value) that they are creating. It is a measurement approach, developed from traditional cost-benefit analysis that captures the economic value of social benefits by translating social objectives into financial measures and focuses on the most important sources of value as defined by stakeholders [26].

The application of SROI is particularly favored among non-profit-making organizations, philanthropic foundations and social enterprises. However, accounting for value in all the dimensions of health and sustainable development should be a common goal throughout

society, including the public and private profit-making sectors, which are all involved and contribute to outlining the importance of social and environmental outcomes. If a similar approach was undertaken by all parties, the transformative change towards health and sustainable development through inclusive and sustainable economic growth would be accelerated [29].

2.3.2 Definition of Social Return on Investment (SROI)

The Social Return on Investment (SROI) is a framework used for understanding, measuring, and reporting the social, economic and environmental value created by an intervention, program, policy or organization [32]. SROI is an instrument of causal contribution analysis and one of many methods of social impact measurement, developed in order to demonstrate the actual social value, trying to measure “the immeasurable“ [23]. The purpose of issuing SROI is for corporations to be able to look at their social impact in financial terms [33].

As defined by New Economics Foundation (NEF), Social Return on Investment (SROI) is a principle-based methodology to capture the extra financial value relative to resource invested [26]. It is a tool to motivate people to think differently about investments [21], since it takes the financial return on investment a step ahead to capture social, economic, as well as environmental returns. The framework measures and accounts for this much broader concept of value and seeks to reduce inequality and environmental degradation and improve wellbeing by incorporating social, environmental and economic costs and benefits [26]. These factors can identify how effectively companies use their capital and other resources to create value for the community [33]. An SROI calculation demands that organizations understand impact for what it really is. The amount of change that has occurred because of their intervention that would not have occurred otherwise. And it gives them a framework for understanding how much change they “get back,” how much impact value they have created, in return for what

they put into making that change happen. In short, it puts environmental and social value back into their cost-benefit equations [25].

Hence, SROI describes the way of creating change [34]. An SROI analysis produces a narrative of how an organization creates and destroys value in the course of making change in the world [35].

The framework uses monetization of social impacts in order to assess value [25]. In particular, a monetary value is assigned to the generated change, so that this value can be compared with the costs of required inputs. SROI allows to estimate social value creation by quantifying qualitative issues and monetizing them in order to allow comparison [23]. It is monetization of social benefits and costs relative to financial and operational costs of a company. It covers the non-measurable impacts that a project creates and tries to assess and quantify them. It therefore measures the significant intended and unintended outcomes of any organization and applies a dollar value to those outcomes [26].

Although using monetary terms, the SROI ratio does not express financial value as such but should be seen as a comprehensive way of expressing the ‘currency of social value’ [31]. Indeed, SROI is about value rather than money. In the same way that a business plan contains much more information than the financial projections, an SROI analysis goes far beyond the number itself [24]. It provides information about actual and planned changes, and the qualitative, quantitative, and financial information on which to base decisions about social service organizations [34]. It is a story about change, on which to base decisions, that includes case studies and qualitative, quantitative and financial information [24]. Outcomes and investment amounts may be measured in non-monetary units, but all values in SROI should be conveyed in a common unit [36]. Money is simply a common unit and, as such, it is a useful and the most widely accepted form of measuring value, but it is not precisely a

monetary quantification [34]. Hence, monetary values are used to represent the resulting social value by accounting for the whole range of the value generated, beyond a narrow microeconomic dimension [32]. The “dual nature of its promises” (i.e. the financial market language used, and the focus on the social element) makes it possible to gain an understanding of both social and financial benefits simultaneously [29].

This allows for the calculation of a benefits to costs ratio, which is the final result of SROI analysis. The ratio states how much social value (in \$) is created for every \$1 of investment. For example, a ratio of 3:1 indicates that an investment of \$1 delivers \$3 of social value (net of cost) [35]. Thus, the SROI ratio reflects the quantified value of total returns generated by the project relative to the costs incurred in achieving those benefits [26]. In this way the outcome, i.e. the value created, is related to the investments made, and is expressed through a ratio [31]. This makes social value visible, at least partially, to investors, as well as comparable [29]. As a consequence, it helps to identify the most impactful and cost-beneficial intervention by providing a measure of broader socio-economic outcomes in a singular monetary ratio. The ratio may provide an indication of the efficiency of an investment by comparing the value of its benefits to the value of the resources invested in order to assess comparative options [32]. However, the point of SROI calculation is not necessarily to justify capital investment, but it is to understand value creation through capital allocation [25].

Unfortunately, the comprehensive comparability of ratios is limited due to SROI methodology. The New Economic Forum (NEF) emphasizes to not restrict value on numbers but to keep in mind supplemental information [23]. The ratio alone does not indicate the social value as qualitative and descriptive evidence should accompany the number [36].

Thus, SROI is a participative approach that is able to capture in monetized form the value of a wide range of outcomes, whether these already have a financial value or not [35]. It is an

estimate, not a precise number [27]. In particular, in order to estimate the value of the outcomes, including non-traded, non-market goods, SROI uses financial approximations, called proxies, that may vary according to the stakeholder [31].

SROI has a strong stakeholder orientation [23]. Stakeholders are those who experience change, whether positive or negative, as a result of the investment being analyzed [29]. In particular, SROI measurement should be matched by qualitative evidence based on stakeholder inquiry [31]. The framework aims to measure change in ways that are relevant to the people or organizations that experience or contribute to it [27]. Thus, stakeholder's engagement is crucial in order to identify which outcomes are relevant and to assign value to them [29]. SROI is then a form of stakeholder-driven evaluation blended with cost-benefit analysis tailored to social purposes. Indeed, it focuses on measuring the important impacts of an organization based on the concept of triple bottom line impact, which is those areas that should be included in order for stakeholders to make decisions based on the SROI analysis [26]. Involving stakeholders can help the organization to understand more about the strengths and weaknesses of the activities and, moreover, it also may provide useful information that can help the organization improve [34]. Stakeholder engagement is fundamental, not only in the genesis of the framework but also as a goal and a means of implementation, and participation in decision-making is recognized as a value itself. SROI turned out to be a proper communication mechanism by making the communication of value easier, supporting the rational decision-making process and it can also serve as a management tool, which may help to improve performance [23]. Investors and managers can use social return on investment to determine a business' performance against social and environmental criteria [26]. The method provides investors with a compelling story, which tells them whether they are in the right direction with the investment made on this specific population. Investors in non-profit organizations and social enterprises usually require a brief and transparent account

of the social value generated through the fund that they have invested. Reporting based upon SROI is an excellent way of building relationships with the organizations they support [34]. In a way, SROI translates the social value created into a form which is understood and appreciated by all the stakeholders, who are those whom the organization is trying to influence (investors and policy makers of the firm), those whose support is desired (clients, beneficiaries, community), and those who are integral in creating the value (the staff) [26]. Thus, SROI quantifies and monetizes social impact in a clear and consistent way, enabling stakeholders to measure the achievement of social impact against three primary performance indicators, being appropriateness, effectiveness and efficiency. Stakeholder engagement, involvement and participation are then recognized as a way to ensure accountability and transparency. In addition to this, stakeholders' engagement can also be regarded as an important inclusive process, giving voice to less empowered groups in decision-making on resource allocation [29].

2.3.3 Two types of SROI

There are two types of SROI:

1. Evaluative: such SROI calculations assess actual outcomes of an organization that have taken place previously. Thus, this is in retrospect after the project has been implemented and real data on possible impacts are available [24].
2. Forecast: this SROI calculation is projection based. It aims to predict of how much social value is going to be created by an organization if the activities meet their intended outcomes [32].

Clearly of the two, evaluative SROI can be used to study the impact of different factors on the total impact created and, therefore, it forms the foundation literature base. On the other hand, the forecast type is useful in the planning stages of an activity. It can depict how investments

will translate into impacts and also identifies the factors which should be measured once the project is up and running in order to assess the total value created [26].

The processes of the two SROI analysis types are not too different. In case of the forecast type, the key difference is in the data collection phase, where instead of collecting actual outcomes data the organization forecasts what it would expect those outcomes to be [37]. In most cases, SROI is used to assess value that has already been generated. A lack of good outcomes data is one of the main challenges when doing an evaluative SROI for the first time. This requires sound outcomes data and if the organization does not have the systems in place to measure, manage, and report such data, it will be hard to implement a successful evaluative SROI process [25]. While to enable an evaluative SROI to be carried out it is needed data on outcomes, a forecast SROI provides the basis for a framework to capture outcomes [24]. The forecast type is a recent development. One of the advantages of completing a forecasted SROI is that the organization will have identified the outcomes data that it needs to collect and can put in place mechanisms for data collection from the outset [37]. Thus, it is often preferable to start using SROI by forecasting what the social value may be, rather than evaluating what it was, as this ensures that you have the right data collection systems in place to perform a full analysis in the future [24]. Moreover, forecasting enables to not only better allocate time and resources to effecting change, but also to create the structures to ensure you can track how well the organization is doing in making the change a reality [25].

2.3.4 Origins of Social Return on Investment (SROI)

SROI analysis has been a conceptual development since the 1960's. Many trial processes have been undertaken and many academic articles written about the process since then. The SROI process became fully developed during the last decade, primarily based on a detailed multi-year studies conducted by the SROI Network, The New Economics Foundation, New

Philanthropy Capital, the National Council on Voluntary Organization, and the Government of Scotland [34]. SROI was pioneered in the year 2000 by the Roberts Enterprise Development Fund (REDF), a San Francisco-based venture philanthropy fund. The concept has since evolved into a widely used, global framework, which has been supported and co-developed by NEF (New Economics Foundation). In the year 2003, with support by Hadley trust, SROI was tested on UK based firms [26]. One of the project's primary goals was to advance an approach to SROI that was as practical and easy-to-use as possible. The objective was to integrate SROI with social accounting methodologies; in part because it is stakeholders who define value and in part because integration of existing approaches to impact management will make it easier for users to engage. In the year 2005, the International SROI Network agreed on a framework for the use of SROI [37]. This was the time when the interest in SROI calculations was fueled across the globe. The initial concept of SROI was designed for and applied by philanthropic foundations financing social programs in order to measure and demonstrate their impact. Other factors which contributed to the growth of the concept were increased focus on "Value for Money" concept, the shift from relaxed charitable attitude to philanthropic investment, push from within the social sector to enhance their productivity and competitiveness, a steady evolution from corporate social responsibility towards social investment and shared value creation promoted by Michael Porter. This shift brought heed to not just philanthropy but also in terms of organization supply chain (value delivery) and overall societal impact [26]. In the late 1990s, in the USA the Roberts Enterprise Development Fund (REDF) developed a first version of SROI as a tool to measure the efficiency of the projects they funded and attempt to capture and monetize the full value creation of their employment services programs in San Francisco. The objective was to develop a technique for the financial calculation of the often unreported benefits of work integration activities that could then be set against program investments to form a more

holistic (and, therefore, realistic) cost-benefit analysis [21]. In their initial work, the REDF identified three types of value created by social purpose enterprises: economic value, social value and socioeconomic value. The first is defined by the market value of inputs and outputs; the second accounts for things which are difficult to measure, for lack of a direct market price (i.e. intangibles). Finally, SROI was supposed to capture the socioeconomic value generated by an enterprise by accounting for resulting public expenditure savings and increase in public revenues, in addition to the cash flow of the business. Since then, the concept of SROI has undergone several revisions, attracting special attention, particularly in the United Kingdom. The SROI Network there (now Social Value International) contributed significantly to its refinement and tried to give a more comprehensive overview of the social impact of a program by accounting for a wider range of outcomes relevant to different stakeholders. SROI is still being developed and refined in both the organizational and academic fields, and new guidelines are being issued by organizations and academic research centers. For a while, it has continued to be used predominantly as a tool to account for social value for charities and the non-profit-making sector, which aim to assess their impact or demonstrate their achievements to their founders. The 2012 meta-analysis from the Centre for Social Investment of the University of Heidelberg pointed out that most of the SROI studies have been undertaken in Anglo-Saxon countries, and were initiated mostly by non-profit-making organizations and public agencies to analyze the impact of such organizations and social enterprises. However, the debate surrounding the definition of SROI has triggered further conceptual and methodological discussions and progress and is leading to new areas of application. The use of SROI has grown exponentially in the last years [29].

2.3.5 The seven principles of SROI

SROI is based on seven important principles which underpin how the method should be applied:

1. Involve stakeholders. Inform what gets measured and how this is measured and valued by involving stakeholders. In this case “stakeholders” refer to individuals (or groups/organizations) affected by the program or activity that is being implemented. More specifically, the change that is expected to occur affects these stakeholders in some way. The principle calls on those implementing an SROI methodology to first identify who those affected are and then maintain them as active participants throughout the SROI process, in order that the value, and the way that it is measured, is informed by those affected by or who affect the activity [25]. All stakeholders should be well consulted about what all factors to consider in the analysis and details on how to measure these factors and their impact [26]. Hence, stakeholder engagement encourages organizations to communicate with those affected by their work and those who are funding it [31]. By implementing this principle, what is measured and how it is done can then be executed in a way that is more relevant to all those affected by the program or activity [25].
2. Understand what changes. The SROI process demands clear understanding and communication of how change has occurred, and whether it is positive or negative. One should also distinguish between change that was expected and change which was not foreseen [25]. Value is created for or by different stakeholders as a result of different types of change; changes that the stakeholders intend and do not intend, as well as changes that are positive and negative [24]. These changes are the outcomes of the activity, made possible by the contributions of stakeholders, and often thought of as social, economic or environmental outcomes. For all stakeholders, it is needed to explain how change is created and evaluate this change through evidence gathered [26]. In turn, these outcomes should be measured in order to provide evidence that the change has taken place. With these in mind, organizations are encouraged to clearly

articulate the theory behind the change they are affecting through their activities. This principle requires the theory of how these changes are created to be stated and supported by evidence [25].

3. Value the things that matter. This is one of the distinguishing factors of the SROI process, since it refers to the assignation of monetary values to the outcomes generated. Many outcomes are not traded in markets and, as a result, their value is not recognized. Financial proxies should be used in order to recognize the value of these outcomes and to give a voice to those excluded from markets but who are affected by activities. This will give such outcomes a way to be valued in an ideally more objective and comparable manner [29].
4. Only include what is material. Determine what information and evidence are significant and, thus, must be included in the accounts to give a true and fair picture of the impact created, such that stakeholders can draw reasonable conclusions about impact [24]. It requires an assessment of whether a person would make a different decision about the activity if a particular piece of information were excluded. This covers decisions about which stakeholders experience significant change, as well as the information about the outcomes. In particular, Organizations should ask themselves whether including or not including certain information would affect the stakeholders involved. If there is information that might sway a decision about the activity by those stakeholders, it should be included [25]. As a consequence, this lends credibility to an organization's account of the social value created. Deciding what is material requires reference to the organization's own policies, its peers, societal norms, and short-term financial impacts.
5. Do not over-claim. Only claim the value that organizations are responsible for creating [24]. This principle requires reference to trends and benchmarks to help assess the

change caused by the activity, as opposed to other factors, and to take account of what would have happened anyway. It also requires consideration of the contribution of other people or organizations to the reported outcomes in order to match the contributions to the outcomes. This principle asks the questions, what would have happened without the organization's activities, how much did the organization's activities contribute to the outcomes generated, and what contributions did other organizations/entities have on those outcomes? Detailing the answers to these questions enables an organization to avoid the over-claim pitfall and better inform stakeholders of the effectiveness of the organization's activities [25].

6. Be transparent. Demonstrate the basis for calculations on which the analysis may be considered accurate and honest, Moreover, show that it will be reported to and discussed with stakeholders. This principle requires that each decision in all aspects of the SROI accounting process should be explained and documented [24]. This includes tracking and communicating the methodologies used to determine metrics, collection processes, analyses conducted, etc. This also includes communicating with whom you spoke with (stakeholders) and how they affected or informed the decision-making process [25]. As a result, when the reasons for the decisions are transparent the analysis will be more credible.
7. Verify the result. Ensure appropriate independent verification of results. Although an SROI analysis provides the opportunity for a more complete understanding of the value being created by an activity, it inevitably involves subjectivity. Hence, appropriate independent assurance is required to help stakeholders assess whether or not the decisions made by those responsible for the analysis were reasonable [24]. External validation of the results of a SROI analysis and how those results have been reached will help lend credibility to the whole process and enable stakeholders at all

levels to better evaluate the outcomes reported. A process called independent assurance can serve organizations seeking such third-party verification of the reliability of an SROI analysis [25].

2.3.6 The process

SROI analysis is the rigorous process of undertaking SROI calculation. It includes stepwise identified procedure to understand measure and report the social, economic and environmental value that is created by the organization [26]. The approach is focused on attributing financial value to inputs and outputs, leading to the final process of calculating the SROI ratio. Arriving at an SROI ratio is the distinctive feature of the SROI approach. Carrying out an SROI analysis involves six stages [31].

2.3.6.1 *Establishing scope and identifying key stakeholders*

Before starting an SROI analysis, it is needed to clarify what it is going to be measured. Hence, in Stage 1 clear scope or boundaries, which are going to be covered in the SROI analysis, are defined in order to ensure that what is being proposed is feasible. Once the boundaries are clear, the main stakeholders are selected and involved. Involving them helps the organization to understand more about strengths and weaknesses of the activities under analysis and may provide useful information that can help the organization improve. Ideally, information should be collected directly from stakeholders. However, lack of time or resources may mean that some information has to come from existing research with stakeholders [24].

2.3.6.2 *Mapping outcomes*

In Stage 2, the involvement of stakeholders supports the building of an Impact Map, which shows the relationship between inputs (resources or activities), outputs (direct and tangible results from the activity), outcomes (changes

occurring for the stakeholders as a result from the activity). This relationship between inputs, outputs and outcomes is called ‘theory of change’, the story of how an intervention makes a difference in the world [24].

When filling out the Impact Map there may be non-monetized inputs. It has to be assessed whether the activity would not go ahead to the same extent without these inputs. If this is the case, then it is necessary to put a value on them.

2.3.6.3 *Evidencing outcomes and giving them a value*

So far, the outcomes occurring to stakeholders have been mapped. This stage involves valuing them via indicators, which can be both qualitative and quantitative. Indicators clarify whether the outcome has occurred, and by how much. Indeed, these are applied to the outcomes in order to measure the change that we are interested in. Finding the right set of indicators that allows to measure in an appropriate way is an important as well as tricky part of the SROI process. Stakeholders are often the best to identify indicators because they know how change has happened for them. This leads to collect indicators which are relevant to stakeholders and scope [24].

In an SROI analysis, financial proxies are used to estimate the social value of non-traded goods. The process of valuation is often referred to as monetization since we assign a monetary value to things that do not have a market price. It is argued to be a sensitive aspect of SROI-analysis because all value is, in the end, subjective. Indeed, people’s perceptions of what things are worth are different and subjective. By estimating this value through the use of financial proxies, and combining these valuations, we arrive at an estimate of the total social value created by an intervention.

2.3.6.4 *Establishing impact*

Once evidence on outcomes has been collected, it should be noted that there would always be some outcomes that would have happened even if the organization had not existed. This step is about assessing whether the analyzed outcomes actually result from the organization's activities. Those aspects of change that would have happened any way or are a result of other factors are eliminated from consideration, while the other share of the outcome is actually due to the organization's activities and, then, this is the impact generated. Impact is referred to as the part of those outcomes that is attributable to respective organization's activities, covering the share of total outcome above and beyond what would have happened anyway. Establishing impact is important as it reduces the risk of over-claiming.

Deadweight is a measure of the amount of outcome that would have happened even if the activity had not taken place and it is calculated as a percentage.

Displacement is another component of impact and is an assessment of how much of the outcome displaced other outcomes. This does not apply in every SROI analysis, but it is important to be aware of the possibility.

Attribution stresses that social changes often are a result of interconnected initiatives and hence to measure value of a single outcome it is important to subtract value added by others.

Drop-off considers how a change resulting from an activity diminishes over time. It usually comes into picture when the effects of the activity last for a duration more than that of the activity and, in such a case, the outcome reduces. Drop-off is usually calculated by deducting a fixed percentage from the remaining level of outcome at the end of each year.

All of these aspects of impact are normally expressed as percentages. Unless you have more accurate information it is acceptable to round estimates to the nearest 10%. The Impact Map should now have percentages filled in for deadweight, attribution, drop-off and (if applicable) displacement. Now, the gross impact for each outcome can be computed by multiplying the financial proxy by the quantity of the outcome. From this total any percentage for deadweight or attribution has to be deducted. This operation has to be repeated for each outcome in order to arrive at the impact of each. In the end, these impacts have to be summed up, the total is the overall impact of the included outcomes [24].

2.3.6.5 *Calculating the SROI*

This stage sets out how to summarize the financial information that you have recorded in the previous stages in the SROI ratio. For this, it is necessary to draw up a projection of the inputs and benefits over the project horizon. By adding up all the benefits, subtracting all negative outcomes or scenarios (deadweight, displacement and attribution), the impact per year can be calculated. By using a discount rate, one can calculate the Net Present Value (NPV). At the end, the SROI ratio is then calculated as follows:

$$SROI\ ratio = \frac{Net\ Present\ Value}{Value\ of\ Investment}$$

A ratio of 10:1 indicates that an investment of one unit generates ten units of blended socio-economic value.

Once the ratio is calculated, it is advised to perform a sensitivity analysis to identify its robustness. The aim of such an analysis is to test which assumptions have the greatest effect on your model. The recommended approach is to calculate

how much you need to change each estimate in order to make the social return become a social return ratio of \$1 value for \$1 investment [24].

2.3.6.6 *Reporting, using and embedding*

This last step involves sharing findings with stakeholders and embedding the good outcomes [24].

2.3.7 SROI and other approaches

2.3.7.1 *From ROI to SROI*

The SROI framework has many similarities with other approaches. One of these is Return on Investment (ROI). ROI is widely used in financial analysis and provides investors with an indication of the efficiency of an investment by comparing profits related to capital invested. It therefore allows a comparison of alternative investment options based on efficiency. ROI can be estimated using a ratio between the net present value of benefits and the net present value of costs. The net present value is usually discounted for value generated over time. However, ROI only accounts for pecuniary value, which is derived from market prices, and it has limitations in accounting for externalities and for investments advancing the public good. In fact, in the real world no business activity is limited to its purely microeconomic aspects, as there are consequences which also affect broader social, economic and environmental dimensions (externalities). Furthermore, many investments are directed to programs with explicit broader social and environmental scope. Some investors contribute to promote the public good, with the goal of improving the common well-being in addition to, or instead of, individuals or shareholders' profit. It is in this context that the notion of SROI made its first appearance. It differentiates itself from financial rate of return and incorporates the concept of Blended Social Value creation resulting from

increased awareness, efficiency in the social sector accounting and investors becoming increasingly demanding on understanding the total impact that their funds create. The underpinning idea is that investments should not only look at what pecuniary value they produce as direct shareholder value, but they should also include a wider range of benefits. In a similar way to ROI, SROI compares the net present value of benefits to the net present value of the resources invested, but it aims to do so by accounting for the whole range of value generated, beyond the narrow microeconomic dimension. As stated in the United Kingdom Office of the Third Sector guide to SROI, the latter is “a framework for measuring and accounting for this much broader concept of value; it seeks to reduce inequality and environmental degradation and improve well-being by incorporating social, environmental and economic costs and benefits” [29].

By their very nature, it is hard to measure social and environmental values, with the danger that such important benefits become subordinated to economic indicators that can claim greater rigor in terms of data quality. In response to such challenges, various approaches have been developed for measuring value other than financial.

Often such approaches share an understanding of impact assessment as being both a means to demonstrate achievements and to help improve organizational operations; they try to explore how social change is achieved, and how change can be demonstrated and illustrated with the purpose of proving that value has been created. All of them yield specific benefits but also raise difficulties and problems regarding methodology. Over the past decade, among these, SROI has received much attention due to a combination of its ambitious and sometimes controversial approach; it claims to be holistic and comprehensive, and it uses a monetized

language, combined with qualitative narratives, to express the different types of value created.

2.3.7.2 *Cost-benefit analysis (CBA) and SROI*

Cost-benefit analysis is a long-established technique that is routinely used by economists, and others, in a very wide range of fields, in different countries. There are possibly thousands of published accounts that have appeared in the academic literature, in addition to a much larger volume of Government analyses that may remain unpublished. By contrast, the technique of SROI is much more recent, and has its focus on the operations of third sector organizations [24].

CBA is a form of economic analysis in which costs and benefits are quantified and compared. It is often used by governments to evaluate the desirability of a given intervention. Having conducted a CBA, generally a project should proceed only if total benefits outweigh total costs. CBA will sum up all the benefits and costs in order to determine whether the new project will be positive or negative for society. This generally requires that all costs and benefits (whether tangible or intangible) be expressed in monetary units. The measurement of intangibles often creates the most difficulty and controversy for CBA. In this respect there is not much difference between classical cost-benefit analysis (CBA) and SROI.

Hence, the main similarity between SROI and CBA is that they both use money as a proxy of costs and benefits arising from an investment, activity or policy. As in the traditional CBA, SROI combines, in the form of a cash flow, the ratio of the tangible and intangible discounted costs and benefits.

At present, it seems that the differences are largely in the style of each approach, rather than the true substance. One difference between SROI and Cost-benefits analysis is that SROI is designed as a practical management tool that can be used

by both small and large organizations, rather than from a macro perspective. Moreover, Guidance on conducting SROI does put greater emphasis on stakeholders' involvement than do standard texts on CBAs. While CBA mentions the importance of an 'Analysis of who is affected by a proposal, undertaken as part of the appraisal, may be very useful in determining who should be consulted', there is a very strong explicit emphasis on stakeholders within SROI and the types of involvement they can have. Consultation with stakeholders and their importance is one of the strongest features of conducting an SROI. It appears within CBA but is given less emphasis. Hence, SROI focuses on, and emphasizes, the need to measure value from the bottom up, including the perspective of different stakeholders, while CBA is about valuing costs and benefits to the whole society of a country. This difference may reflect differences in working within the third sector more generally. An additional area in which they differ is comparability. Indeed, recent SROI guidance does not recommend comparing SROI ratios across different activities, whereas CBA is designed to be comparable in such a way [31].

2.3.7.3 *Social Accounting and SROI*

Both SROI and social accounting are approaches used to measure the creation of social value. SROI focuses on the perspective of change that is expected or happens to different stakeholders as a result of an activity. By contrast, social accounting starts from an organization's stated social objectives. SROI and social accounting share a number of common principles, but social accounting does not advocate the use of financial proxies and a 'return' ratio. SROI and social accounting can be compatible: the completion of an SROI report is much easier if it is built on the basis of a good set of social accounts, for example [24].

2.3.7.4 *Outcomes approaches and SROI*

The process of measuring outcomes as part of a theory of change is common to other outcomes models. The involvement of stakeholders is also a key feature of SROI that is emphasized, to a greater or less extent, in other outcomes models. The main difference between SROI and many other outcomes approaches is the importance of giving financial value to their outcomes. The common ground between the initial stages of SROI and other outcomes approaches means that organizations that have already done a lot of work on outcomes are likely to find undertaking an SROI analysis much easier than organizations looking at outcomes for the first time [24].

2.3.8 The benefits of SROI

SROI is a powerful tool that can help organizations to make better decisions and focus on the most important social challenges [36]. An SROI analysis can fulfil a range of purposes. It can be used as a tool for strategic planning and improving, for communicating impact and attracting investment, or for making investment decisions. It can help guide choices that managers face when deciding where they should spend time and money [24]. The main benefits of an SROI analysis are listed below.

- It gives organizations' deeper insight into the value they are creating and impact on all stakeholders [26]. Organizations can understand what social value an activity creates in a robust and rigorous way and so manage their activities and relationships. Furthermore, this help them to identify common ground between what an organization wants to achieve and what its stakeholders want to achieve, so that social value can be maximized.

- SROI puts social impact into the language of ‘return on investment’, which is widely understood by investors, commissioners and lenders. There is increasing interest in SROI as a way to demonstrate or measure the social value of investment, beyond the standard financial measurement [35].
- the SROI ratio is a simple and clear indicator of the value an organization creates for its stakeholders [37].
- It summarizes the true costs even the intangible ones associated with delivering the intended project impact [26].
- SROI can also be used in strategic management. The monetized indicators can help management analyze what might happen if they change their strategy, as well as allow them to evaluate the suitability of that strategy to generating social returns, or whether there may be better means of using their resources [35]. Thus, SROI is useful as a management tool, since it provides the basis for forecasting, planning and managing social activities. It can help to direct resources to areas with the greatest impact and to clarify strategy and mission. It additionally guides the organization to identify indicators to track progress, clarify what you do and establish clear aims and objectives. The active participation of the users and other stakeholders on this process analysis, foster organizational learning [21]. SROI enables employees to take a step back from day-to-day operations and examine the work they undertake from a new perspective. The insights this generates can shape future decision-making, thus continuously improving how a project or organization runs [37].
- It may help target appropriate resources at managing unexpected outcomes, both positive and negative [24]; Apart from positive outcomes it also highlights any negative impact the project might create on the stakeholders and thus gives a head-start to prepare to mitigate such consequences [26].

- Additional benefits are accountability, transparency and communication across stakeholder groups. Indeed, SROI studies are meant to be open and transparent documents. The calculations of the different scenarios (deadweight, displacement, and attribution) and assumptions to identify indicators, or financial proxies, are clearly explained and communicated to the stakeholders. It helps to get key stakeholders, like investors, on board [21].
- SROI offers organizations a comprehensive approach to understand and communicate impact returns, both internally and externally. Assigning monetary values to social returns provides a shared language to better inform decision making across the stakeholder ecosystem [25].
- The process opens up a dialogue with stakeholders, helping to assess the degree to which activities are meeting their needs and expectations [35]. Creating a formal dialogue with stakeholders enables organizations to hold the service to account and involves them meaningfully in service design [24]. SROI is based on stakeholder involvement along the whole analysis process. Indeed, they are involved from the very start to define the project objectives, to identify the outputs and outcomes of the project. By involving the most important stakeholders, the project empowers them. This is a strong point from a change management perspective [21].
- It provides basis for better negotiation to raise funds of a project.
- It assists in decision making to allocate funds, to make decisions about where an investment will create more value, establishing synchronization between financial and social bottom line [26].

2.3.9 The limits of SROI

Results from literature indicate that SROI has strong points. However, there is still room for improvements, since there are recognized limitations to SROI. Indeed, the literature deals with the weaknesses, limitations and controversial aspects of SROI. The following problem areas may be distinguished [21]:

- If there are not already good outcomes data collection systems in place, it can be time-consuming to conduct an evaluative SROI analysis first time around.
- There is a danger of focusing narrowly on the ratio. The ratio is only meaningful within the wider narrative about the organizations. Some authors argue that there is too much emphasis on calculating the ratio which can affect the legitimacy of the report: while the ratio is only an indication of the study, it should be supported by a strong story. Skilled investors would never base their financial decisions on one number only, the same practice applies to this social measurement tool. For this reason, comparisons between organizations just based on the ratio are not recommended.
- SROI is an outcome, rather than a process evaluation. The dialogue with stakeholders yields some insight into what works and what doesn't and why, but there may be instances where a more specific process evaluation would be useful.
- SROI requires a diverse skill set, from stakeholder engagement to working with Excel spreadsheets. This can be hard to find in one person [35].
- Unlike mapping inputs and outputs, which is fairly straightforward process identifying elements of an organization's flow of activities, adding impact outcomes into the equation demands a well-developed theory of change model and a process of interpretation. Stakeholders up and down the change process may have different ideas

about which outcomes actually capture the intervention's ability to effect change or which outcomes are most important to beneficiaries. Then there's also the question of which outcomes are most feasibly measured given the context of the impact market and organizational resources and expertise. Without the right tools to ensure relevant and feasible mapping of outcomes, it is quite difficult to successfully implement an SROI approach [25].

- The most challenging part of the process is figuring out how to put a dollar value on outcomes [24]. SROI is dependent on subjective considerations so that attitudes to monetary values may differ between stakeholders and introducing a financial estimate of some outcomes can be problematic [34]. Hence, assigning a dollar value to the social impact can present problems. The theory for developing financial proxies in the impact sector remains more of an art than a science. In other words, because proxies are so context dependent, it remains immensely complicated for organizations to come up with reliable data and, ultimately, reliable ratios [25].
- Another critical aspect is the allocation of costs. Critics argue that only direct costs (and not overhead costs) are included in the SROI. In this way, the full costs associated with the project are underestimated and the ratio is overstated. Besides this, social projects are often executed in an environment where accurate cost accounting systems are not available. Discount rates have also been mentioned as critical: discount rates used are often too low because one frequently fails to incorporate inflationary rates [21].
- while SROI is one of the most comprehensive tools, it is also one of the most resource intensive. Larger organizations may have resources for such execution, but for smaller organizations, the resource-heavy implications remain a significant limitation. This resource-intensive approach is compounded by the fact that the market still doesn't

offer a wide array of tools to facilitate the SROI methodology. Instead, organizations shell out money to consultants who have the expertise and experience to accurately calculate the financial proxies for impact returns. Thus, whether an organization opts to implement the SROI execution themselves, or pay consultants to execute the process, the resources needed remain costly [25].

- It can't be used to compare performance between organizations. Benchmark is not possible because the SROI value obtain is for the specific project one is measuring its value. It cannot be compared with another project as variables are far too diverse. Yet, benchmark is possible year over year for the same project to measure changes in performance over time [27]. In defense of SROI, it should be noted here, that classic investment appraisal techniques, like, e.g., the Net Present Value (NPV) approach, have the same problem when it comes to comparing projects on the basis of the calculated NPV figures. For instance, when two projects differ in lifetime, their Net Present Values cannot be compared [21].

Despite the recognized limitations of this method, the SROI technique can be a valuable tool in promoting existing or potential projects by helping to attract new funding, and, at the same time, it can also help the entities funding existing projects to understand the full value of the benefits delivered [34].

3. The Italian Wine Industry

Before working on the SROI case study, which is going to focus on a singular wine cellar, a preliminary research was conducted on the general situation of the Italian wine industry. This research was done with the aim of getting a comprehensive overview of the current Italian wine industry state of the art through two questionnaires.

3.1 First questionnaire

In the first place, some data, which was collected on June 2020 during a previous study, has been taken into account. The data was collected from a small sample made of nine wine cellars, which are based in the Italian region called Lombardy. Some people from these wine cellars answered to a questionnaire whose aim was to raise awareness about the existence of activities beyond the traditional ones, also in the Circular Economy context. In particular, they could undertake activities which may lead to the optimization of their impact on society and environment, such as wine-testing experience for clients and the use of renewable energy. The questionnaire responses are showed below.

Table 1: Names of the wine cellars

Risposte: 9 Saltate: 0

| # | RISPOSTE | DATE |
|---|---|--------------------|
| 1 | Avanzi Cav. Giovanni soc agricola - Manerba del Garda | 6/19/2020 6:49 PM |
| 2 | Crealto | 6/17/2020 3:46 PM |
| 3 | Cantina Colli Morenici Mantovani del Garda sac - Ponti sul Mincio | 6/16/2020 11:58 AM |
| 4 | azienda agricola Baldo Procolo | 6/13/2020 2:28 PM |
| 5 | cantine scolari srl | 6/13/2020 12:54 PM |
| 6 | Cantine Franzosi sas | 6/8/2020 3:49 PM |
| 7 | Conti Thun | 6/8/2020 1:06 PM |
| 8 | Azienda Bioagricola Podere dei Folli di Folli Davide | 6/1/2020 6:43 PM |
| 9 | Azienda Agricola Monser ss Puegnago del Garda (BS) | 5/31/2020 12:07 PM |

Figure 1 confirms that the respondents wine cellars are mainly based in Lombardy.

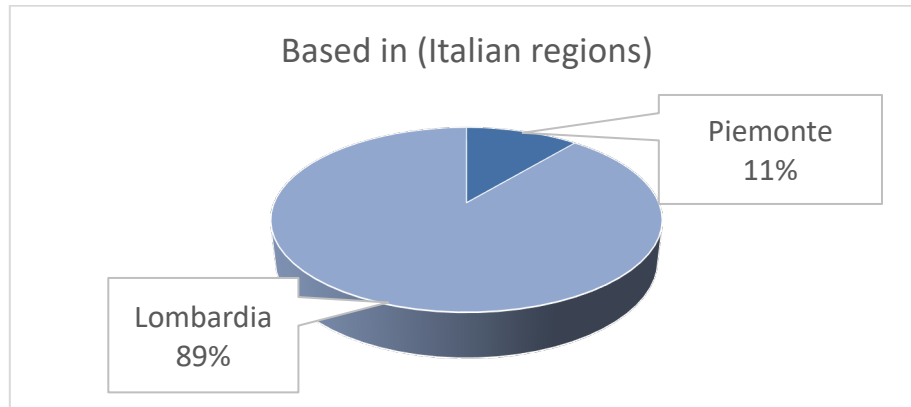


Figure 1: Location

Table 2: Foundation year

Risposte: 9 Saltate: 0

| # | RISPOSTE | DATE |
|---|---------------------------|--------------------|
| 1 | 1931 | 6/19/2020 6:49 PM |
| 2 | 2009 | 6/17/2020 3:46 PM |
| 3 | 1959 e operativa dal 1963 | 6/16/2020 11:58 AM |
| 4 | 1800 da 3 generazioni | 6/13/2020 2:28 PM |
| 5 | 1929 | 6/13/2020 12:54 PM |
| 6 | 1938 | 6/8/2020 3:49 PM |
| 7 | 2018 (Puegnogo sul Garda) | 6/8/2020 1:06 PM |
| 8 | 2002 | 6/1/2020 6:43 PM |
| 9 | 2000 | 5/31/2020 12:07 PM |

The 89% of the wine cellars answering to the first questionnaire are micro firms with less than ten employees and annual revenues or total assets lower than 2M€. Only 11% of them can be classified as small firms, with more than 10 employees and revenues or total assets lower than 10 M€.

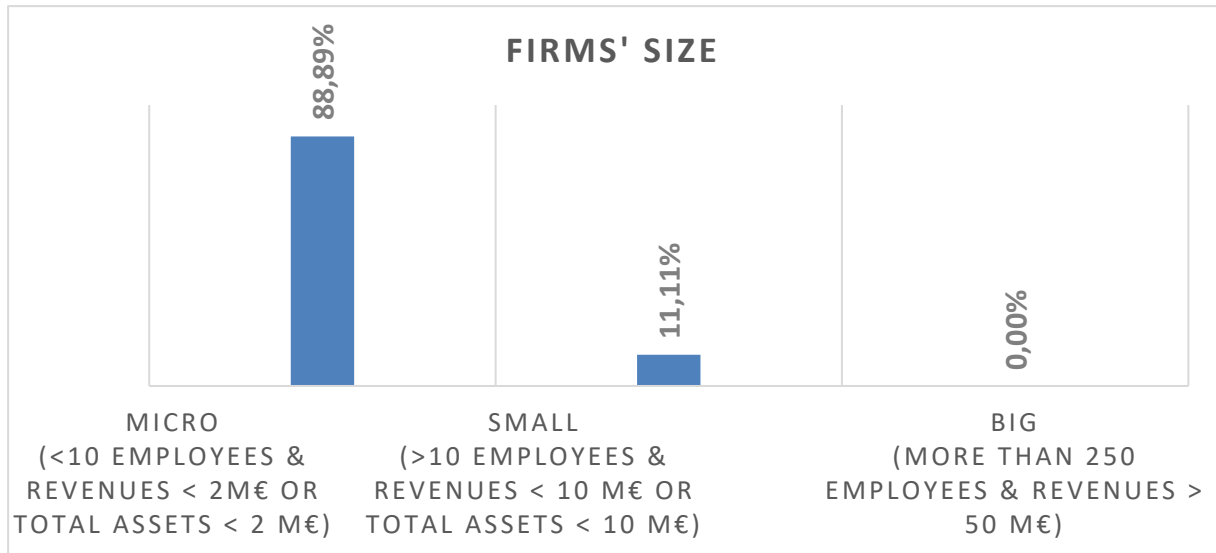


Figure 1: Firms' size

As can be seen from figure 3, the majority of them (44.44%) produces more than 200k bottles every year. The annual bottles production of the remaining wine cellars is lower than 50k units.

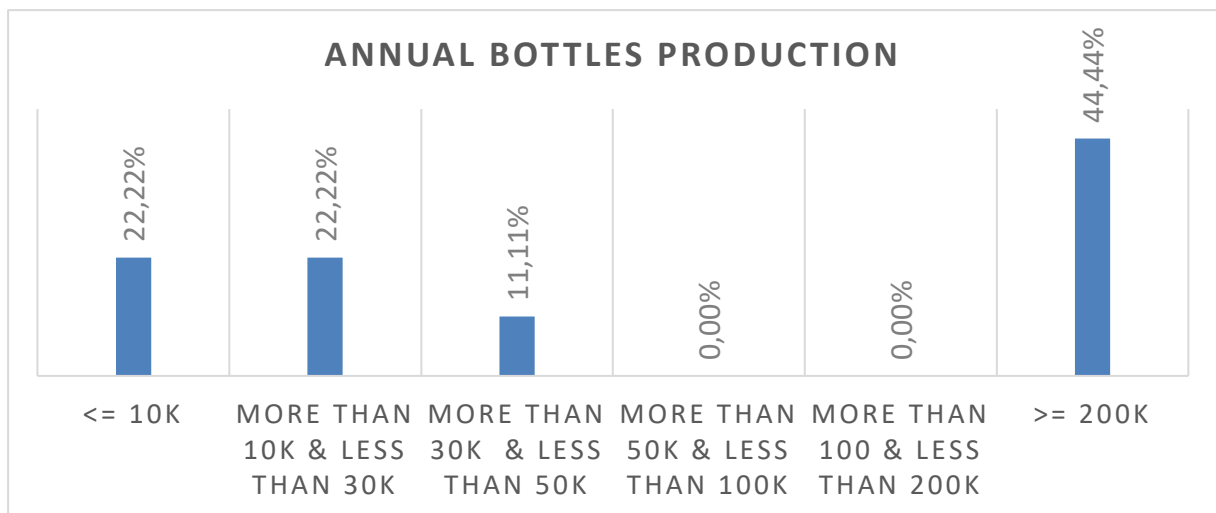


Figure 2: Annual bottles production

Figures 4 and 5 show that the 78% of the people who filled in the questionnaire are men, while only the 22% are women. Most of them (67%) are between 30 and 50 years old, while the 22% are older and the 11% are younger.

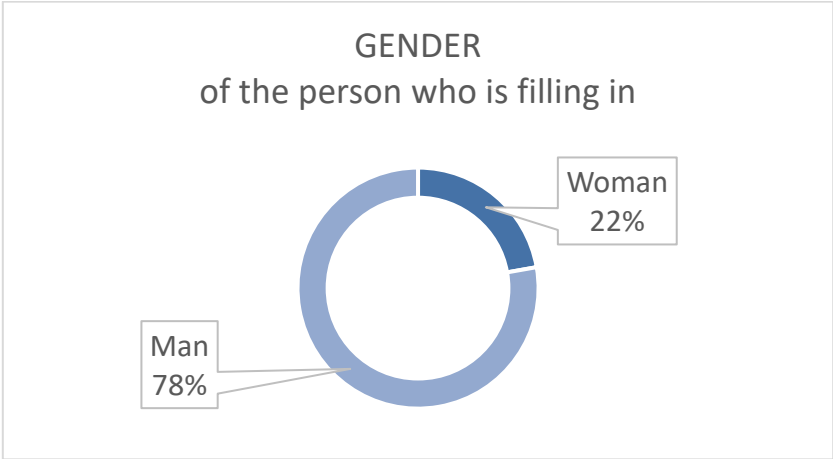


Figure 3: Gender

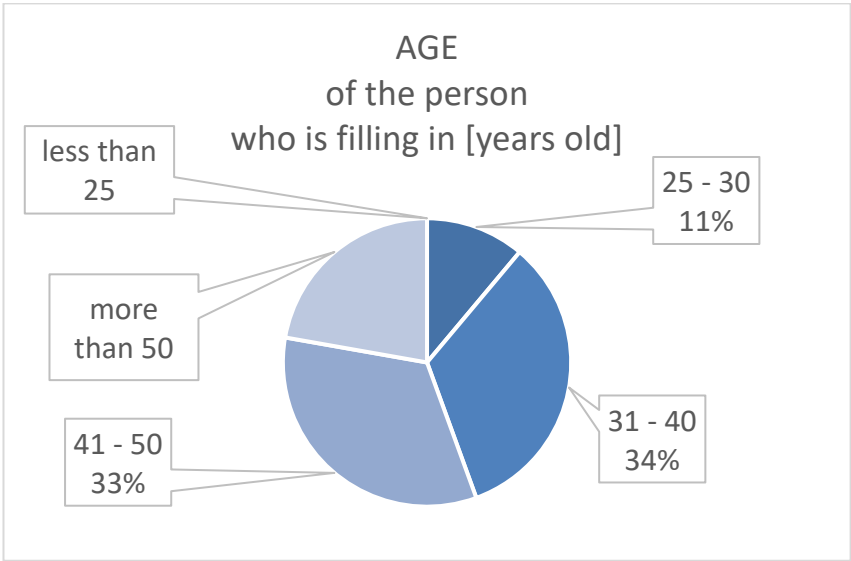


Figure 4: Age

They have also been asked to indicate which job category they belong to (figure 6). The 75% of them are employers, while the remaining part belongs to the two categories of administrative consultants and executives.

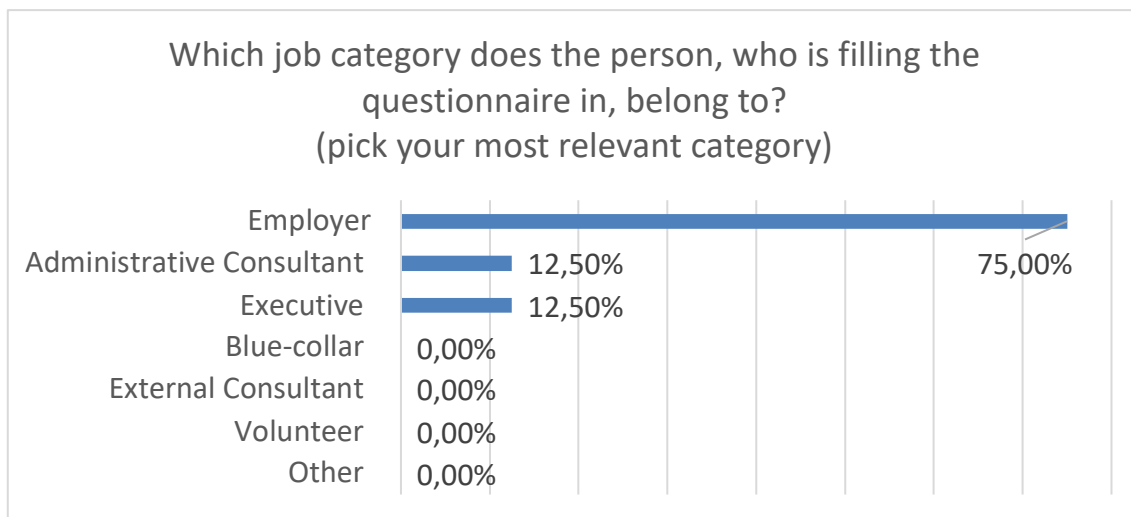


Figure 5: Job category

In particular, the 50% are wine makers, the 33.33% are managers and only the 16.67% are enologists (figure 7).

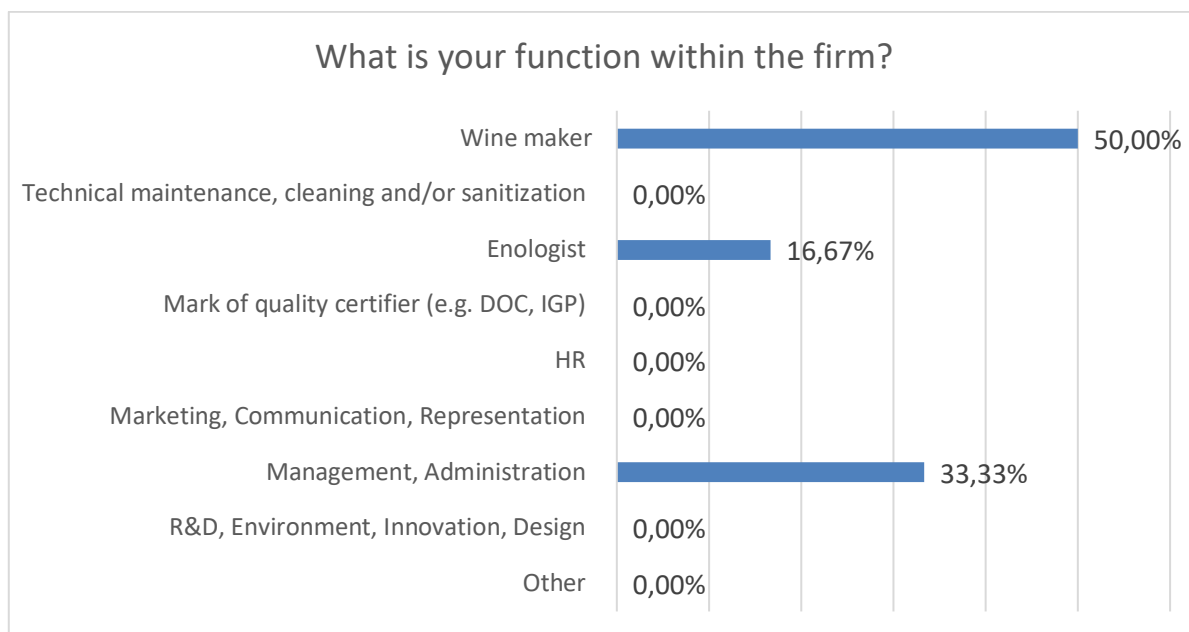


Figure 6: Function

The wine cellars provide additional services which go beyond the traditional activities. In particular, figure 8 shows that 25% of them have an agritourism and/ or a restaurant open for

lunch. Moreover, the 12.5 % also provide the restaurant service at dinner time, hosts weddings, provides conference rooms and educational farms.

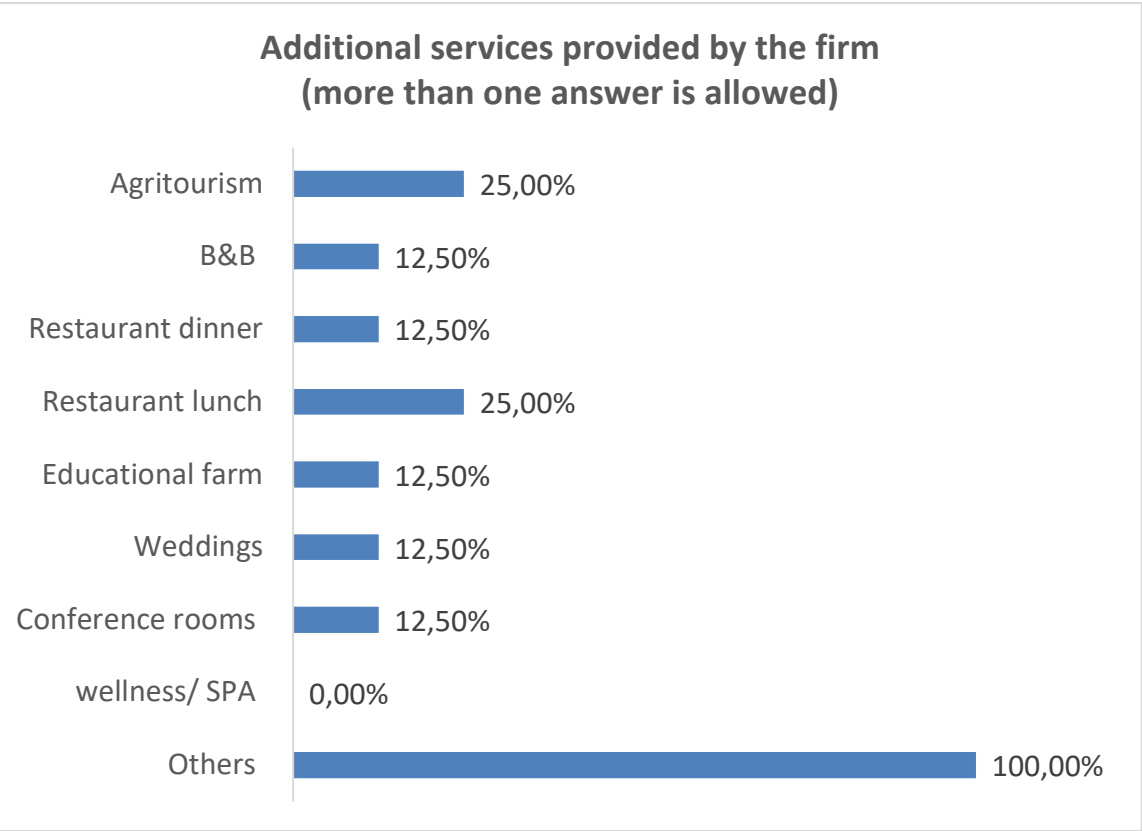


Figure 7: Additional services

The figures from 9 to 14 show how useful each communication channel is perceived in order to recover from the crisis.

Figures 9 and 10 show, respectively, the cases of website and social networks. The majority of the wine cellars (78%) have already implemented their website and adopt social networks to communicate. The remaining 22% think that these communication channels can hardly be useful in order to recover from the crisis.

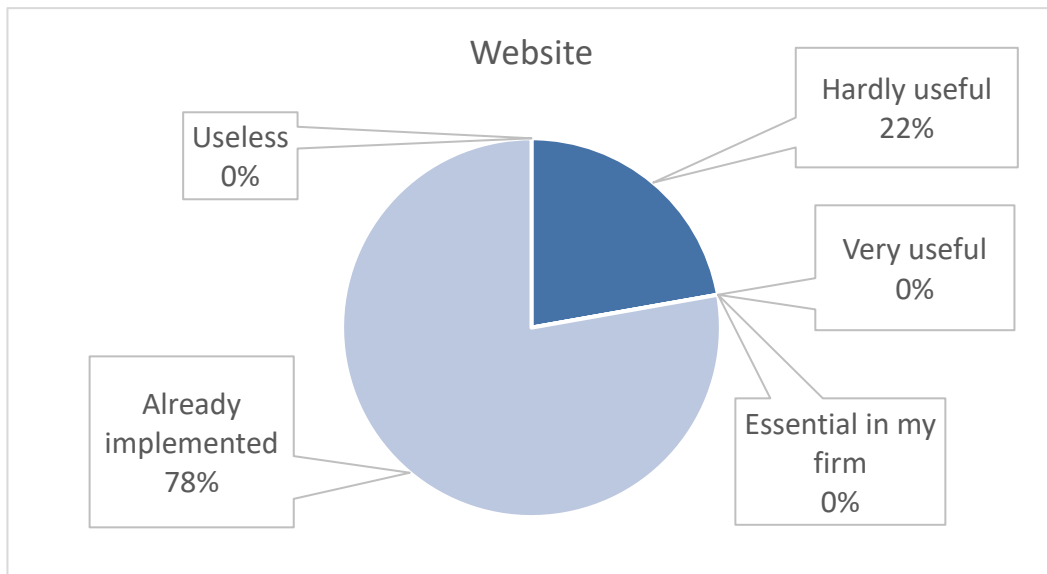


Figure 8: website utility

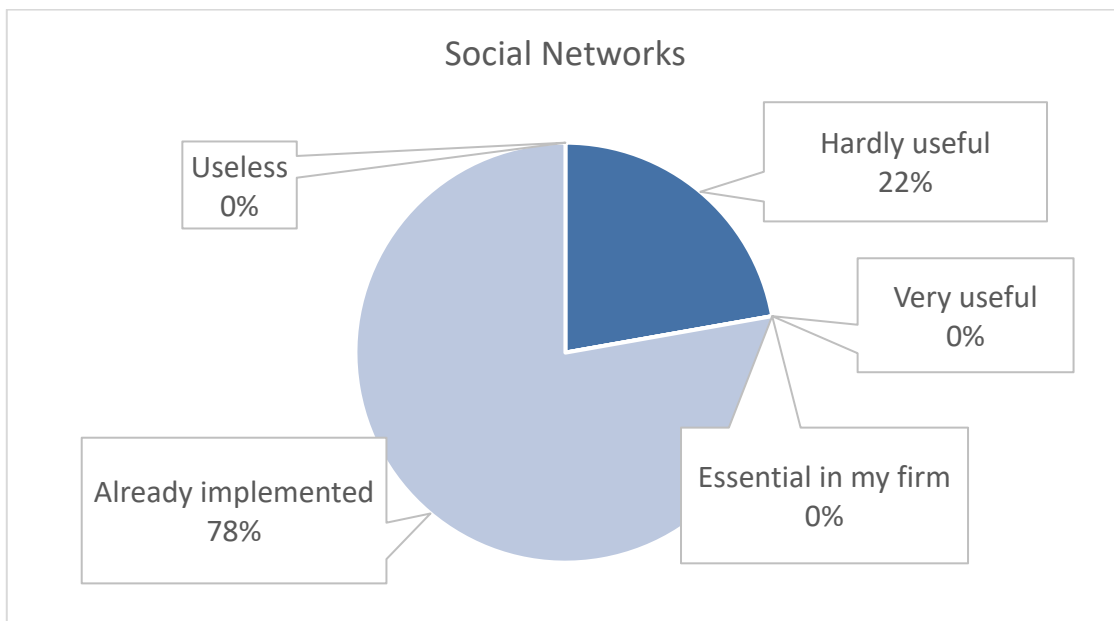


Figure 9: Social Networks utility

Figure 11 shows how useful Android Applications are perceived in order to recover from the crisis. It is interesting to see that none of the respondent wine cellars exploit Android Applications. The 56% of them think an Android Application can hardly be useful in order to

recover from the crisis. However, the 22% think it could be very useful and the 11% even think it is essential in their firms.

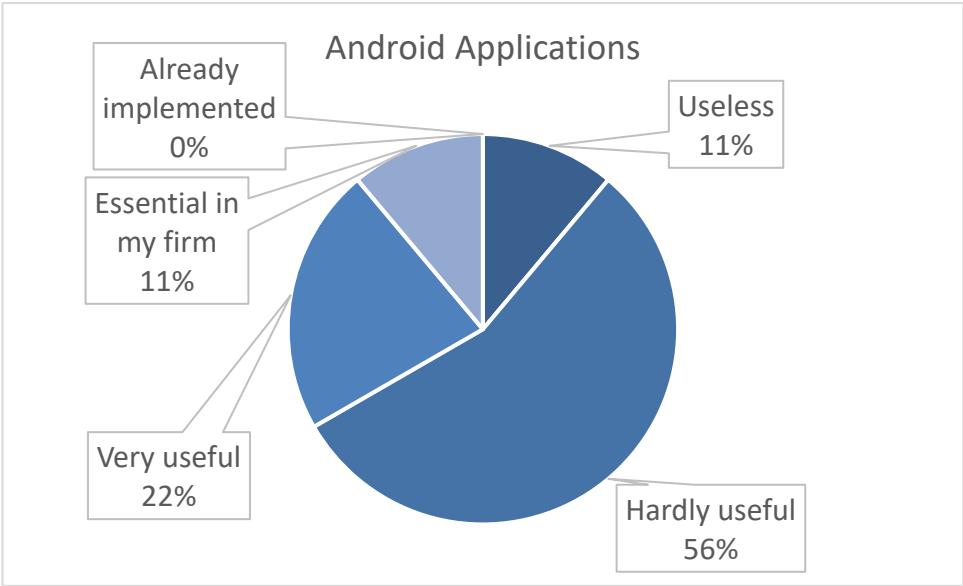


Figure 10: Android Application utility

Figures 12 and 13 reveal that a huge share of the wine cellars have taken part in exhibitions and use off-line advertising. However, all the rest thinks that these communication channels can hardly be useful or consider them even useless.

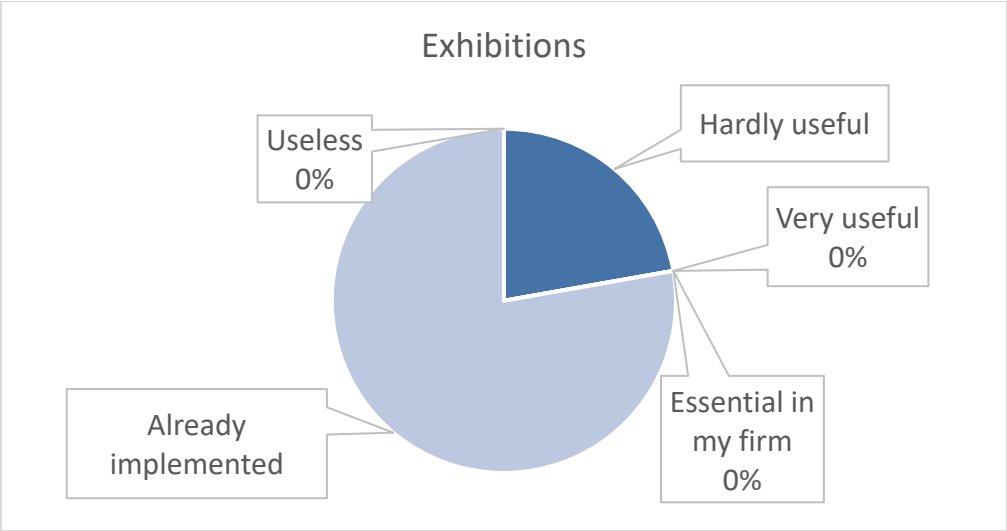


Figure 11: Exhibitions utility

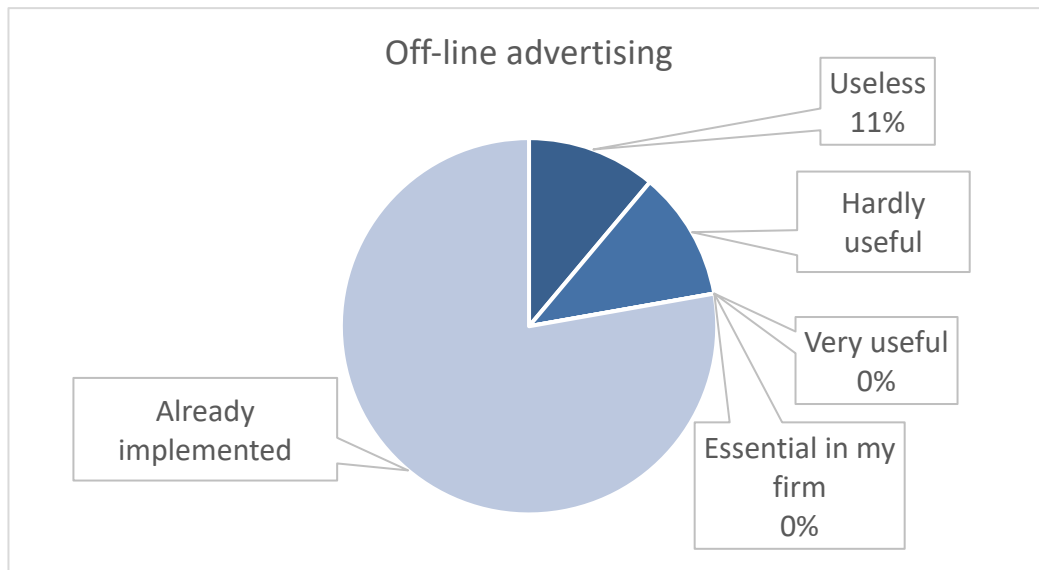


Figure 12: Off-line advertising utility

As you can see from figure 14, on-line advertising has already been implemented by the 56% of the wine cellars. The 22% think it is a very useful communication channel in order to recover from the crisis, or even essential. The remaining 22% think it can hardly turn out to be useful.

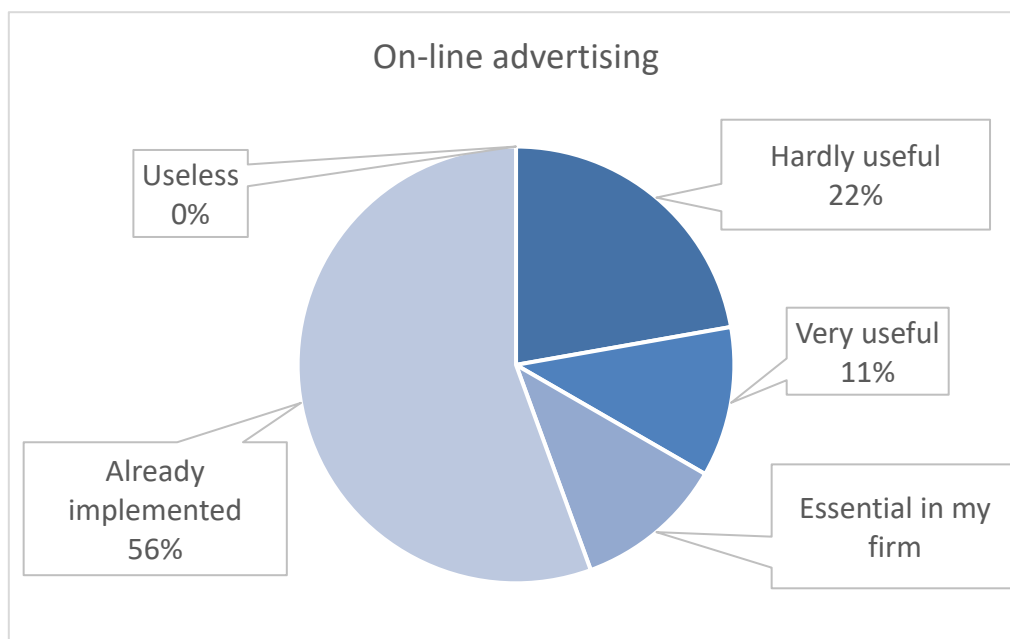


Figure 13: On-line advertising utility

Here some initiatives which could be undertaken in order to innovate, grow and recover from a crisis. Figures 15 to 26 show how useful they are perceived.

As you can see from figure 15, only the 22% of the wine cellars have already implemented projects which sustain the Circular Economy. However, the 56% perceive them as very useful and the 11% even essential.

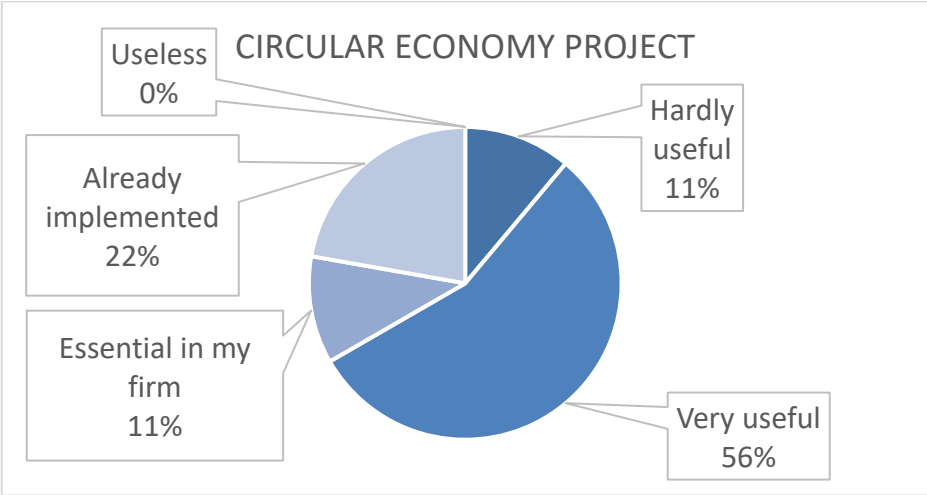


Figure 14: Circular Economy projects

Figure 16 illustrates that none of the wine cellars answering to the first questionnaire have ever measured the social impact generated through SROI. However, the 67% consider it very useful, while the 33% consider it even essential in their firms.

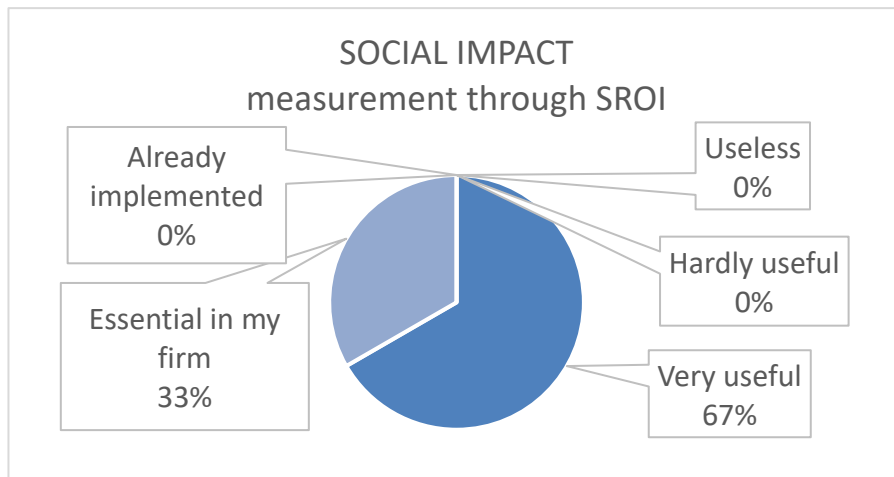


Figure 15: Social Impact measurement using SROI

Figure 17 shows that the 33% have already implemented strategies based on Corporate Social Responsibility (CSR). The remaining wine cellars consider them very useful or essential.

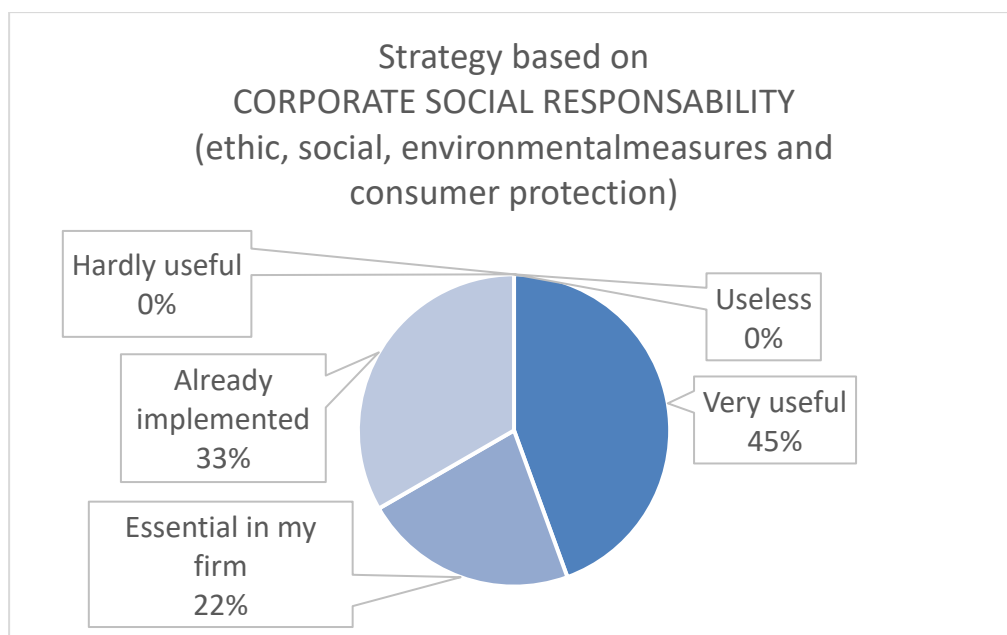


Figure 16: Corporate Social Responsibility

Figure 18 shows their opinion about undertaking actions in order to improve communication with the market. The 67% of them has already undertaken some initiatives to do that, all the rest thinks it is essential or very useful.

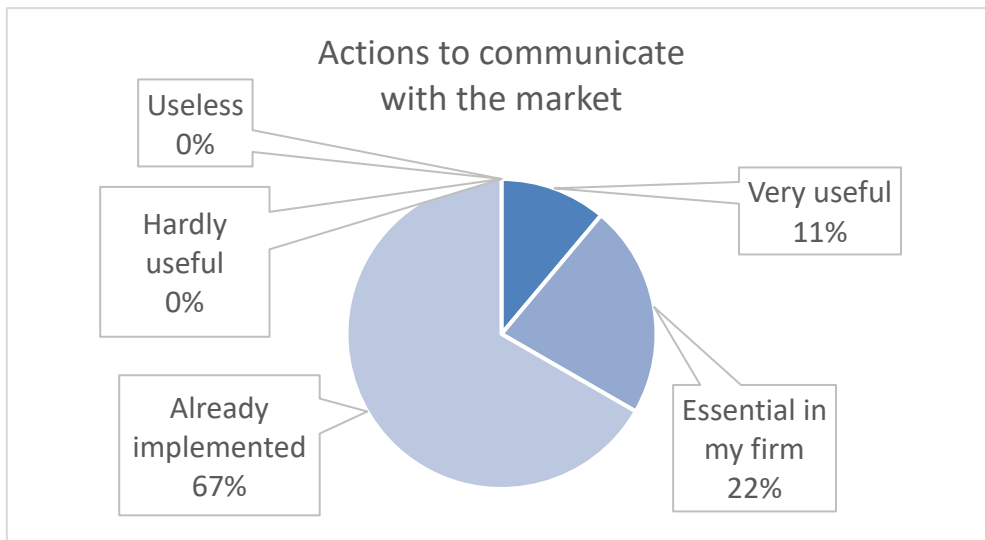


Figure 17: Actions to communicate with the market

Figure 19 reveals how the wine cellars are inclined to the acquisition or consolidation of national and international markets. Such actions have been implemented by the 11% of them only, while the 56% think it may be very useful. However, a significant share perceives it as hardly useful (22%) or even useless (11%).

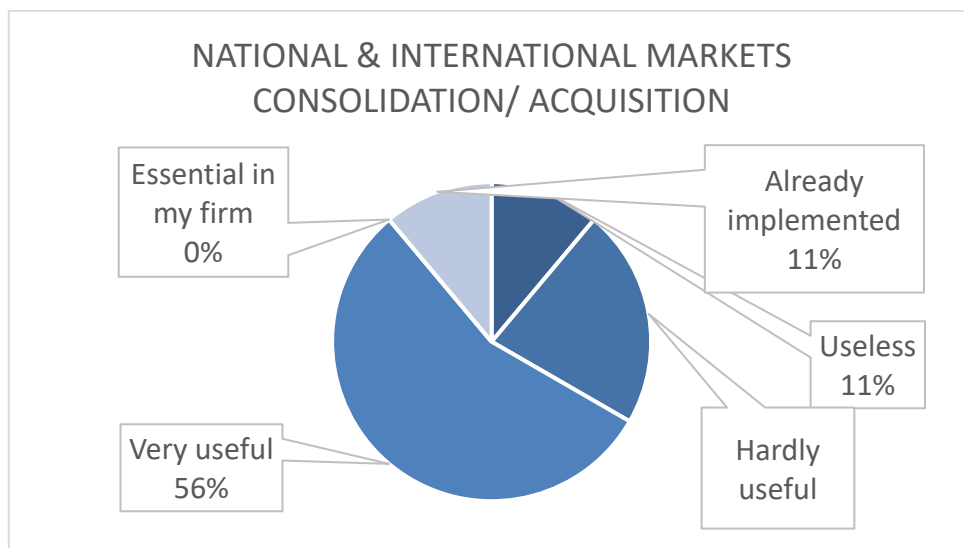


Figure 18: Consolidation or Acquisition of National and International markets

Figure 20 illustrates that the 33% of the wine cellars are already involved in activities to engage the local community ethically and educationally. The 45% think it would be very useful.

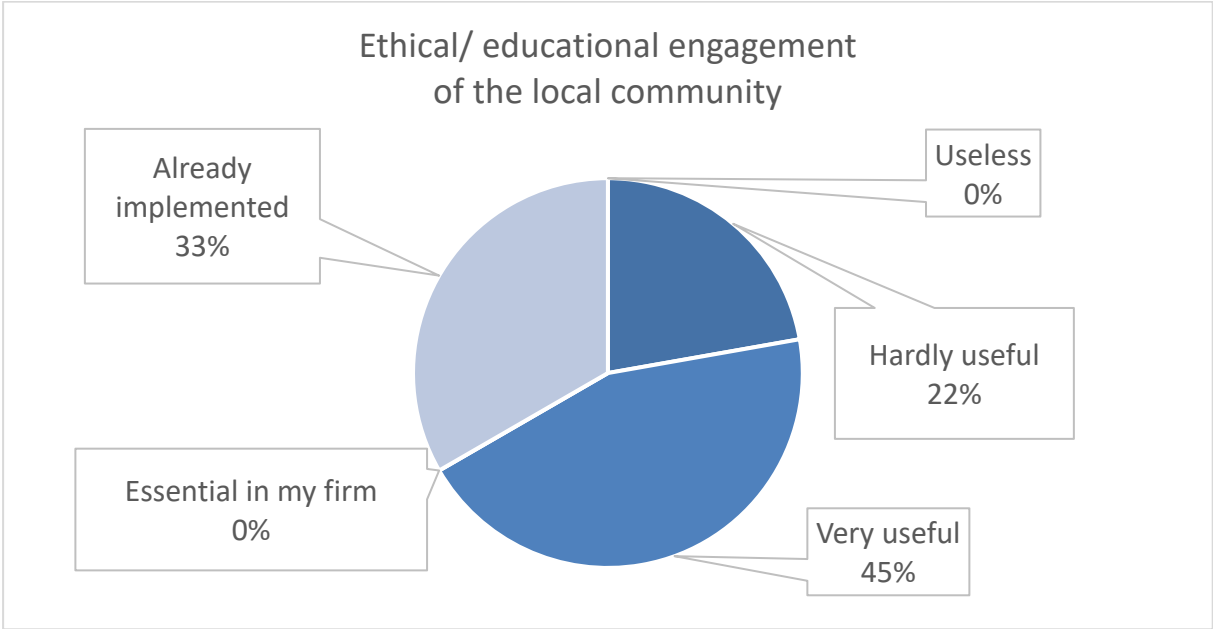


Figure 19: Ethical and educational engagement of the local community

As can be seen from figure 21, only the 22% the wine cellars have undertaken some actions in order to meet the employees’ needs and incentive their soft skills with ad hoc projects. The 33% think this is essential, while the 34% consider it very useful. However, there’s also a small percentage (11%) which consider such initiatives hardly useful.

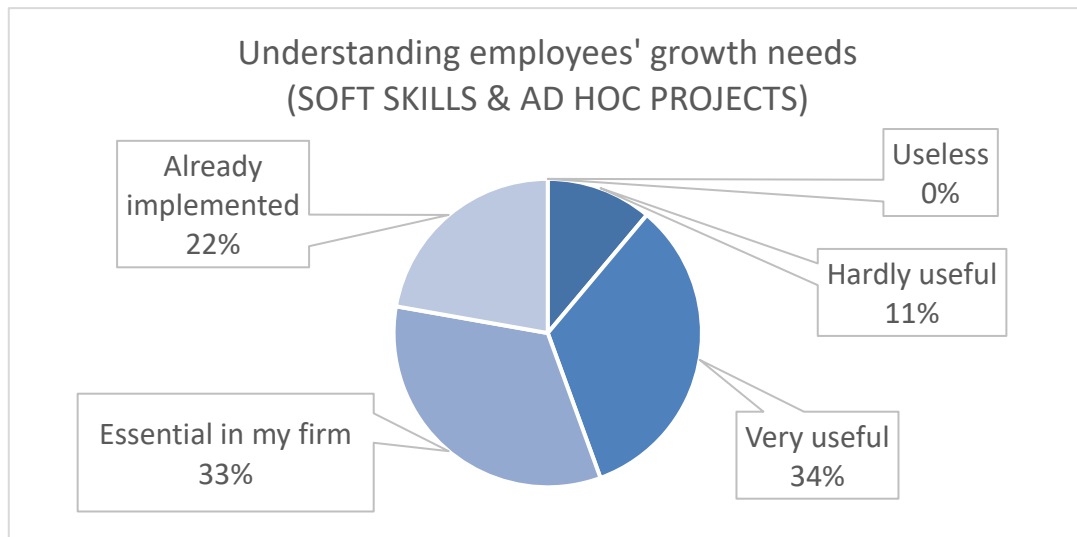


Figure 20: Soft skills and Ad Hoc projects to meet the employees' needs

Figure 22 shows that the 33% have already undertaken actions to map and involve stakeholders. The 78% haven't done it yet, however they think it can be very useful (45%) or even essential in their firms (33%).

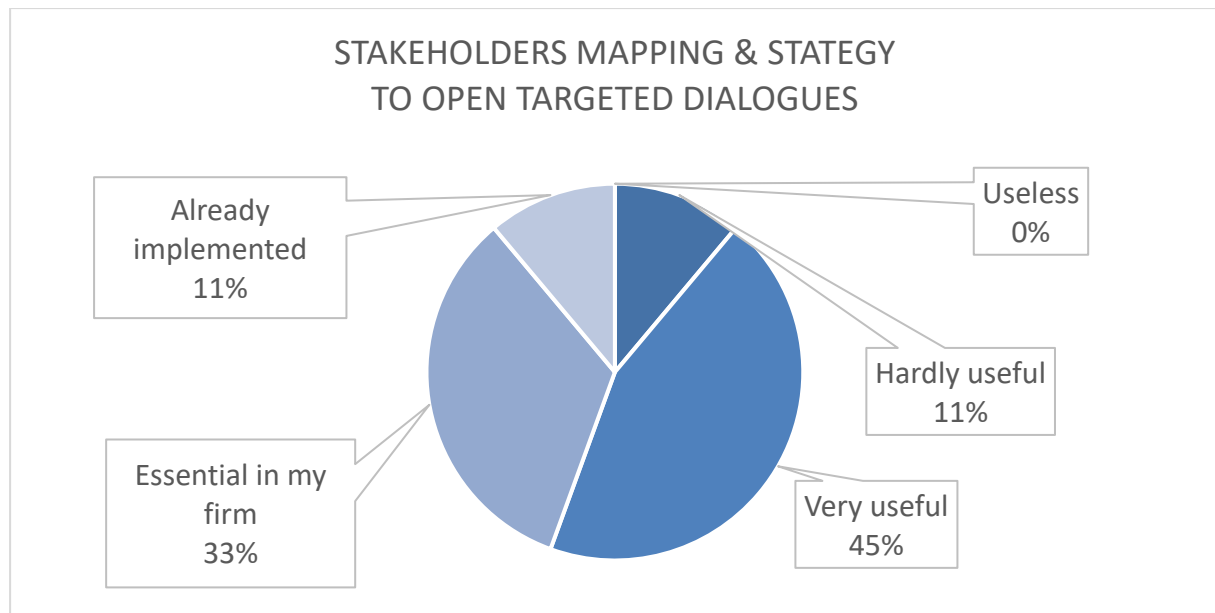


Figure 21: Stakeholders mapping & strategy to open targeted dialogues

Figure 23 is about making a perception map on the reputation drivers with respect to the wine cellars. None of them have implemented it. However, the majority of them think it is essential in their firms (33%) or very useful (56%).

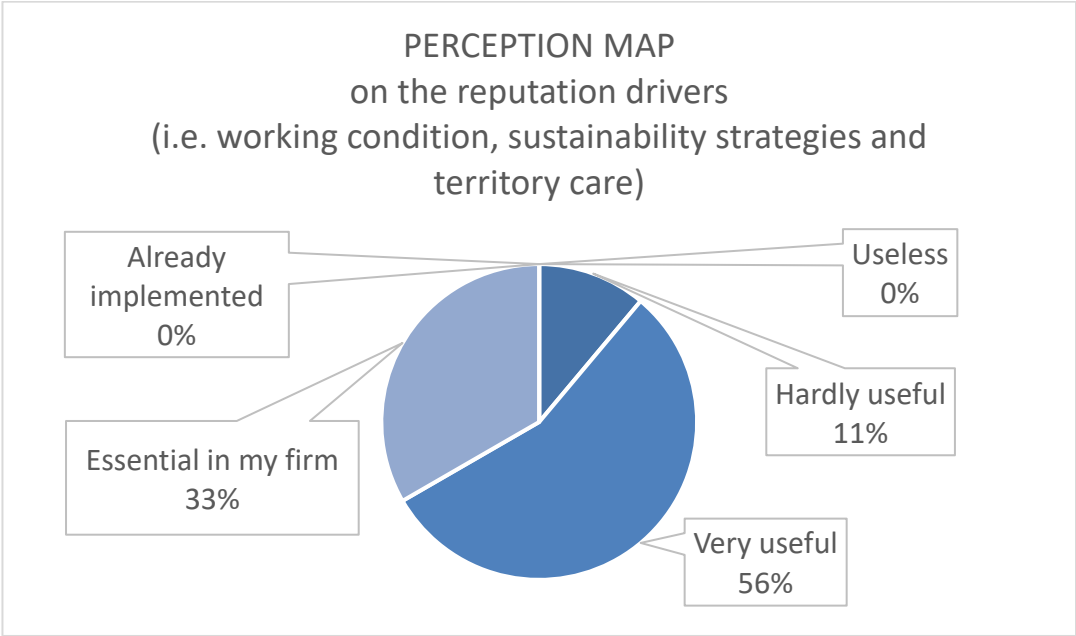


Figure 22: Perception Map on the reputation drivers

As can be seen from figure 24, the majority of the wine cellars (56%) retain biodynamic projects to be hardly useful in order to innovate, grow and recover from a crisis. Only the 11% have implemented such projects, 22% think it can be very useful and the 11% considers it useless.

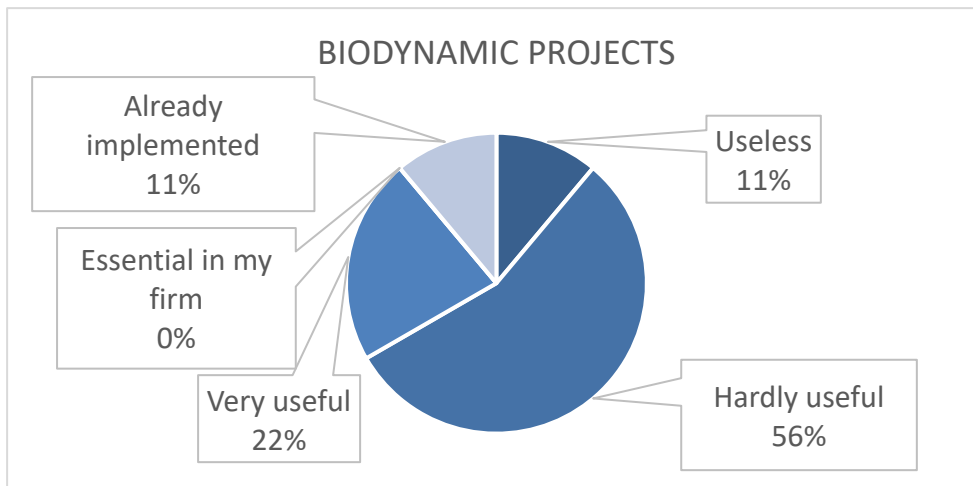


Figure 23: Biodynamic projects

With regards to the biological projects, figure 25 shows that the 45% of the wine cellars have already implemented some, while the 33% think they can be very useful and the 22% think they can hardly be useful.

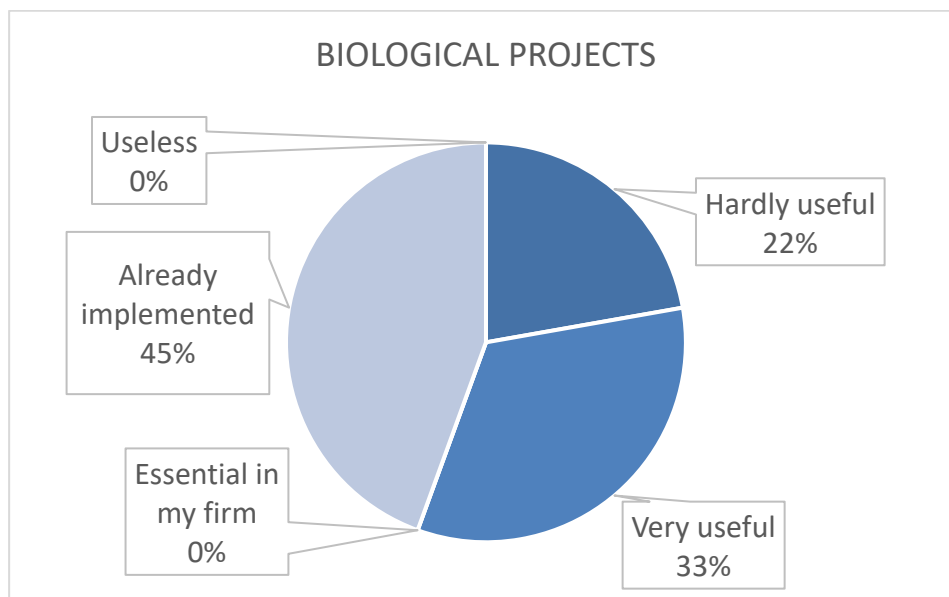


Figure 24: Biological projects

Figure 26 shows that only the 22% of the wine cellars have already implemented agritourism projects. The 45% think they can be very useful and the 22% consider them even essential.

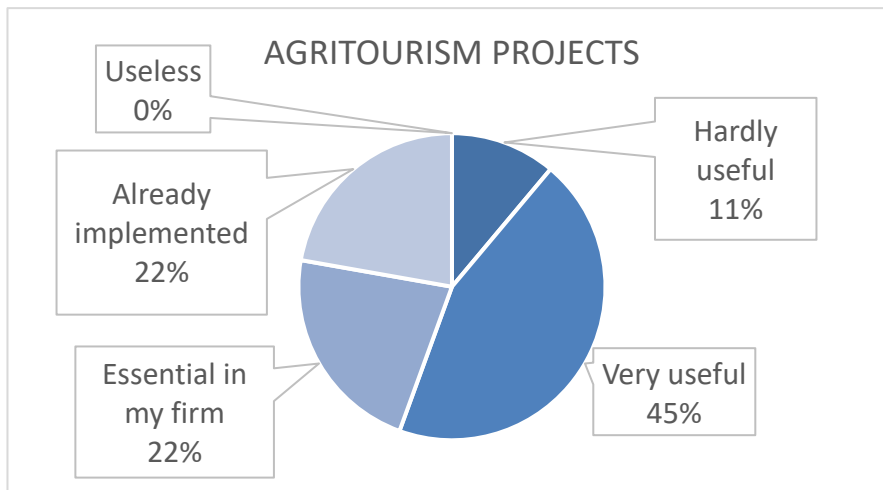


Figure 25: Agritourism projects

The figures from 27 to 33 show how useful are considered the following instruments and practices in order to make the Italian wine cellars sustainable and responsible.

The LCA practice is widely accepted among the wine cellars (figure 27). Indeed, the 56% consider it useful and applicable in the particular firms, while the 22% consider it useful only.

The 11% have already implemented it and the same percentage don't know what it is.

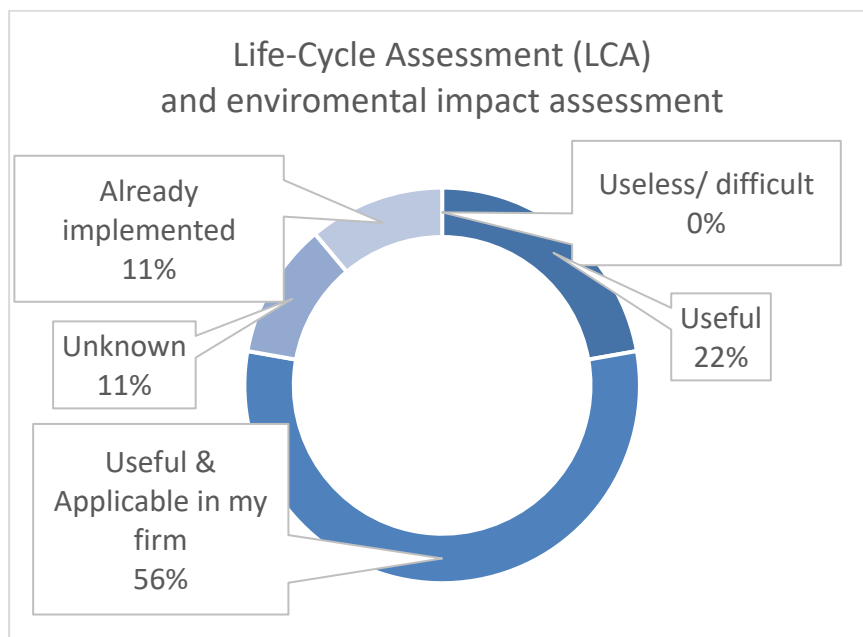


Figure 26: Life-Cycle Assessment (LCA) and environmental impact assessment

Figure 28 shows that only the 11% already concerns about Carbon Footprint. The 56% think that a CO2 emissions assessment can be useful, while the 22% not only think it can be useful, but also applicable in their firms. The 11% think that such initiative may be useless or difficult to be undertaken.

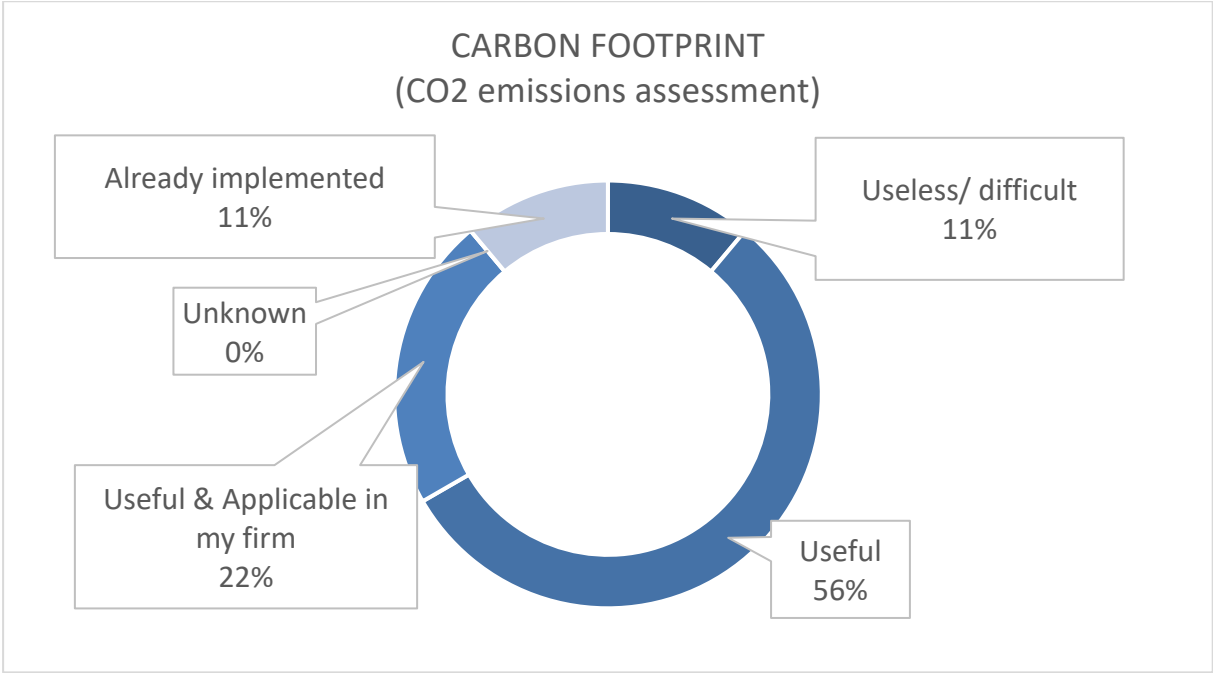


Figure 27: Carbon Footprint

Figure 29 shows that only the 22% concern already about water footprint. The 45% consider the water consumption assessment useful and applicable in their firms, while the 33% consider it to be just useful.

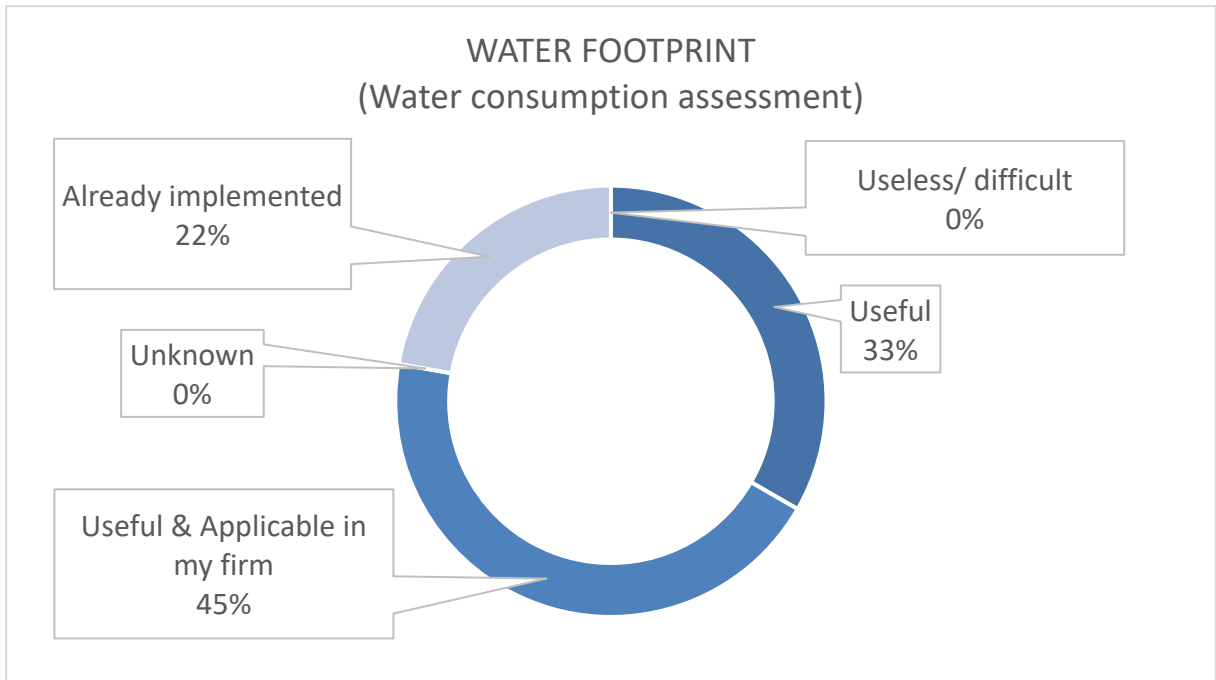


Figure 28: Water Footprint

As can be seen from figure 30, the 44% of the wine cellars have already adhered to product certifications, while the others think they are useful.

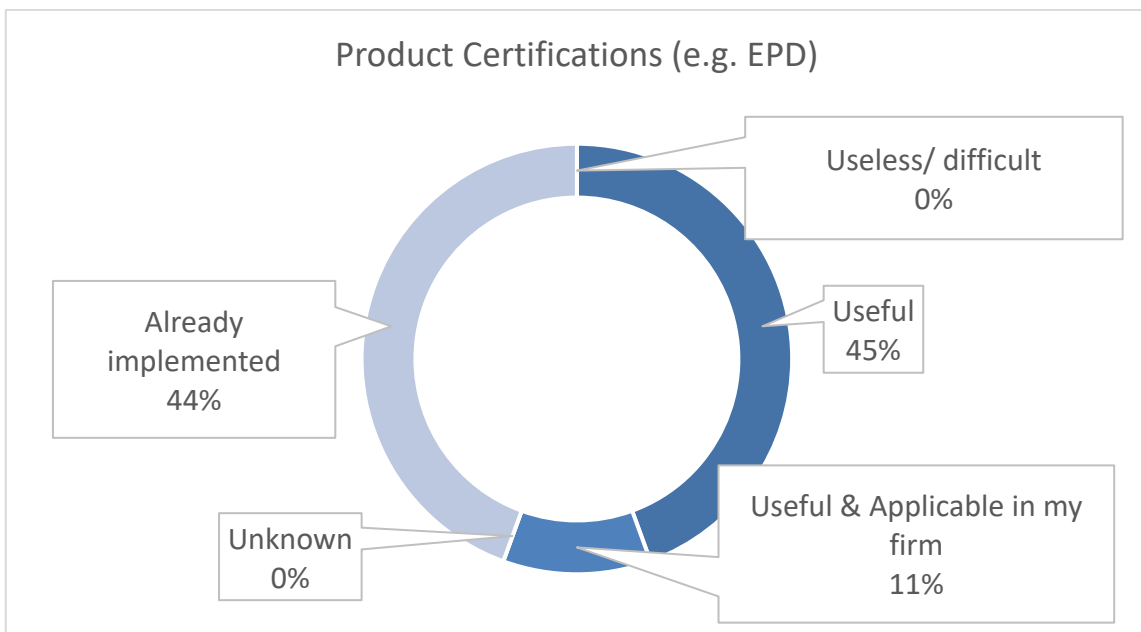


Figure 29: Product Certifications

The figures 31, 32 and 33 show that the ISO 1400, ISO 45001 and SA 8000 Certifications are widely considered useful, even if not already implemented.

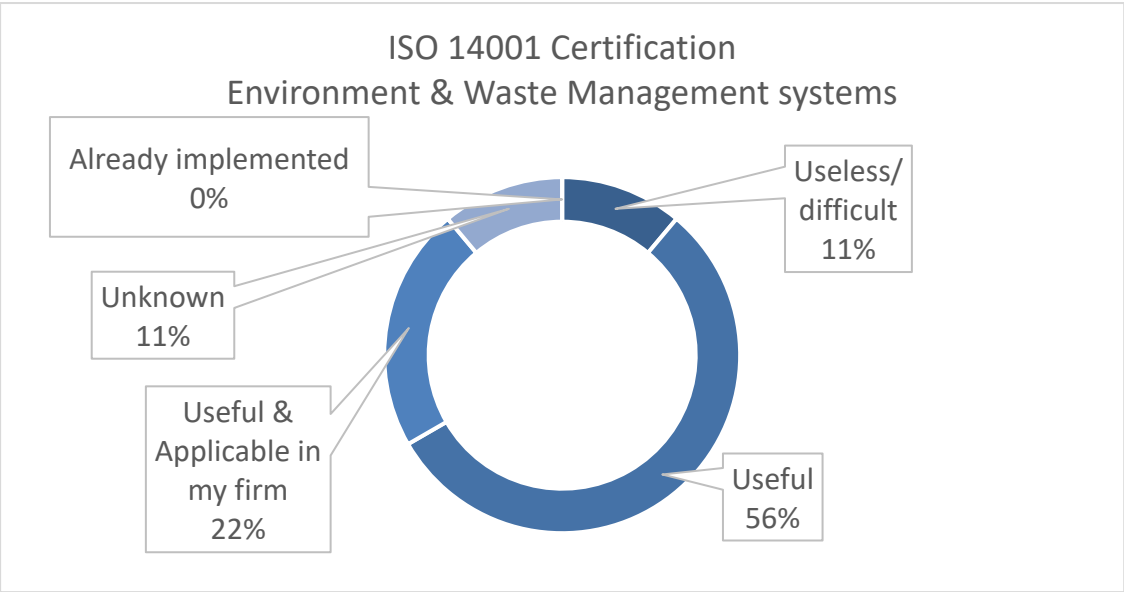


Figure 30: ISO 14001 Certification

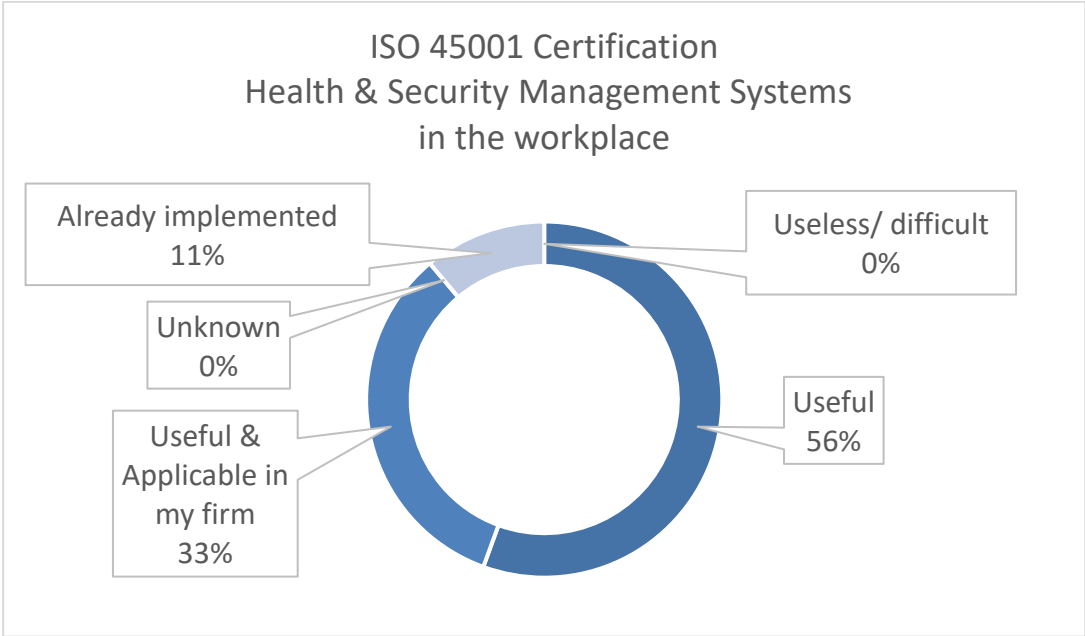


Figure 31: ISO 45001 Certification

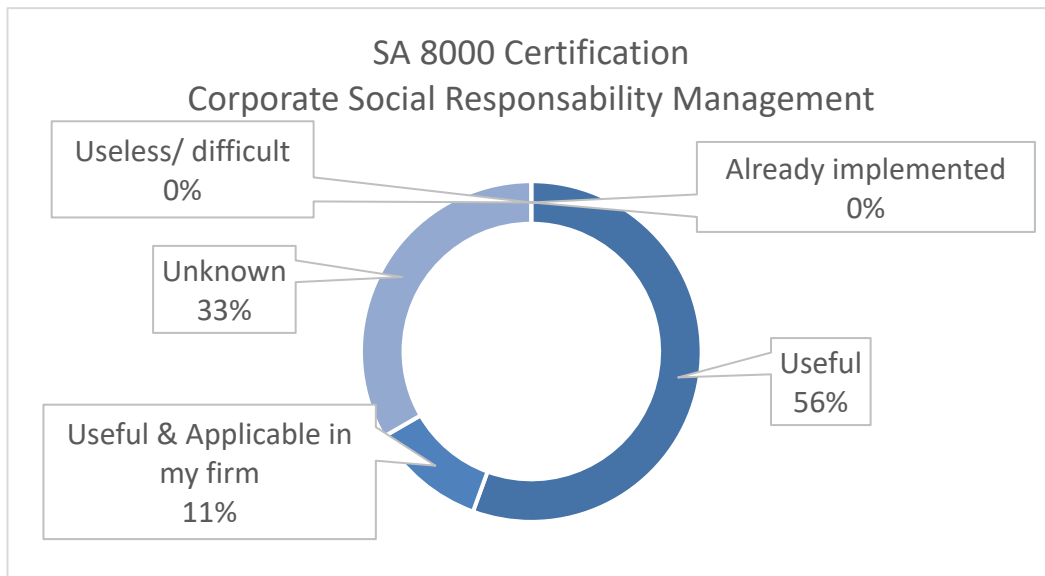


Figure 32: SA 8000 Certification

The figures from 34 to 39 show how the circular economy practices are considered useful by the wine cellars.

Figure 34 show that the 78% have already implemented practices of waste reduction and reuse in the supply chain.

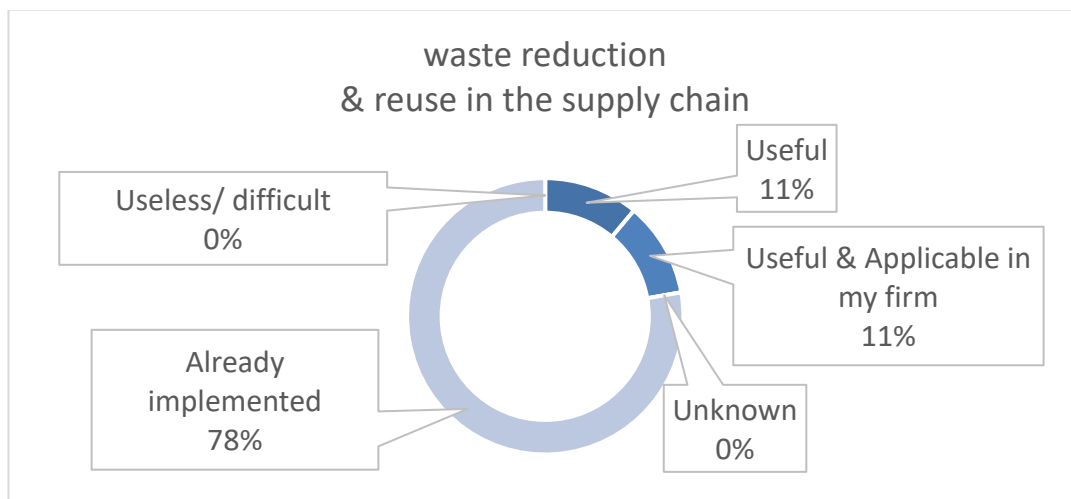


Figure 33: waste reduction & reuse in the supply chain

Figure 35 is about Sustainable Packaging Design. The 78% of the wine cellars think it is a useful initiative, while the 33% also think it is applicable in their firms. The 22% have already provided a sustainable packaging.

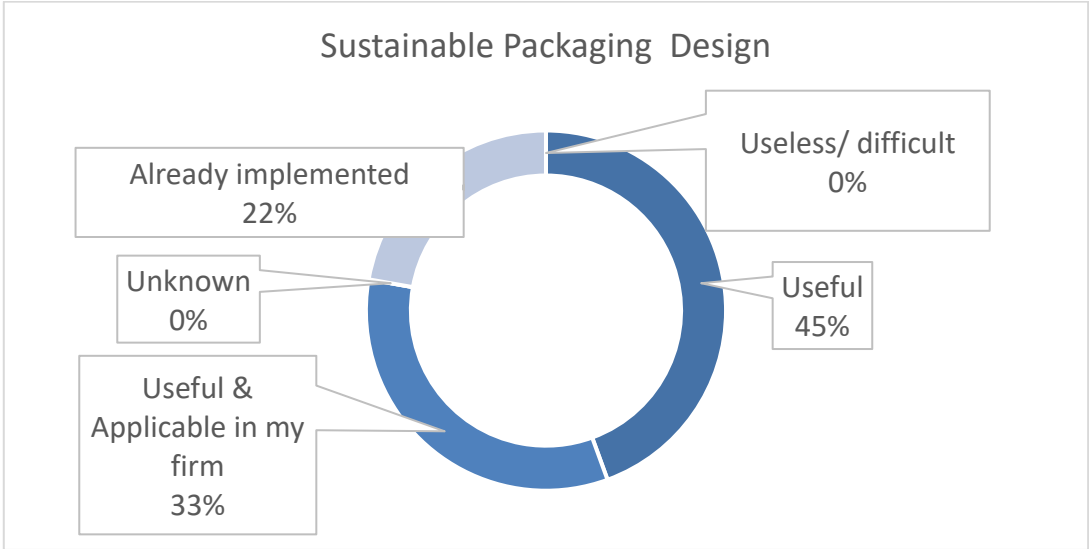


Figure 34: Sustainable Packaging Design

Figure 36 illustrates that 89% of the wine cellars claim the utility of the wastewater treatment. However, none of them have implemented it and only the 33% think it is applicable in their firms.

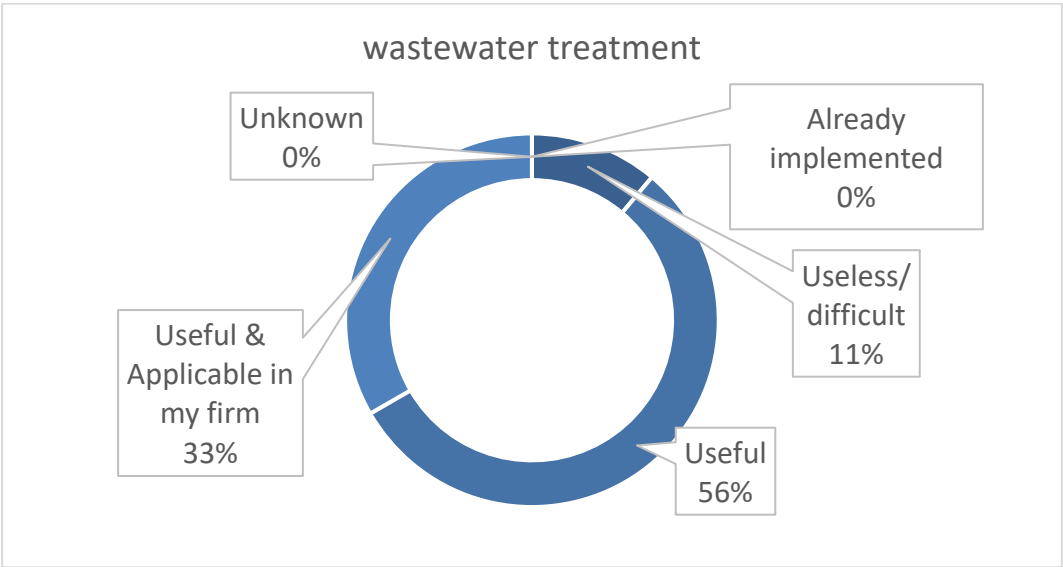


Figure 35: wastewater treatment

Similarly to the wastewater treatment, figure 37 shows that all the wine cellars consider also the Logistics replanning initiative useful. However, only the 11% have implemented it, while the 33% think it is applicable in their firms.

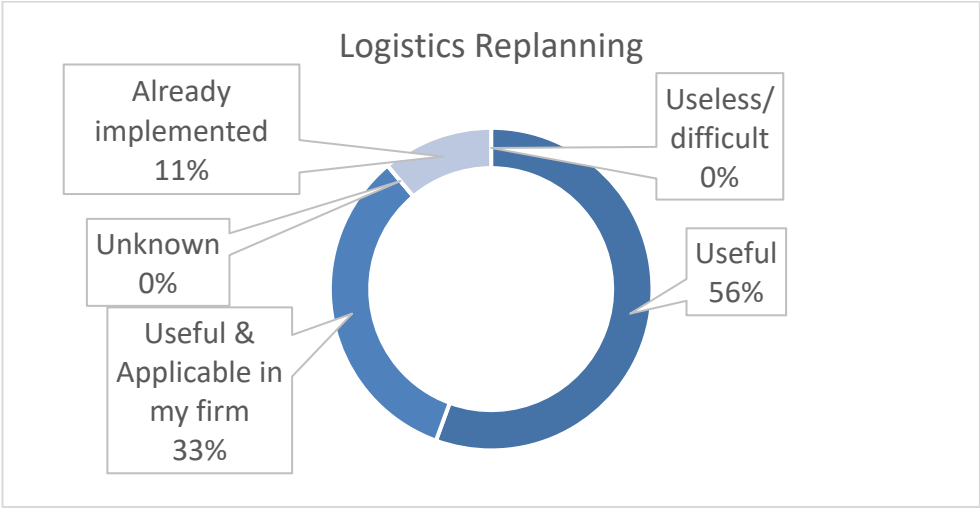


Figure 36: Logistics Replanning

Figure 38 shows that the 33% of the wine cellars already adopt renewable energy. All the rest of them consider it useful.

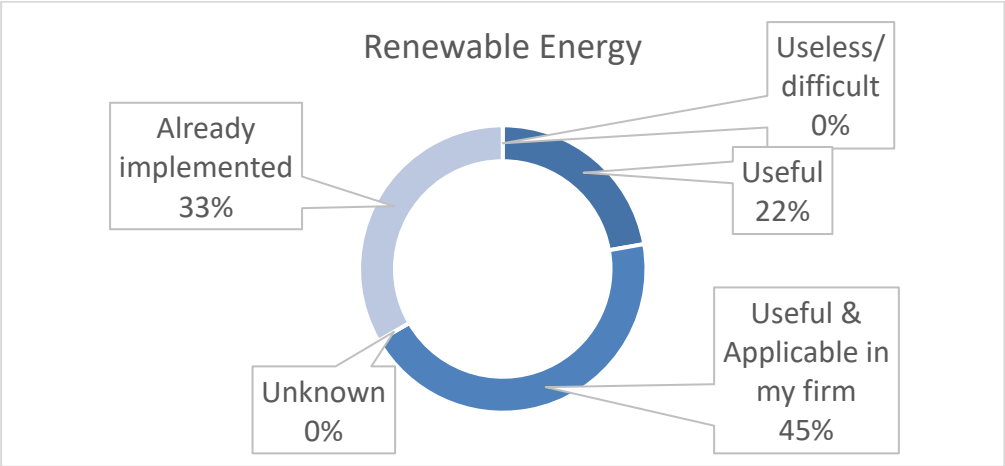


Figure 37: Renewable Energy

As can be seen from figure 39, sustainability is applicable also in the real estate redesign and improvement. All the wine cellars agree in its utility, while only the 22% have actually

implemented real estate sustainable improvement and the 33% think it is applicable in their firms.

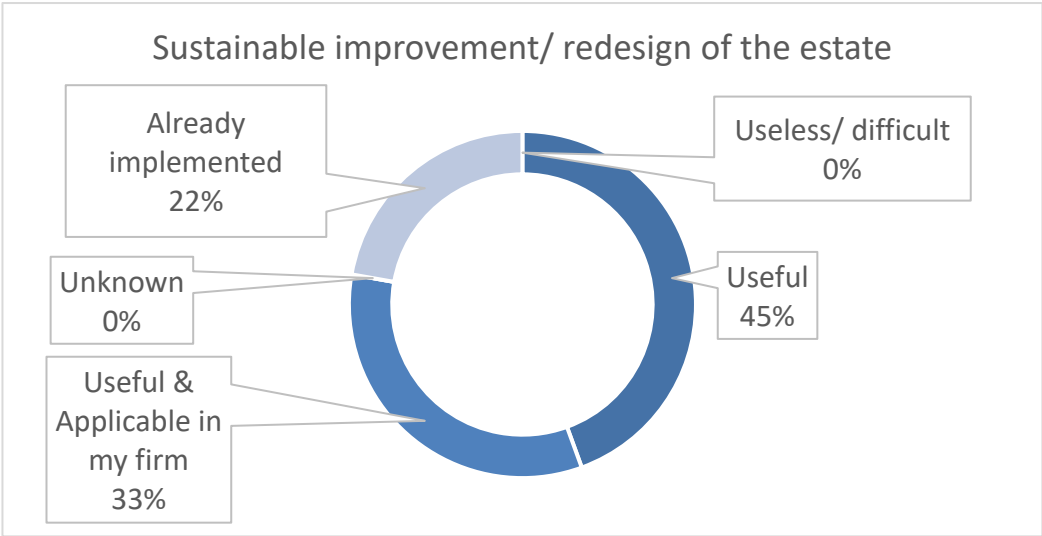


Figure 38: Sustainable improvement/ redesign of the estate

As can be seen from the graph in figure 40, at least the 75% of the wine cellars can benefit from facilities/ subsidies this year.

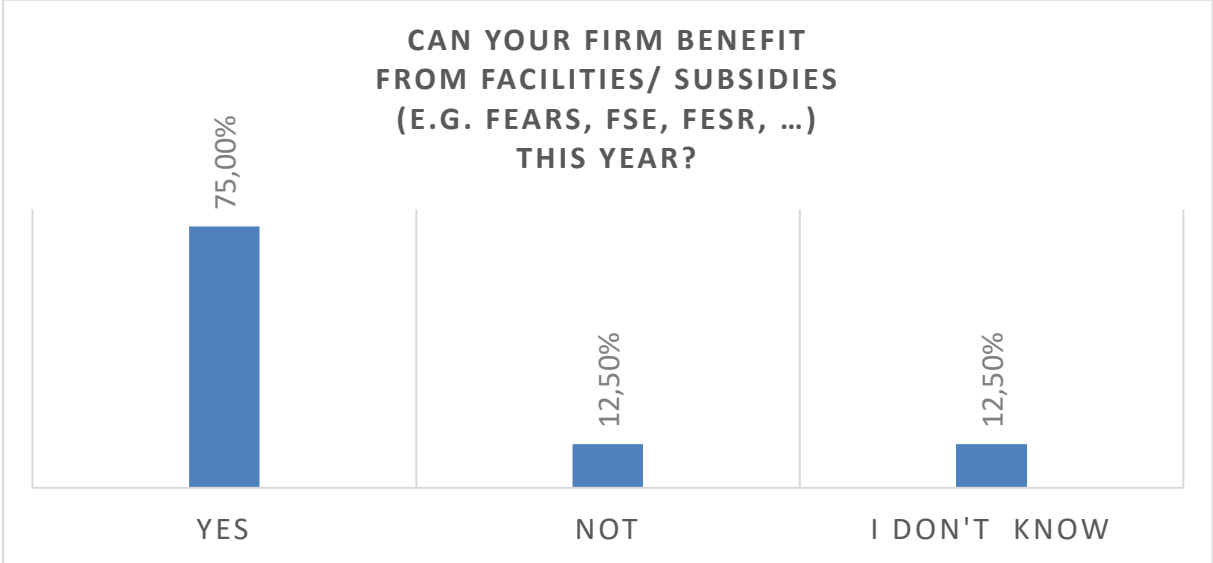


Figure 39: subsidies

Figure 41 shows the values assigned to a circular economy pattern in the wine cellars or to a help through a management consultancy. As a result, the 62.5% of the wine cellars would invest a “forfait” all-in-one package, the 25% would make a hourly retribution investment and the 12.5% would invest maximum 5k€. None of them claim to be not interested in it since they think it may turn out to be useful.

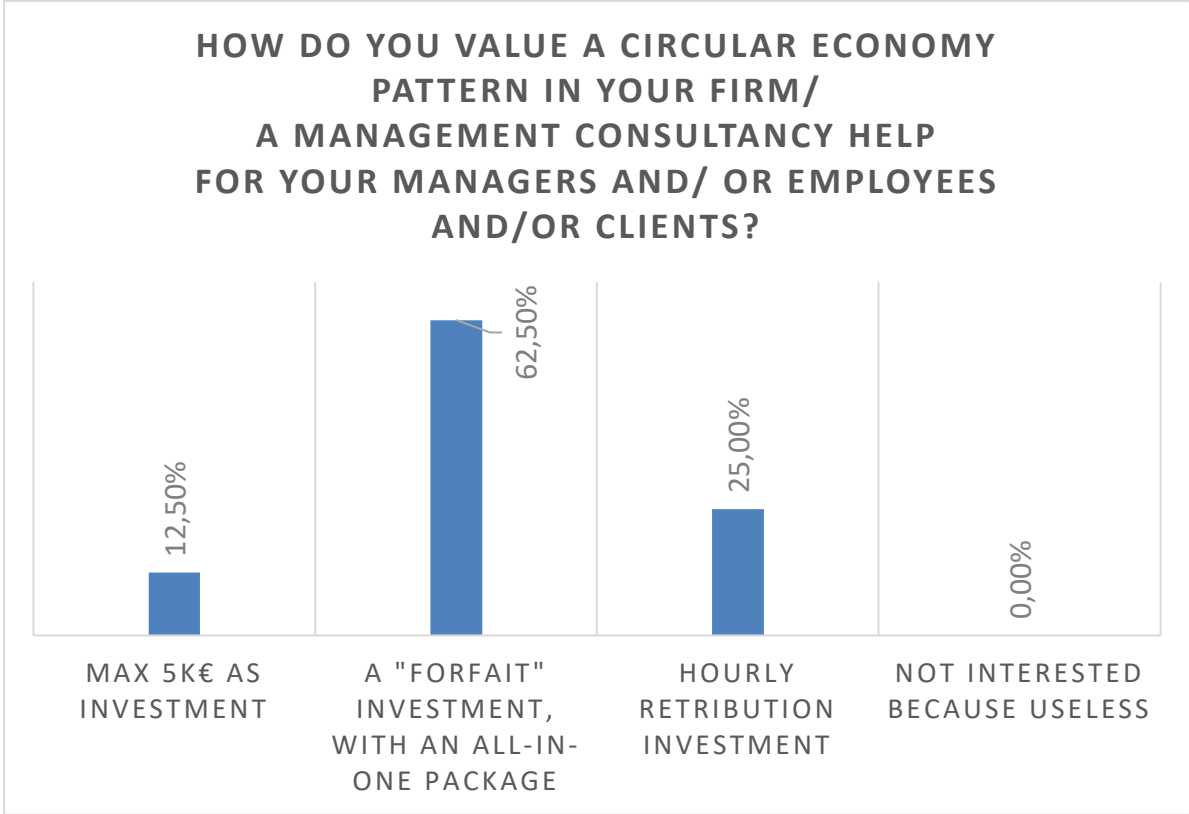


Figure 40: value assigned to the optimization activity of some practices within the firm

Figure 42 shows that the 44.44% of the cases expect the structural corporate welfare to decrease only slightly due to the pandemic. A slight decrease would imply less than the 20% of stressed employees and also new issues to be managed. The 33.33% expect a significant decrease, while the remaining 22.22% expect it to decrease hugely.

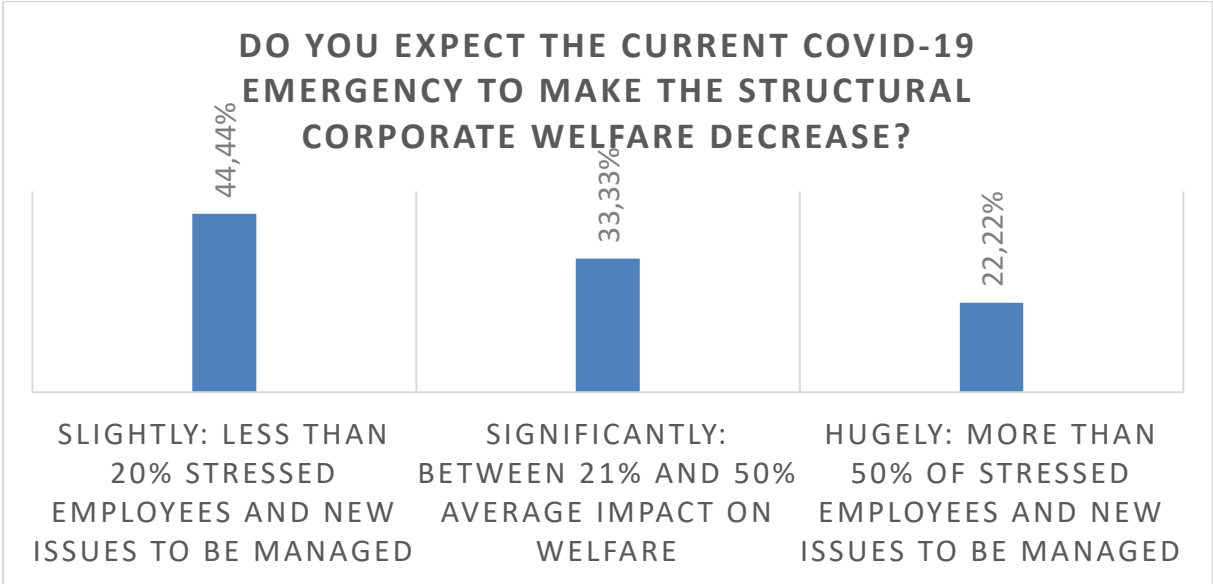


Figure 41: estimate of the corporate welfare decrease due to the pandemic

Figure 43 shows that the 66.67% expect revenues to decrease by more than the 21% and less than the 50% due to the pandemic.

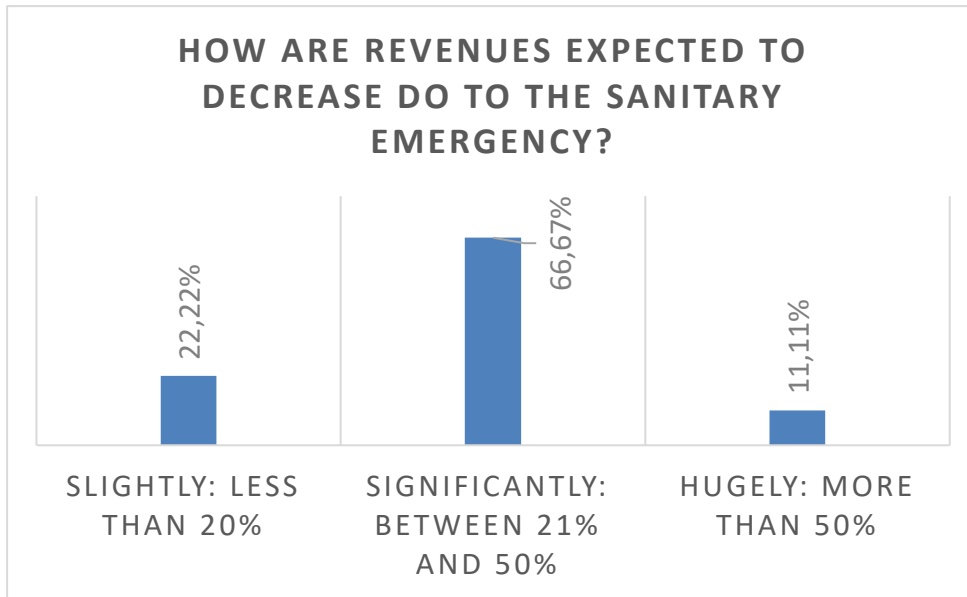


Figure 42: estimate of the decrease in revenues due to the pandemic

Also the supply chain is expected to suffer negative impacts due to the pandemic, such as late payments. In particular, figure 44 shows that the 44.44% of the wine cellars expect the impact to be between the 20% and the 50%. The 33.33% expect a slighter impact and, by contrast, the 22% expect a stronger impact.

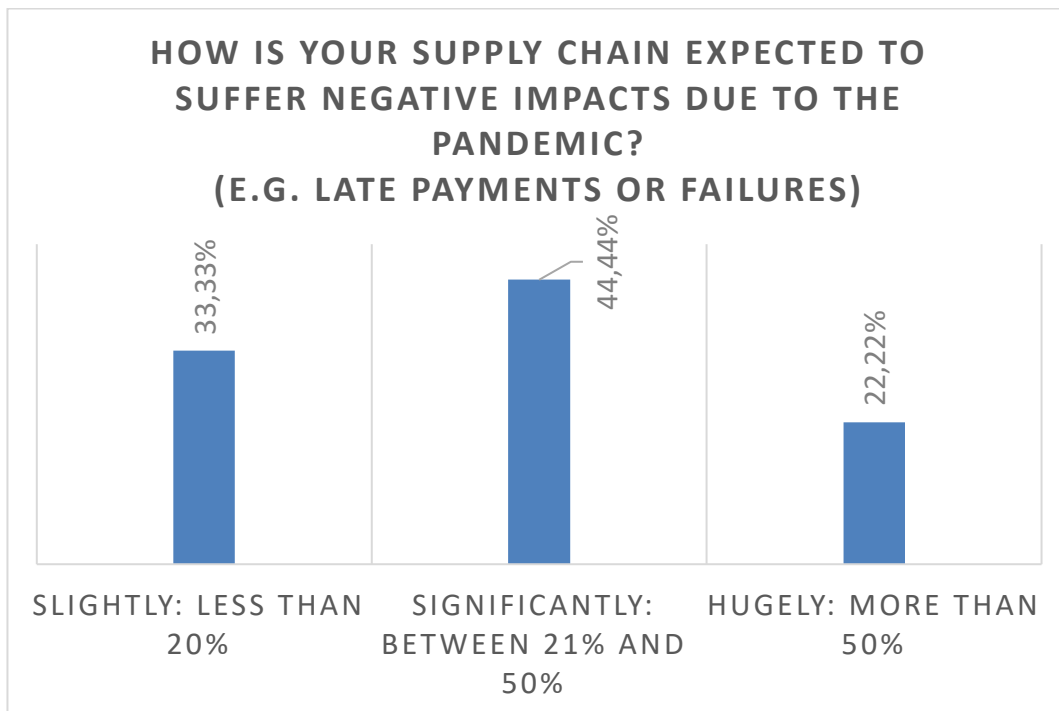


Figure 43: negative impact expected in the supply chain due to the pandemic

3.2 Second questionnaire

In October 2020, the previous questionnaire was rearranged in order to pursue the actual aim of this first stage of the research. Thus, it was adjusted in order to collect data which shows the current Italian wine firms' situation and visualize a big picture of it. The final questionnaire is reported in Appendix A.

Once the questionnaire was rearranged, the next step was the development of a database containing some of the Italian wine cellars' contacts in an Excel sheet. In particular, at first the contacts of fifty wine cellars from all over Italy were randomly collected by searching on the Internet. The resulting initial database was made of a table where each row was dedicated to one of the wine cellars. The type of data collected in the columns were name, Italian region, website, address, telephone number and e-mail.

Next, all the fifty wine cellars of the initial database were singularly contacted by e-mail. The e-mail contained a brief presentation of the research and, moreover, a kind invitation to take part at the questionnaire through the link, which was provided. As a result, only one wine cellar out of fifty actually filled in the questionnaire.

Since the response rate was extremely low, not only the database has been enlarged reaching a hundred contacts of Italian wine cellars, but also a different tactic has been implemented in order to engage them. The names of the additional fifty wine cellars were collected from the *Analisi informatizzata delle aziende di capitale italiane (AIDA)* database, which collects the balance sheets of about 1,300,000 Italian firms [38]. After that, their websites have been visited in order to collect their contacts in our database. Next, All the wine cellars of the final database, including the forty-nine not responding from the initial sample, have been called on the phone. When they showed to be interested and available, which turned out to be the most common case, they were provided with the link to the questionnaire through e-mail

immediately after the telephone call. Contacting the wine cellars on the phone led to an overall response rate of 18%. Thus, the second survey reached a sample made of eighteen wine cellars, which is larger than the sample from the first questionnaire. Based on the findings of the second survey, the following graphs were produced.

Table 3: Names of the wine cellars

Risposte: 16 Salta: 2

| # | RISPOSTE | DATE |
|----|--|---------------------|
| 1 | MonteOliveto di Casà | 11/18/2020 4:07 PM |
| 2 | CANTINA PERTINACE | 11/4/2020 11:37 AM |
| 3 | Cantine Rasore Srl | 11/4/2020 11:24 AM |
| 4 | BOSIO FAMILY ESTATES SRL | 11/2/2020 5:03 PM |
| 5 | prunotto | 11/2/2020 12:13 PM |
| 6 | vinchio vaglio serra | 11/2/2020 11:00 AM |
| 7 | Cantine Volpi | 11/2/2020 8:47 AM |
| 8 | MANFREDI ALDO & C. Azienda Vinicola S.r.l. | 10/30/2020 5:35 PM |
| 9 | Araùdica Castelvèro | 10/30/2020 9:47 AM |
| 10 | Cantina Terre del Barolo | 10/30/2020 9:42 AM |
| 11 | Grillo iole | 10/28/2020 5:48 PM |
| 12 | LA CANTINA PIZZOLATO SRL | 10/28/2020 3:02 PM |
| 13 | Francesca Fiasco | 10/28/2020 11:50 AM |
| 14 | Favventura società agricola a r.l. | 10/28/2020 11:08 AM |
| 15 | AZIENDE AGRICOLE PLANETA | 10/28/2020 11:01 AM |
| 16 | Ceretto Aziende vitivinivole | 10/23/2020 10:06 AM |

The pie chart in figure 45 shows where the wine cellars are based. The 69% of the wine cellars answering to the questionnaire are based in Piemonte, Italian region. The remaining 31% are equally distributed in other five different regions, which are located in both the north and south areas of Italy.

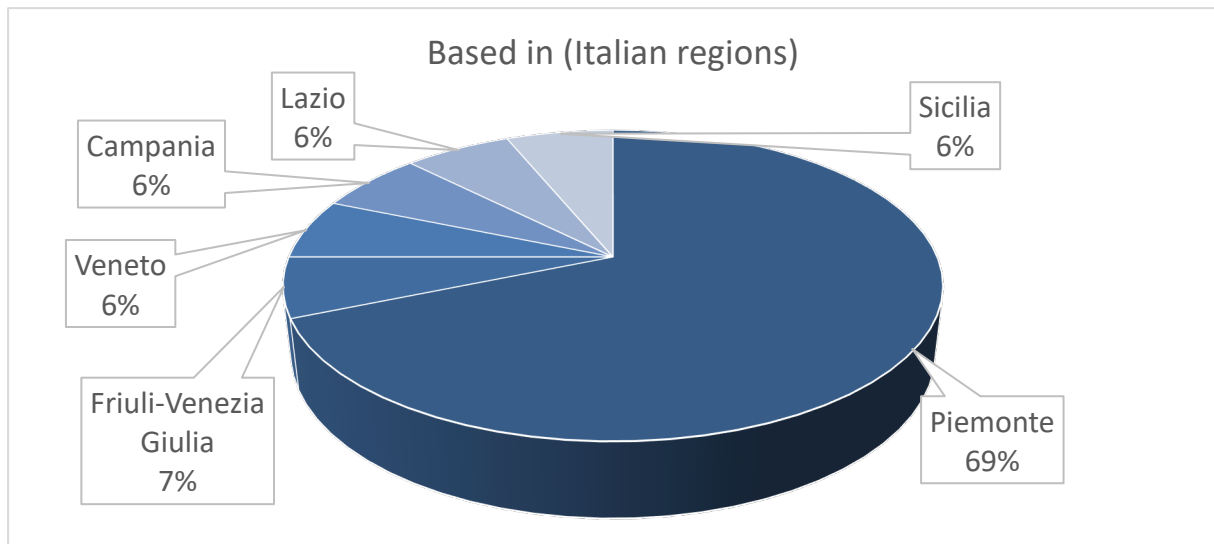


Figure 44: Location

Table 4: Foundation year

| # | RISPOSTE | DATE |
|----|------------|---------------------|
| 1 | 2010 | 11/18/2020 4:07 PM |
| 2 | 1959 | 11/6/2020 2:18 PM |
| 3 | 1973 | 11/4/2020 11:37 AM |
| 4 | 1949 | 11/4/2020 11:24 AM |
| 5 | 20/09/1982 | 11/2/2020 5:03 PM |
| 6 | 1904 | 11/2/2020 12:13 PM |
| 7 | 1959 | 11/2/2020 11:00 AM |
| 8 | 1914 | 11/2/2020 8:47 AM |
| 9 | 1975 | 10/30/2020 5:35 PM |
| 10 | 1954 | 10/30/2020 9:47 AM |
| 11 | 1958 | 10/30/2020 9:42 AM |
| 12 | 1973 | 10/28/2020 5:48 PM |
| 13 | 1981 | 10/28/2020 3:02 PM |
| 14 | 2016 | 10/28/2020 11:50 AM |
| 15 | 2015 | 10/28/2020 11:08 AM |
| 16 | 1995 | 10/28/2020 11:01 AM |
| 17 | 1937 | 10/23/2020 10:06 AM |

The people who filled in the questionnaire have also been asked to indicate which job category they belong to (figure 46). The 16.67% of them are employers, an additional 22.22% are executives, while the 11% are external consultants or volunteers. The remaining part claims to belong to other job categories.

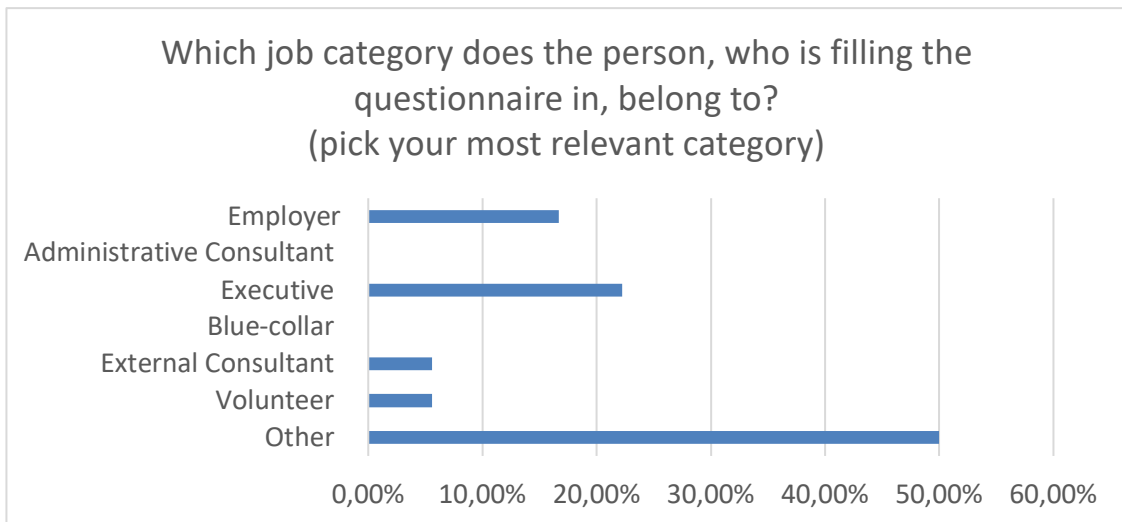


Figure 45: Job category

In particular, the 44.44% work in marketing & communication, while the 38.89% are managers (figure 47).

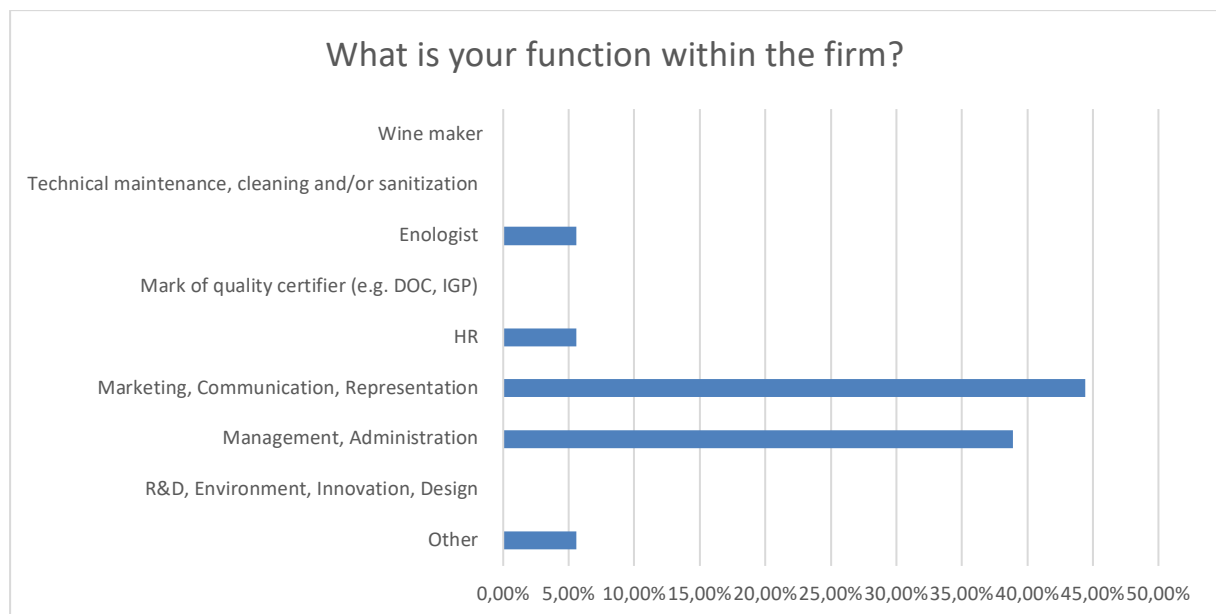


Figure 46: Function

The 72.22% of the wine cellars answering to the secondo questionnaire are small firms with more than 10 employees and annual revenues or total assets lower than 10M€. Only 5.56% of them can be classified as big firms, with more than 250 employees and revenues higher than

50M€. The remaining 22.22% are micro firms with less than 10 employees and annual revenues or total assets lower than 2M€.

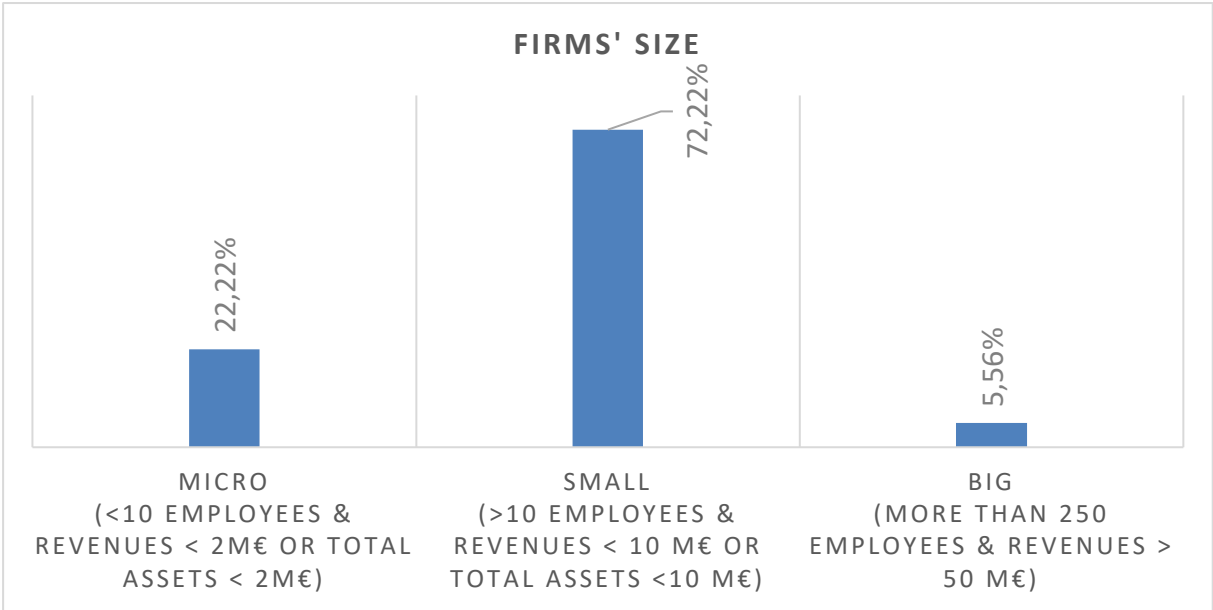


Figure 47: Firms' size

As can be seen from figure 49, the majority of them (66.67%) produces more than 500k bottles every year. The second highest percentage is 11.11% which represents both the share of wine cellars that produce more than 30k and less than 50k bottles per year and the share of wine cellars that produce less than 10k bottles per year.

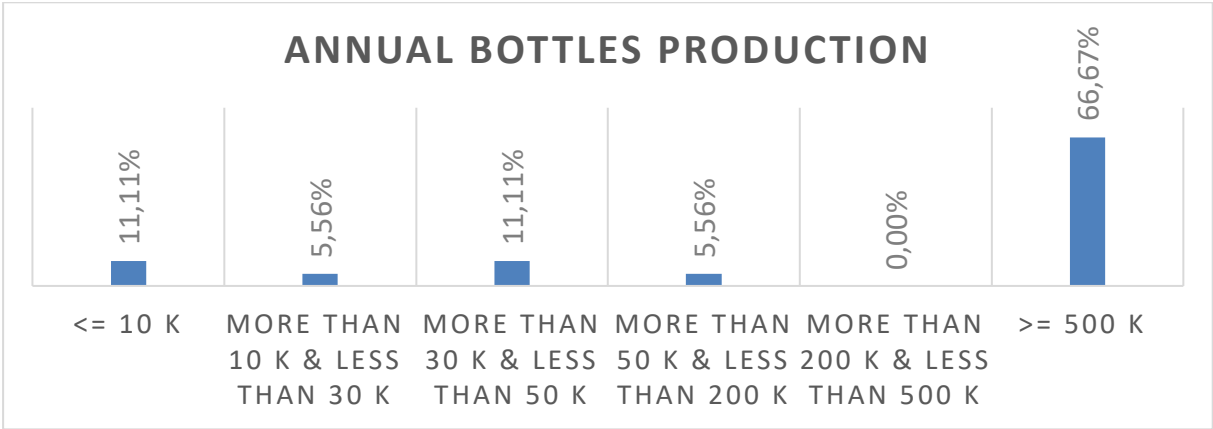


Figure 48: Annual bottles production

Not all the wine cellars deal with the whole wine making process. Thus, they have been asked to select which stages of the process are vertically integrated within their firms. As can be seen from figure 50, it turned out that the 88.89% deal with the final stages of aging and bottling, the 83.33% conduct the intermediate stages from the pressing activity to the wine clarification, while the 77.78% also deal with the very first stage of grape-harvest.

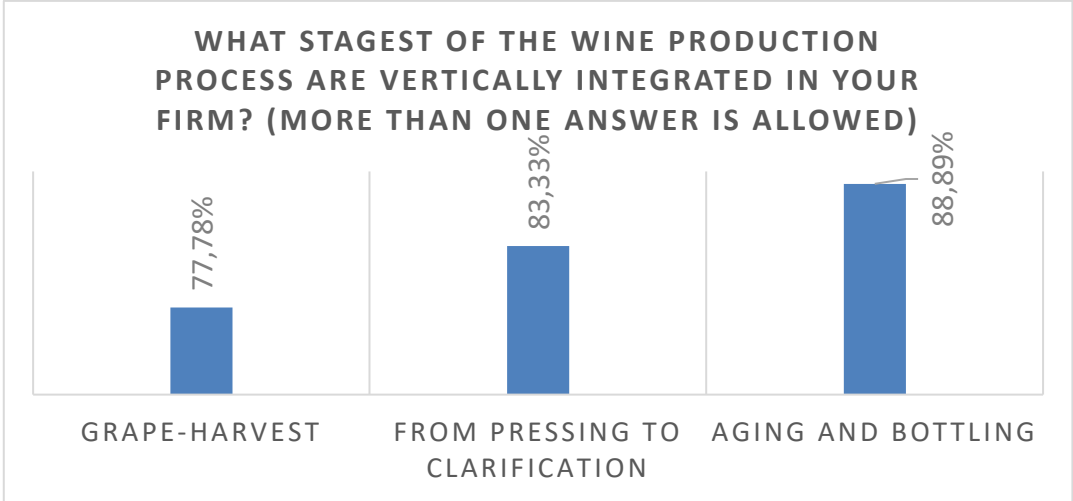


Figure 49: Vertical Integration

The wine cellars provide additional services which go beyond the traditional activities of the wine process. In particular, figure 51 shows that 94% of them offer wine-testing experiences, 76% offer guided tours and 88% deal with direct sales. Moreover, 41% provide conference rooms, 23.5% offer the restaurant service, even lower percentages offer B&B, agritourism and host weddings.

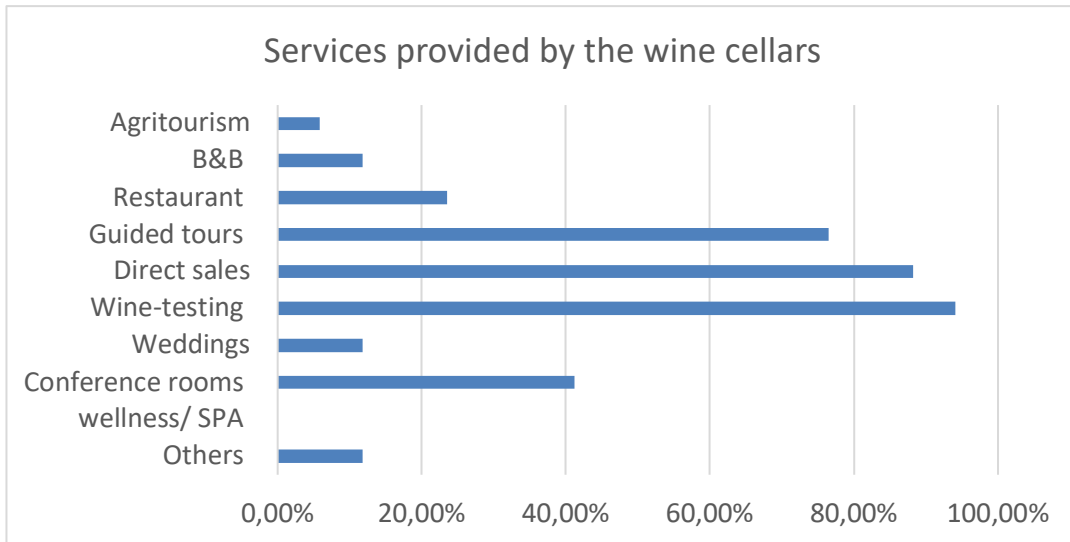


Figure 50: Additional services

Figure 52 shows the communication channels used by the wine cellars. The 94% of them have a website and use an Instagram profile to communicate with their stakeholders. The 88% also use Facebook and 82% have taken part in exhibitions. None of them use Android Applications, but a significant percentage (29%) use on-line advertising. Off-line advertising is even more spread, indeed the 35% of the wine cellars use it. Moreover, the 50% also rely on word of mouth.

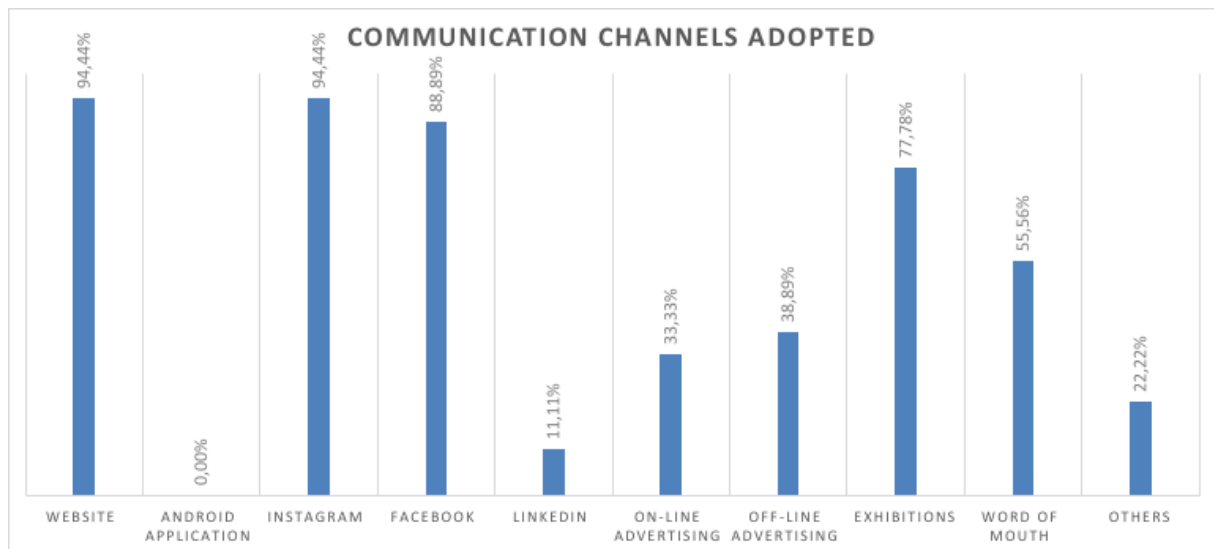


Figure 51: Communication channels

Figures from 53 to 68 show whether some initiatives have been undertaken by the wine cellars. Such initiatives may have been taken in order to make the organization grow and pursue innovation.

As you can see from figure 53, the 47% of the wine cellars have already implemented projects which sustain the Circular Economy, while a significant share (18%) is still unaware of such projects.

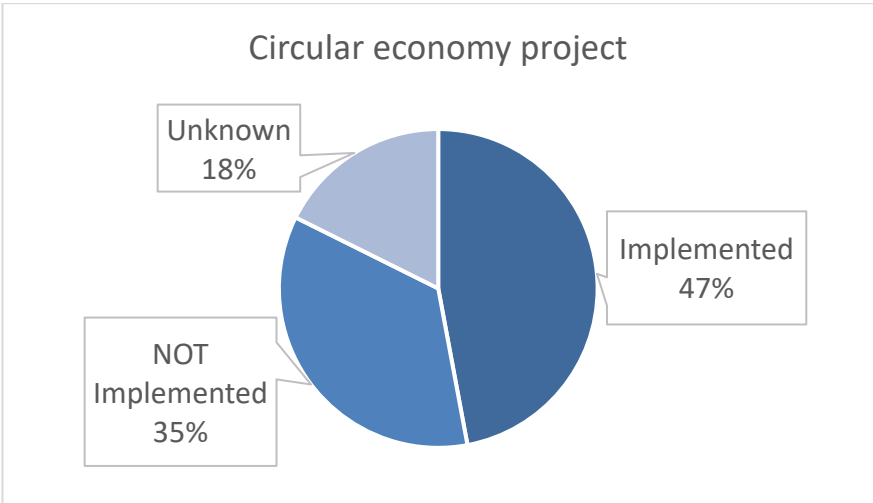


Figure 52: Circular Economy Projects

Figure 54 illustrates that the 17% of the wine cellars answering to the second questionnaire have measured their social impact using SROI, while the 18% don't know what it is.

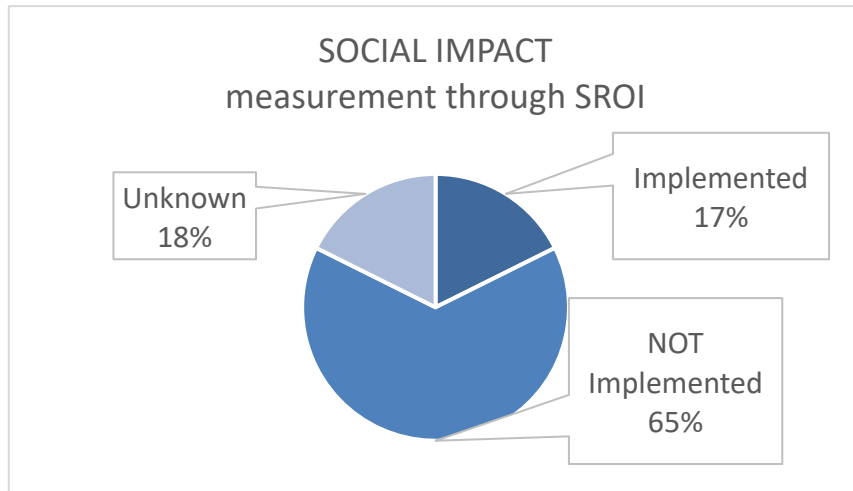


Figure 53: Social Impact measurement using SROI

Figure 55 shows that the 78% have already implemented strategies based on Corporate Social Responsibility (CSR).

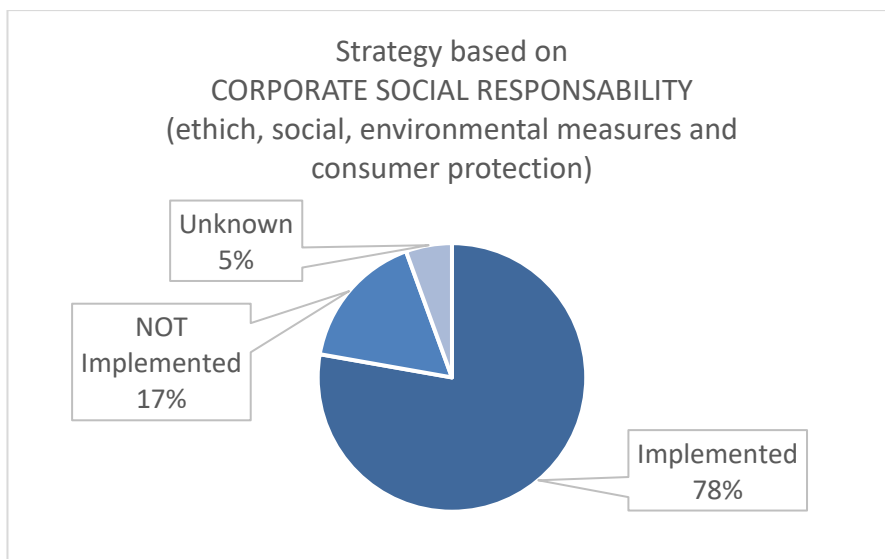


Figure 54: Corporate Social Responsibility

Figure 56 shows that the 94% of the wine cellars care about informing the market about their corporate values.

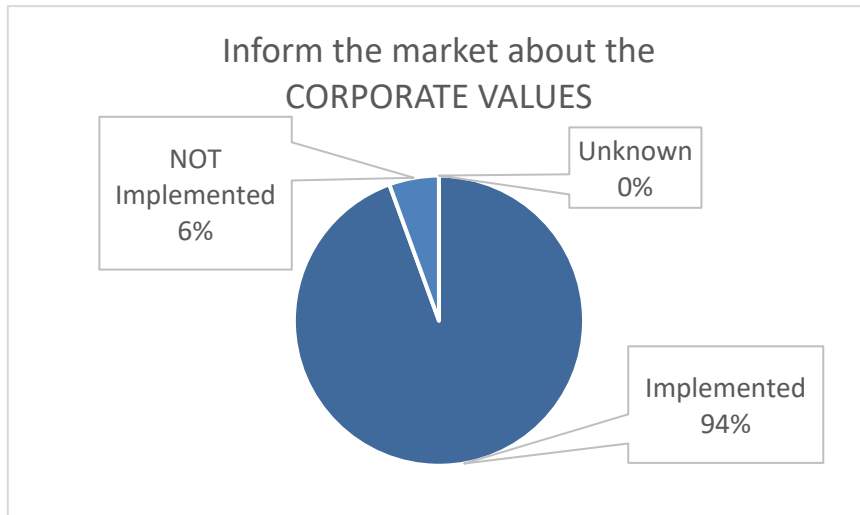


Figure 55: Actions to communicate with the market

Moreover, the 94% are active in building corporate reputation and customer loyalty (figure 57).

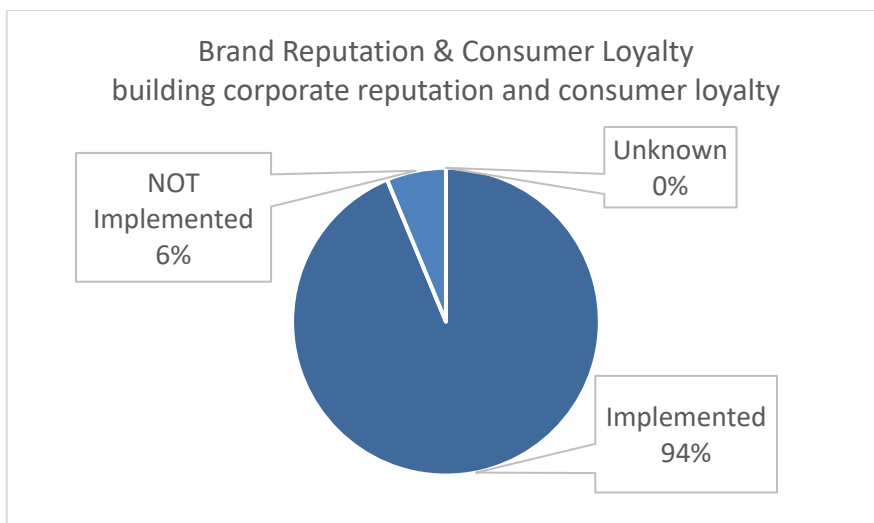


Figure 56: Brand Reputation & Customer Loyalty

As can be seen from figure 58, the 47% of the wine cellars are working on mapping their stakeholders and implementing a strategy to open targeted dialogues.

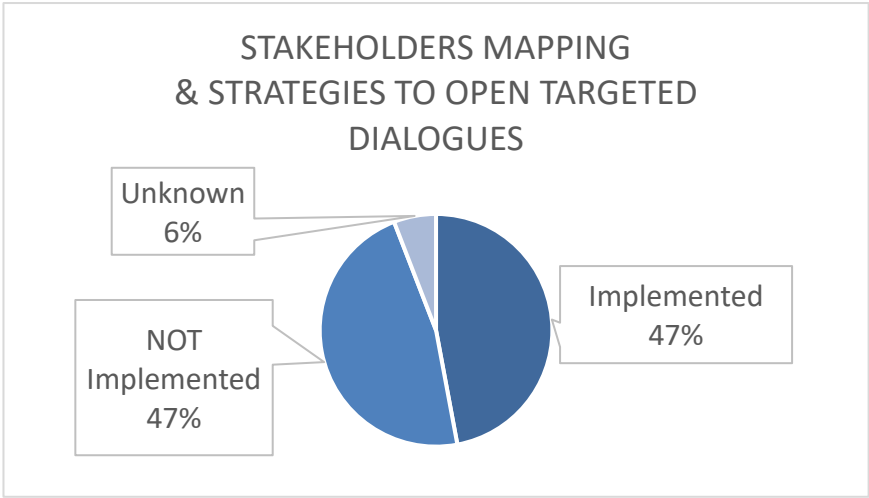


Figure 57: Stakeholders mapping

Figure 59 shows that the 61% are also working on engaging the local community in ethical issues.

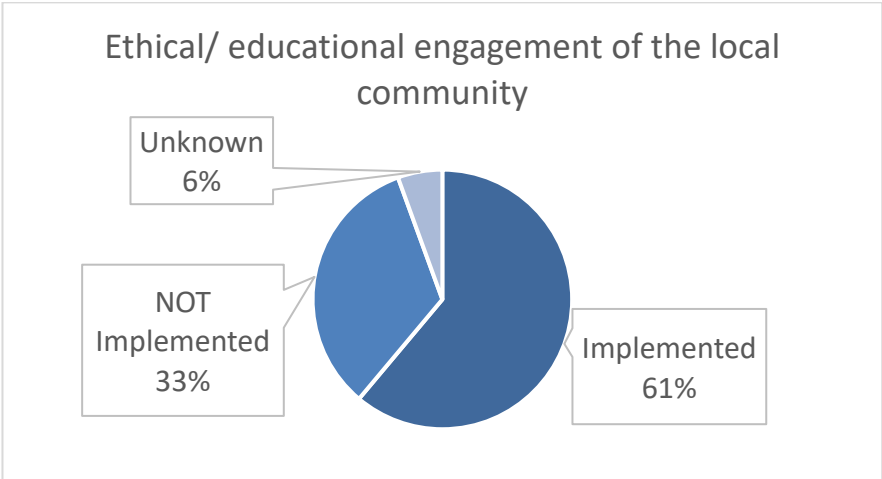


Figure 58: Ethical engagement of the local community

Figure 60 reveals how the wine cellars are inclined to the acquisition or consolidation of national and international markets. Such actions have been implemented by the 100% of the sample.

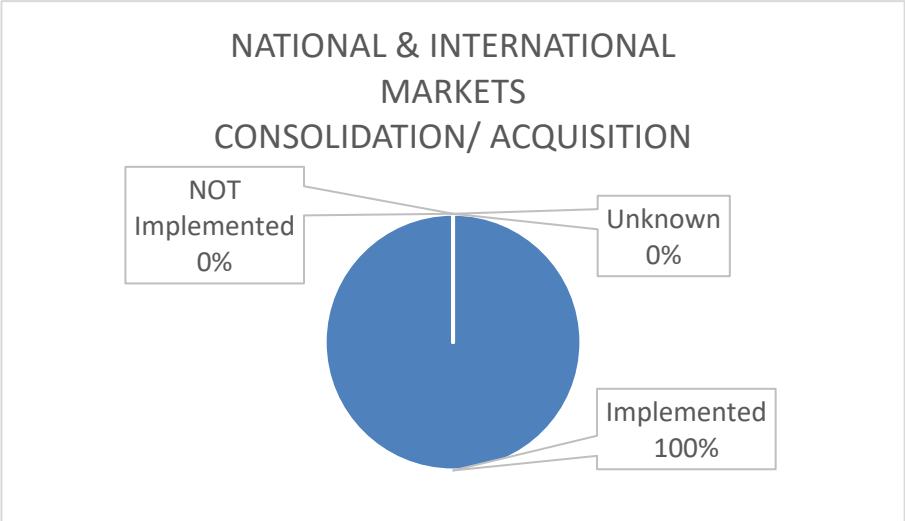


Figure 59: Consolidation or Acquisition of National and International markets

As can be seen from figure 61, the 71% the wine cellars have undertaken some actions in order to meet their employees' needs and incentive their soft skills with ad hoc projects.

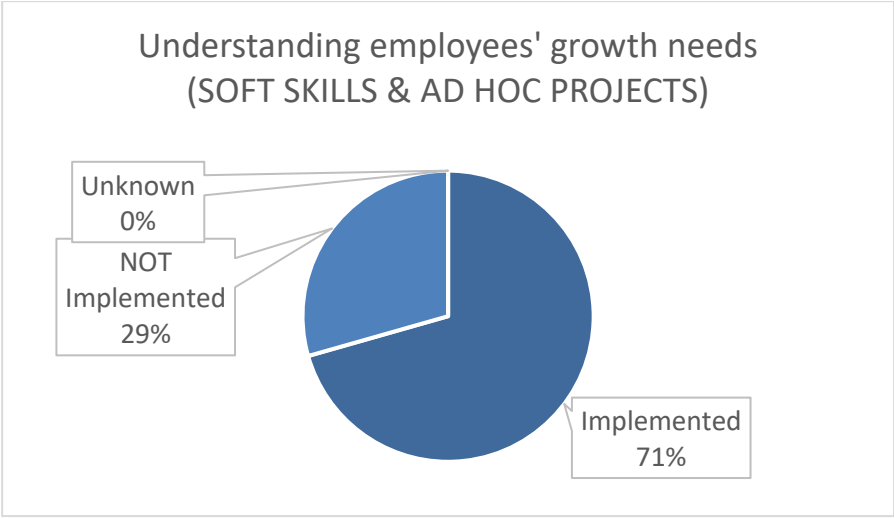


Figure 60: Soft skills and Ad Hoc projects to meet the employees' needs

Figure 62 shows that the 25% are involving migrants in their corporate activities.

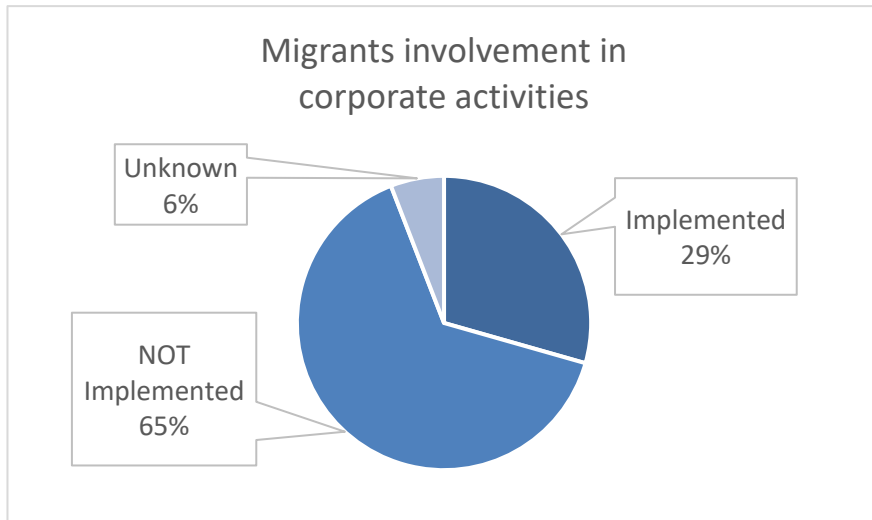


Figure 61: Migrants involvement in corporate activities

The 67% of the wine cellars care about their employees' protection (figure 63). In particular, they fairly incentive the employees through remuneration and valuing their health.

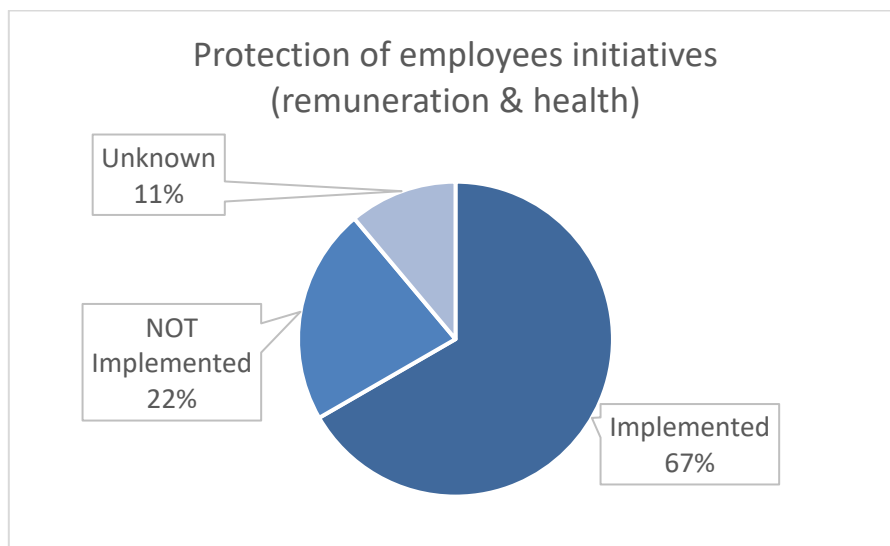


Figure 62: Initiatives to protect the employees

The 61% are trying to exploit the current crisis as an opportunity for change (figure 64).

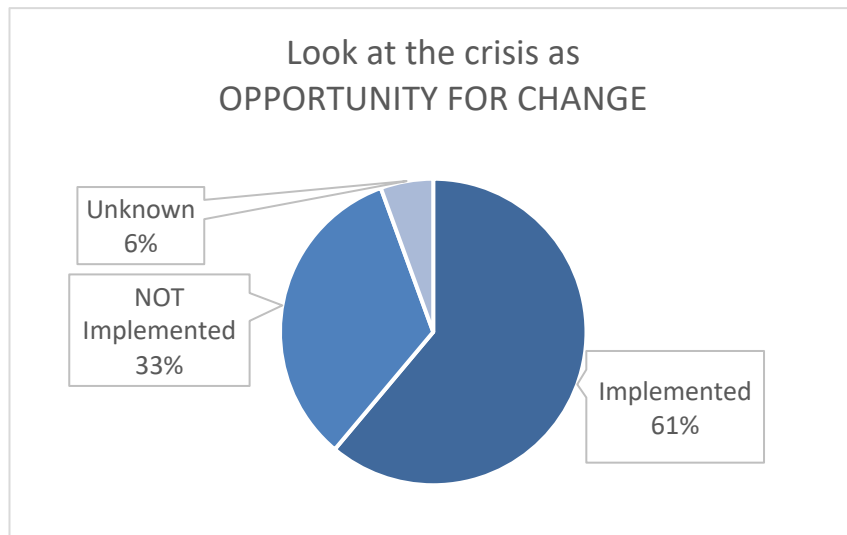


Figure 63: Crisis as opportunity for change

Figure 65 is about making a perception map on the reputation drivers with respect to the wine cellars. The 41% have implemented it, while the 47% haven't.

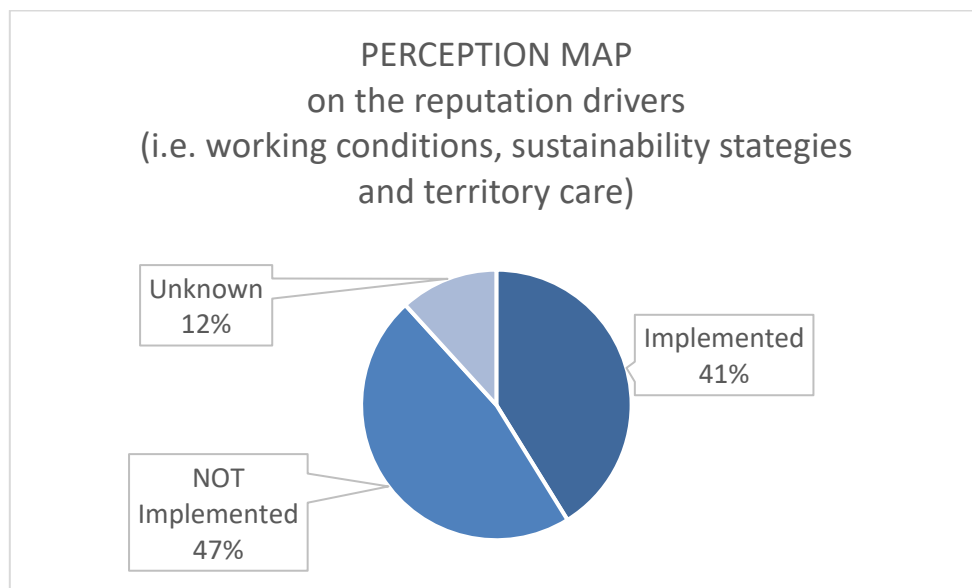


Figure 64: Perception Map on the reputation drivers

As can be seen from figure 66, the majority of the wine cellars (71%) don't have undertaken biodynamic projects, while the 23% have.

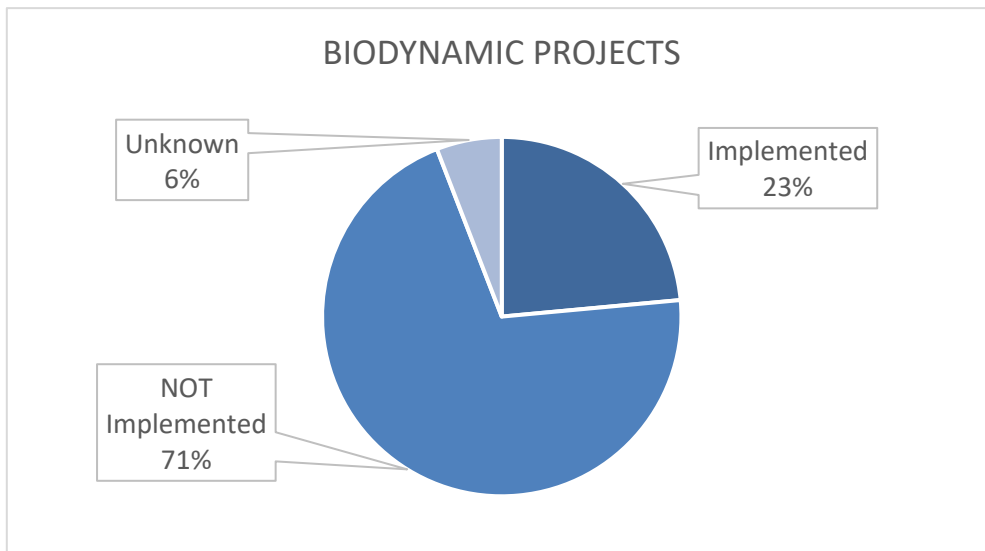


Figure 65: Biodynamic Projects

With regards to the biological projects, figure 67 shows that the 61% of the wine cellars have already implemented some.

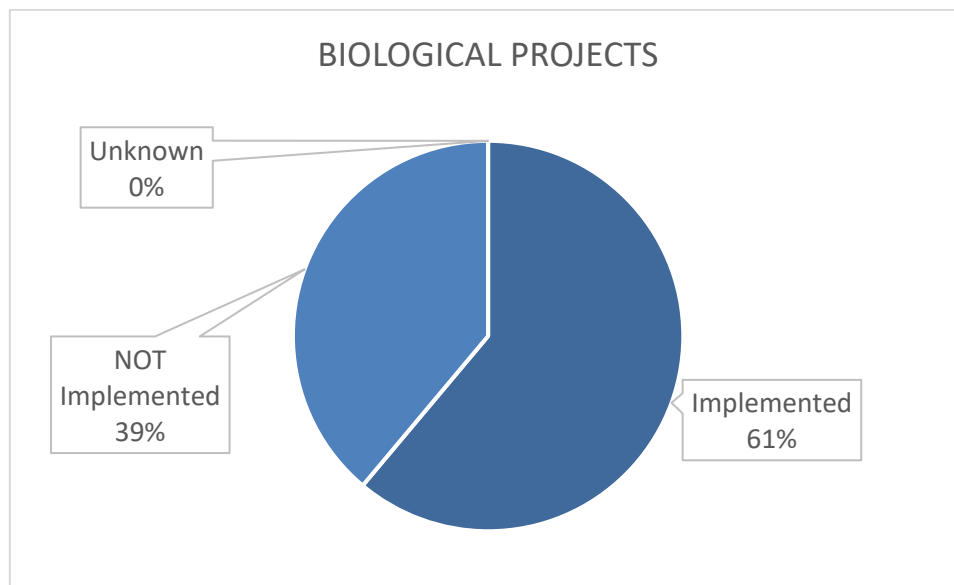


Figure 66: Biological Projects

Figure 68 shows that only the 41% of the wine cellars have implemented agritourism projects.

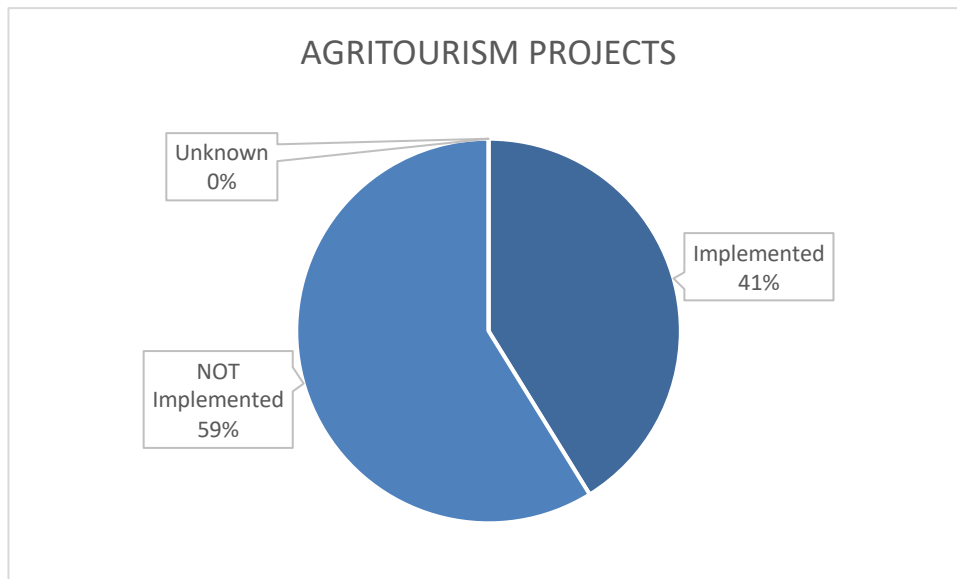


Figure 67: Agritourism Projects

The figures from 69 to 81 show the instruments and practices adopted so far in order to make the Italian wine cellars sustainable and responsible.

The LCA practice has been implemented by the 53% wine cellars (figure 69), while the 18% don't know what it is.

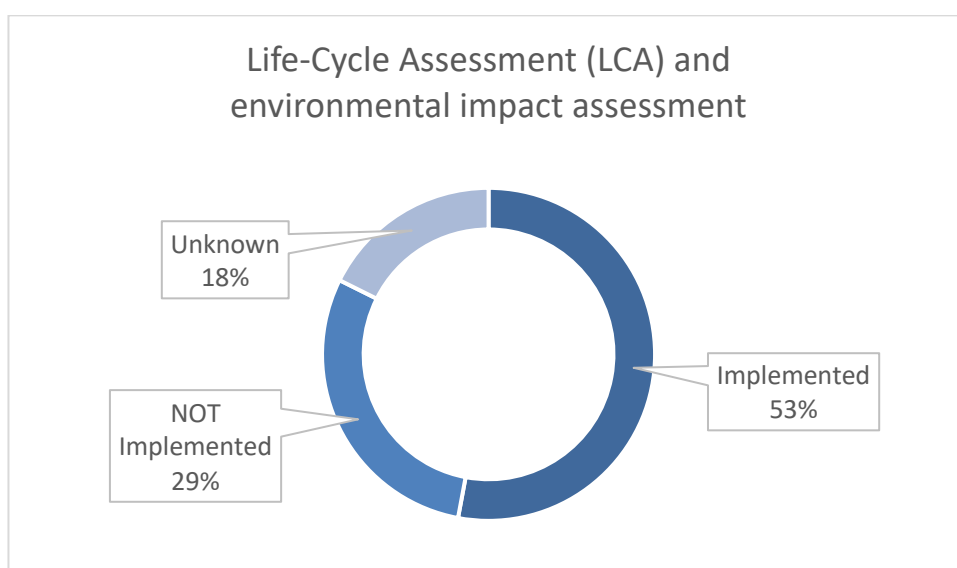


Figure 68: Life-Cycle Assessment (LCA) and environmental impact assessment

Figures 70 and 71 show that the 53% concerns about both Carbon and Water Footprint, while the 35% haven't implemented any initiative to address the environmental problem.

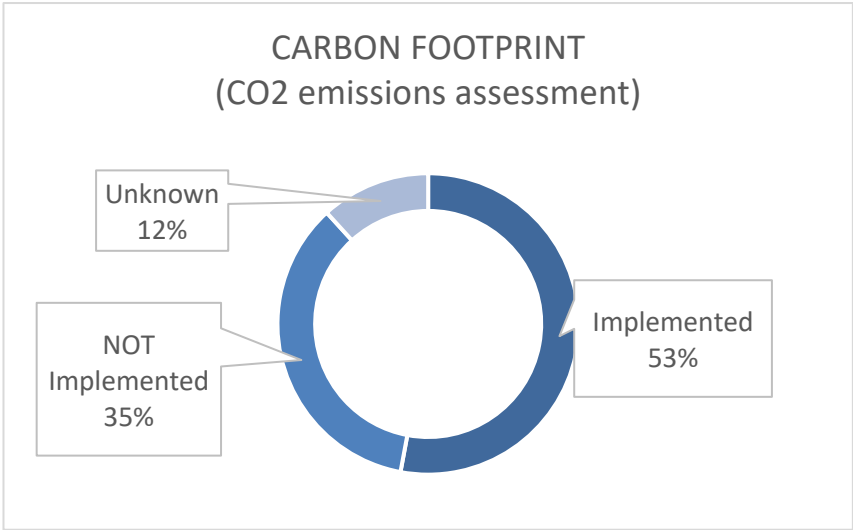


Figure 69: Carbon Footprint

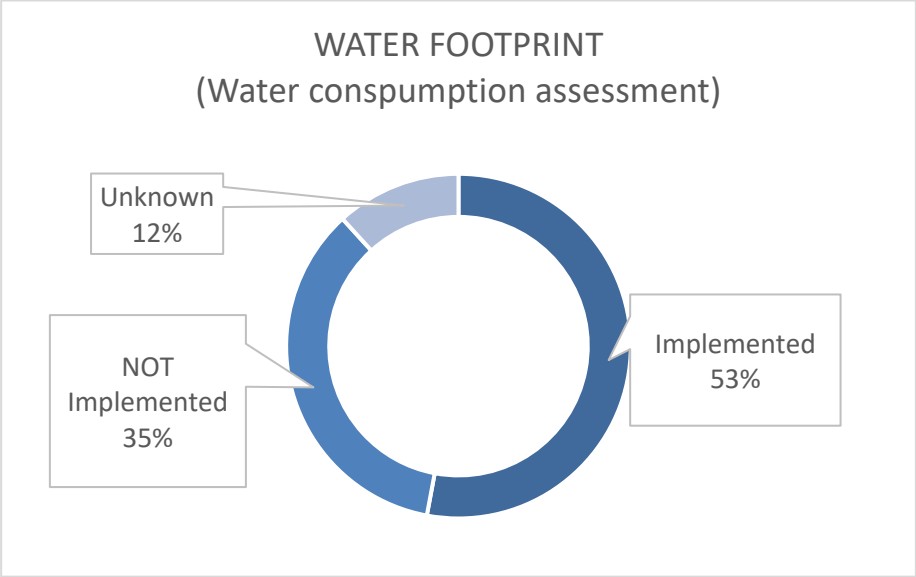


Figure 70: Water Footprint

As can be seen from figure 72, the 35% of the wine cellars already got product certifications.

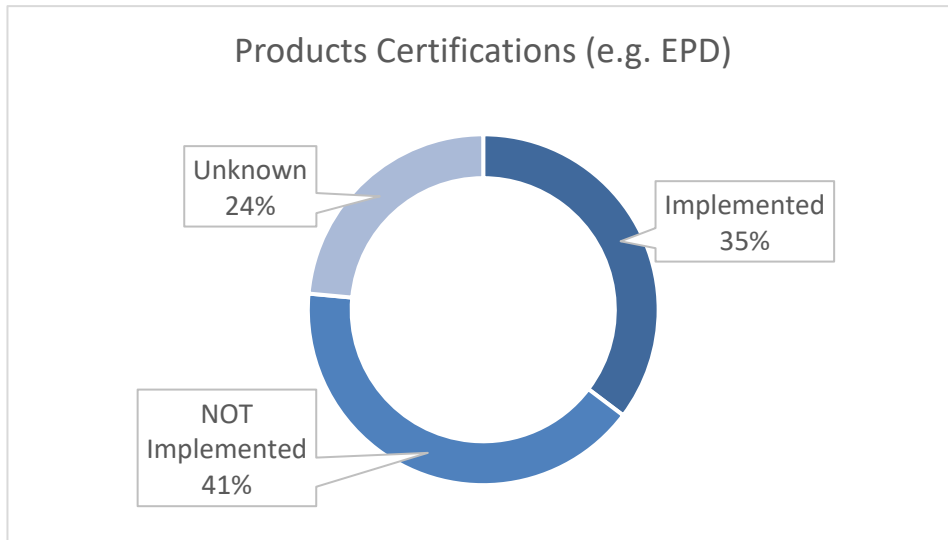


Figure 71: Product Certification

Figure 73 shows that the 39% got the ISO 14001 Certification and implement environment and waste management systems. Moreover, the 22% got the ISO 45001 Certification for health and security management systems in the workplace (figure 74), while the 17% got the ISO 8000 Certification (figure 75) for Corporate Social Responsibility management.

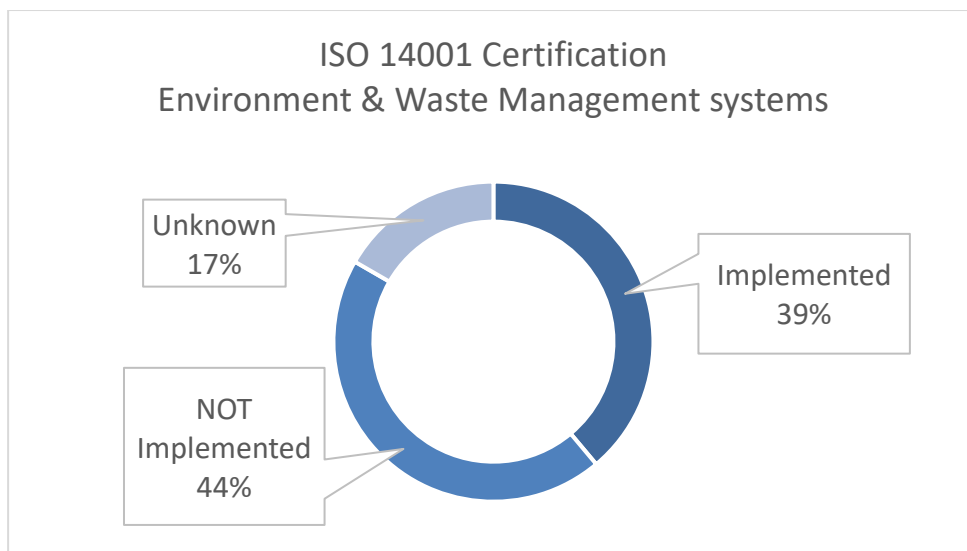


Figure 72: ISO 14001 Certification

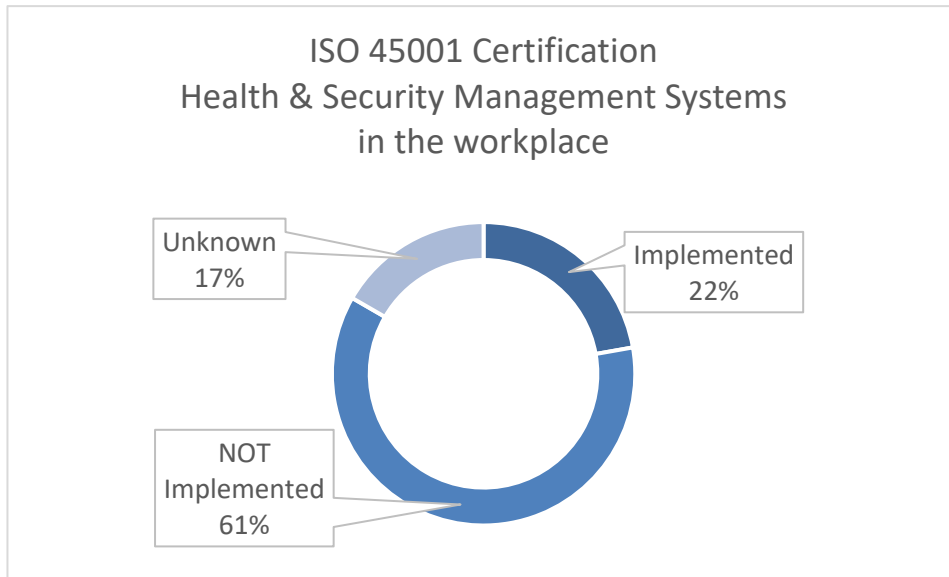


Figure 73: ISO 45001 Certification

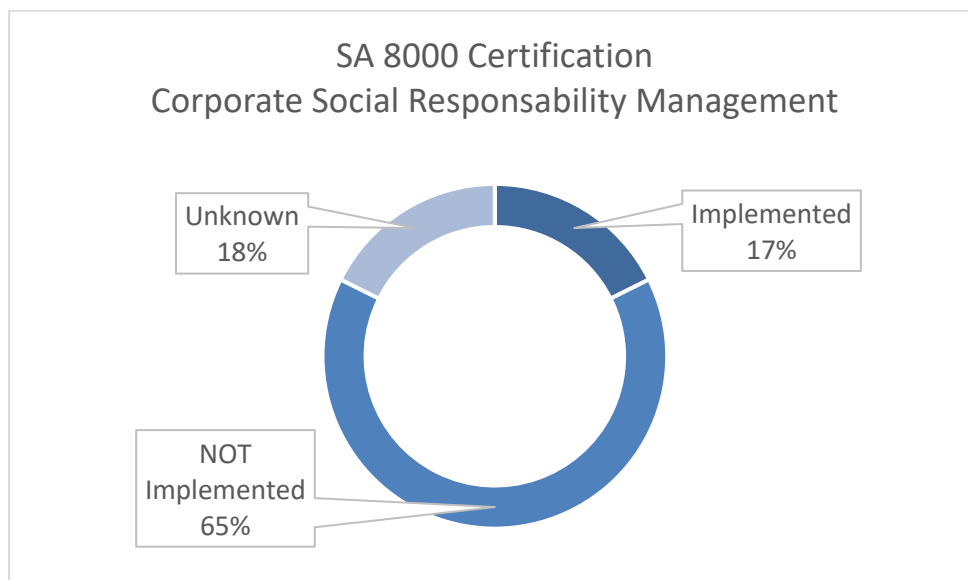


Figure 74: SA 8000 Certification

Figure 76 shows that the 83% have already implemented practices of waste reduction and reuse in the supply chain.

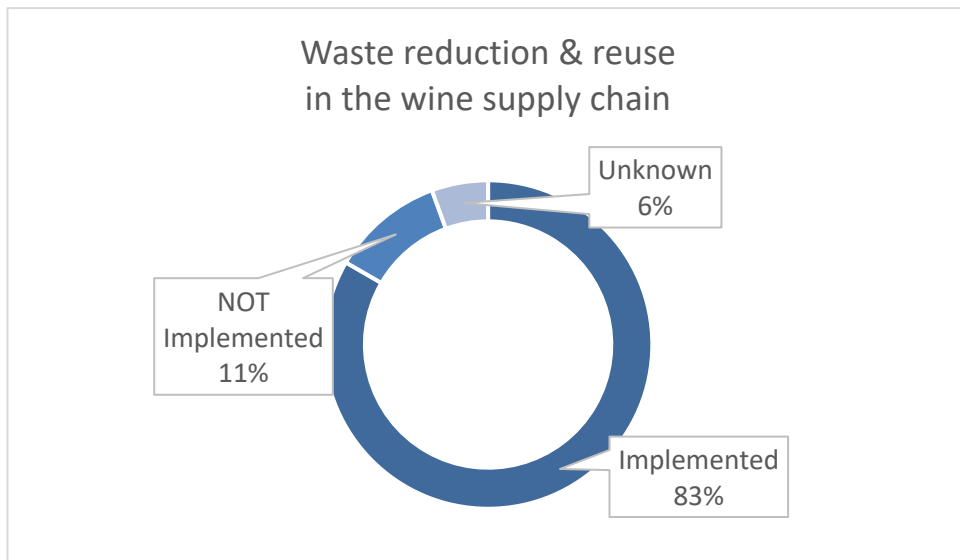


Figure 75: waste reduction & reuse in the supply chain

Figure 77 is about Sustainable Packaging Design. The 67% of the wine cellars have already provided a sustainable packaging.

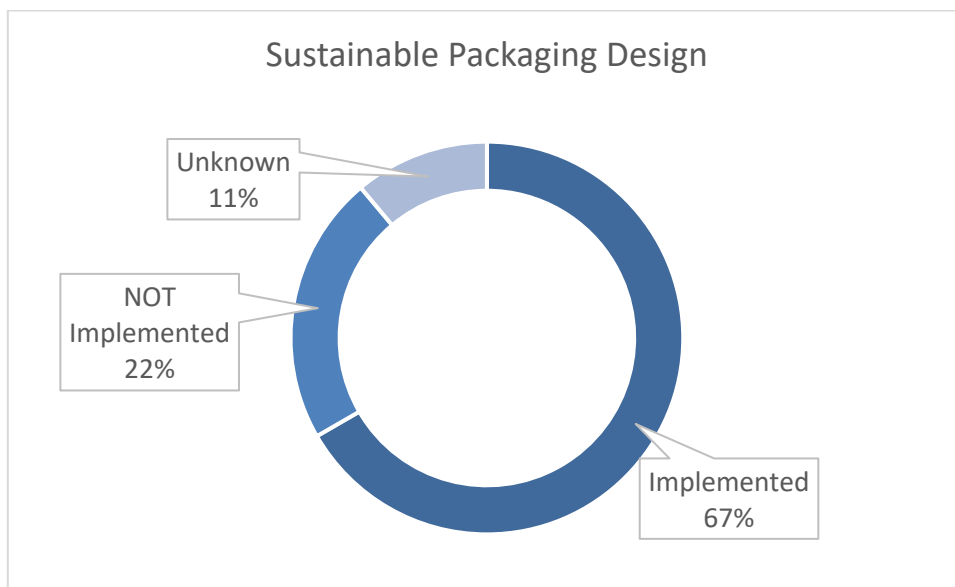


Figure 76: Sustainable Packaging Design

Figure 78 illustrates that 59% of the wine cellars have implemented wastewater treatments.

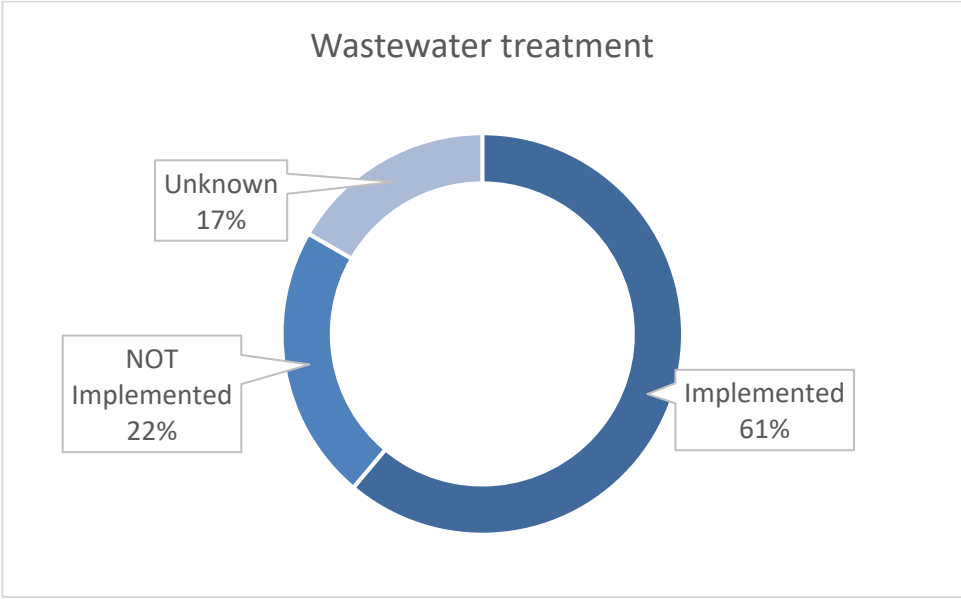


Figure 77: wastewater treatment

As can be seen from figure 79, the 59% have undertaken actions to protect biodiversity, given that the sector is strongly dependent on natural resources.

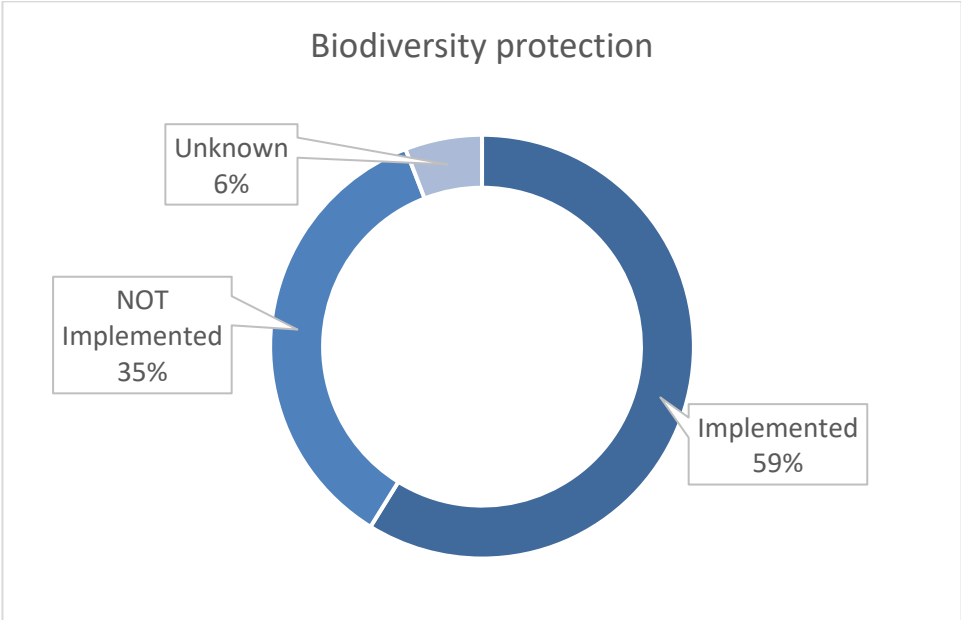


Figure 78: Biodiversity protection

Figure 80 shows that the 44% the wine cellars have replanned logistics.

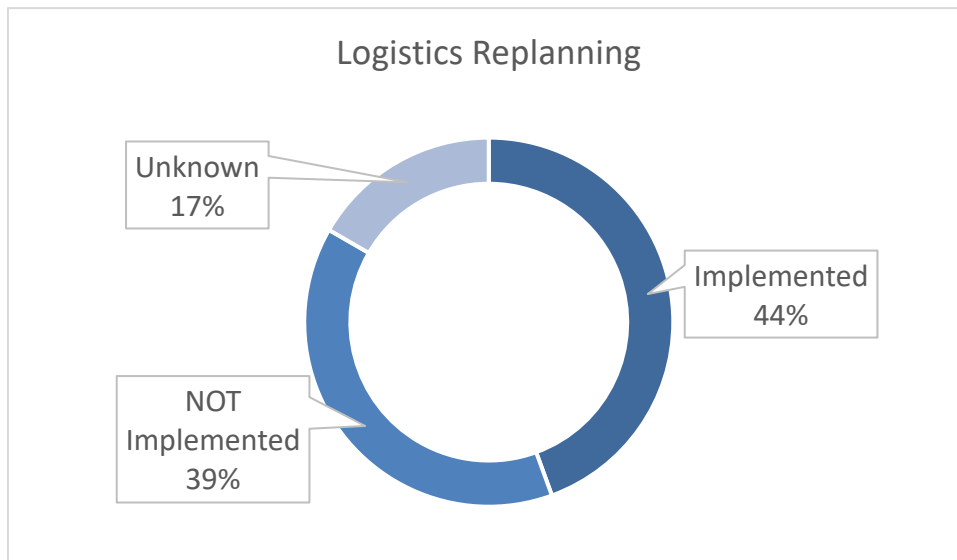


Figure 79: Logistics Replanning

As can be seen from figure 81, the 75% of the wine cellars have redesigned and improved their real estates following sustainable criteria.

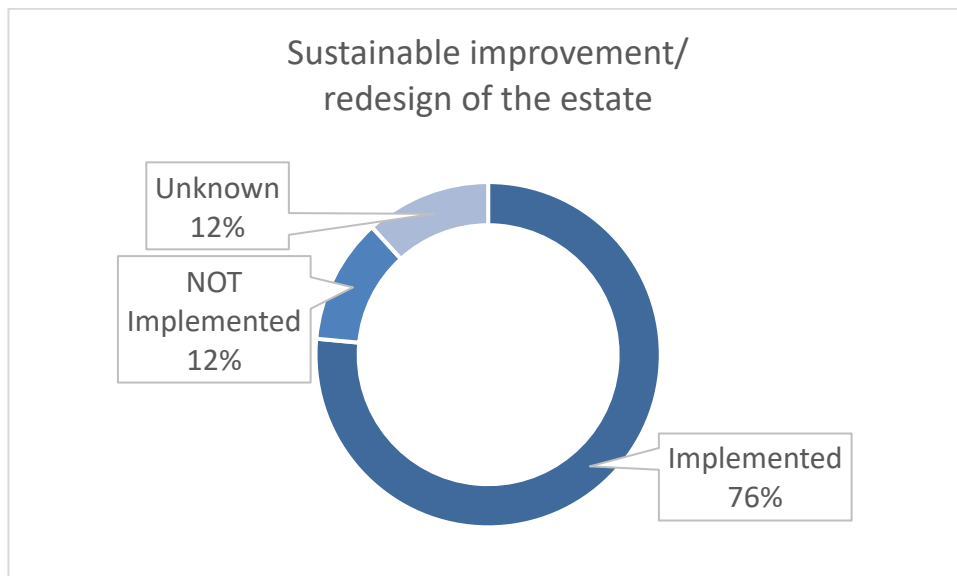


Figure 80: Sustainable improvement/redesign of the estate

Sustainable and responsible initiatives not only optimize the environmental impact but also should value the brand and help build a solid reputation. As a result, such initiatives may attract potential clients and/or investors. However, it is not always easy to communicate to stakeholders the sustainable initiatives which have been undertaken by the firm due to lack of evidence. In particular, figure 82 shows that the 39% of the wine cellars have encountered the issue.

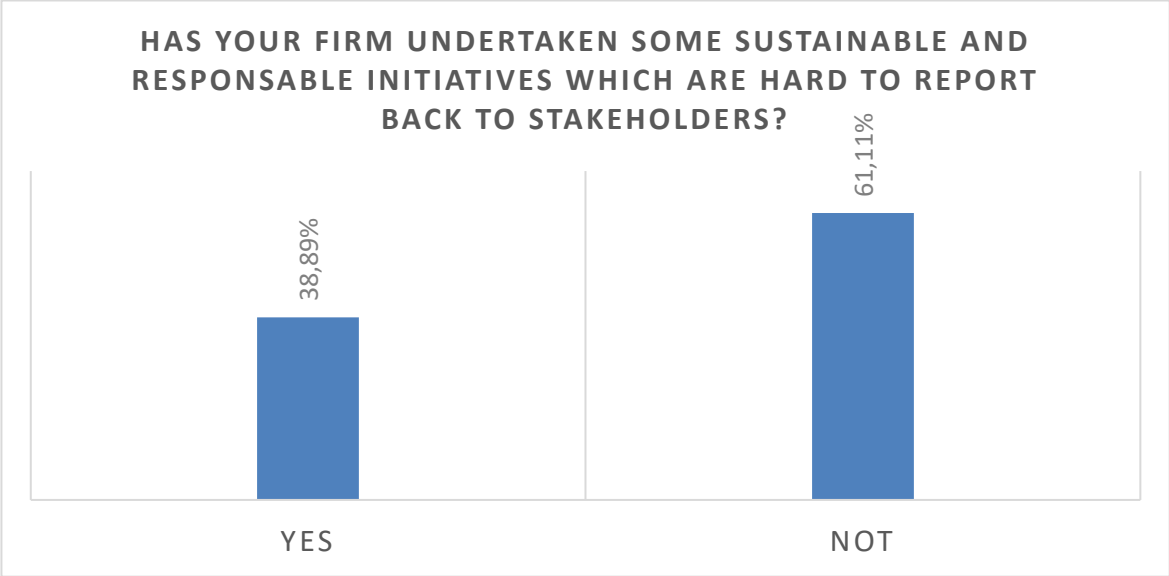


Figure 81: Difficulty in reporting sustainable initiatives to stakeholders

The Italian wine cellars strongly rely on the terroir concept, which lead to the production of wine with unique taste features and inimitable. The graph in figure 83 shows the percentages of the wine cellars relying on this concept. In particular, they have been asked whether they make high quality wine, specific and identifiable from the unique feaures of their land. Indeed, it is made in a delimited area, where the interaction between particular natural, physical and chiminal conditions, soil, geographical area and climate gives their wine unique taste features, which make it immediately recognizable. This is what is called Terroir concept, which makes the most demanding customers recognize the uniqueness and allows the the

Italian wine cellars to pursue the product differentiation strategy. As a result, the 89% claim that their wine actually fits the terroir concept, since their products are inimitable and then unique.

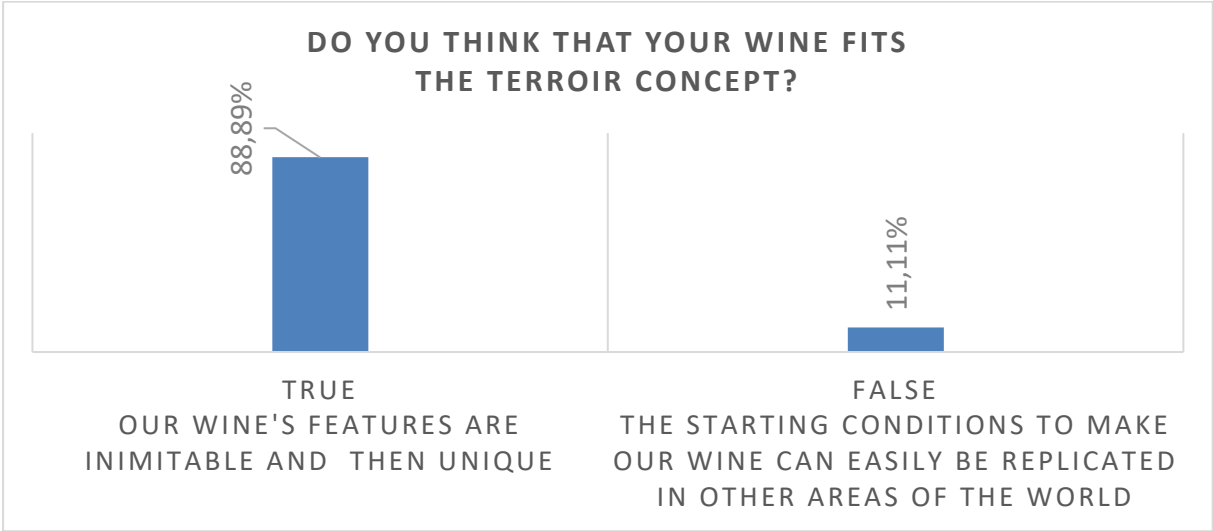


Figure 82: Terroir concept

Figure 83 shows that a significant percentage (28%) of the sample limit to experiment and innovate due to their adherence to some certifications.

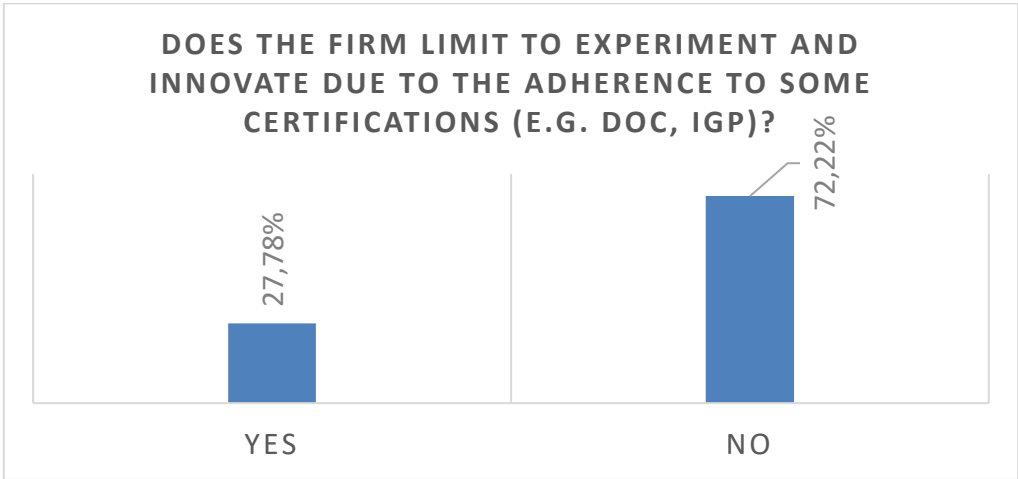


Figure 83: Limit to innovate

Figure 84 shows that the 44.44% of the cases expect the structural corporate welfare to decrease only slightly due to the pandemic, while another 50% expect it to be significant. A

slight decrease would imply less than the 20% of stressed employees and also new issues to be managed. Significant decrease means that the impact would be between the 20% and the 50%.

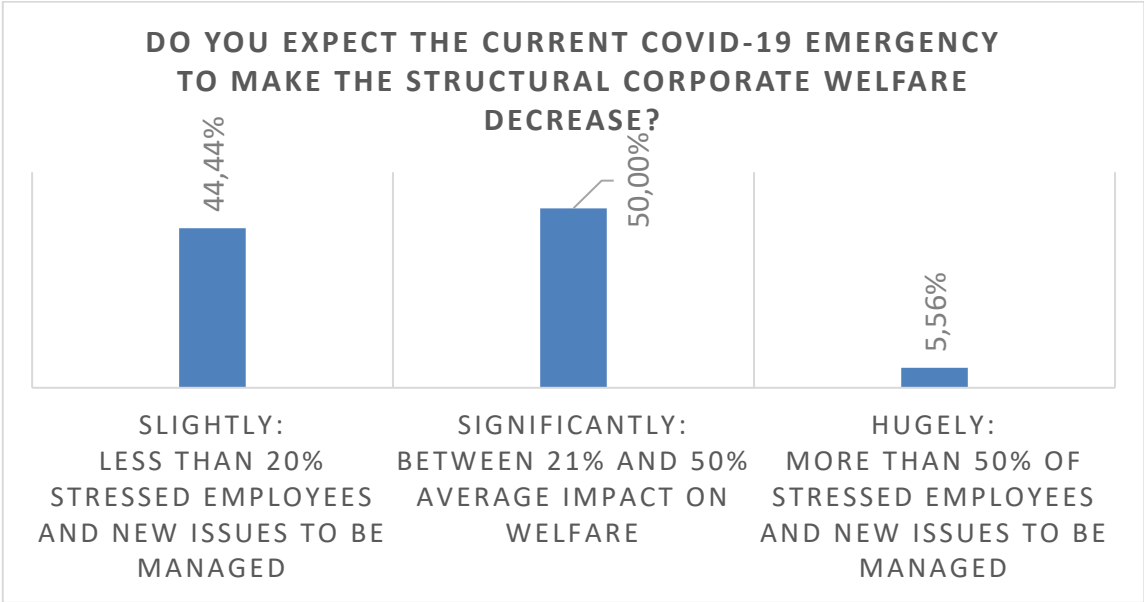


Figure 84: estimate of the corporate welfare decrease due to the pandemic

3.3 Correlations

Correlation is a statistical technique that can show whether and how strongly pairs of variables are related [43]. The second questionnaire’s results are characterized by some correlations which are shown in the following paragraphs.

3.3.1 Firm size & other variables

The wine cellars’ size and the average amount of bottles they produce every year are correlated. The size is expressed in terms of number of employees, average annual revenues and total assets. The micro firms have less than ten employees and annual revenues or total assets lower than 2M€. Small firms have more than 10 employees and revenues or total assets lower than 10 M€. Big firms have more than 250 employees and revenues higher than 50 M€. The bottles amount is simply measured in bottles units. That said, figure 85 shows that the bigger is the wine cellar the higher is the amount of annual bottles production.

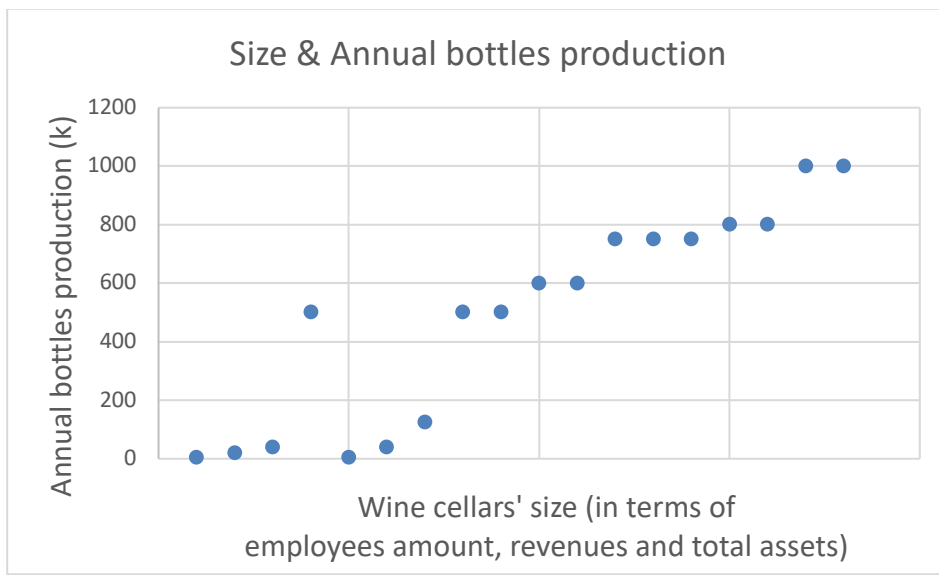


Figure 85: Correlation between size & annual production

In particular, only 25% of the micro wine cellars produce more than 500k units per year, while 79% of the small and big wine cellars produce more than 500k units per year (figure 86).

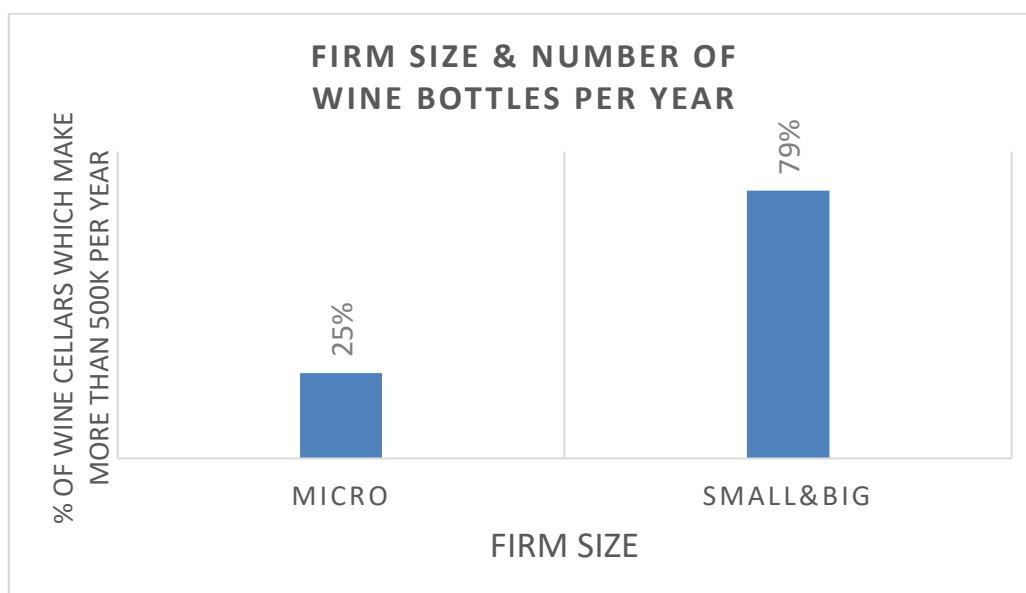


Figure 86: size & annual production – percentage of firms which produce more than 500k

As can be seen from figure 87, the size of the wine cellars is also correlated to their foundation year. In particular, the older is the wine cellar, the bigger it is.

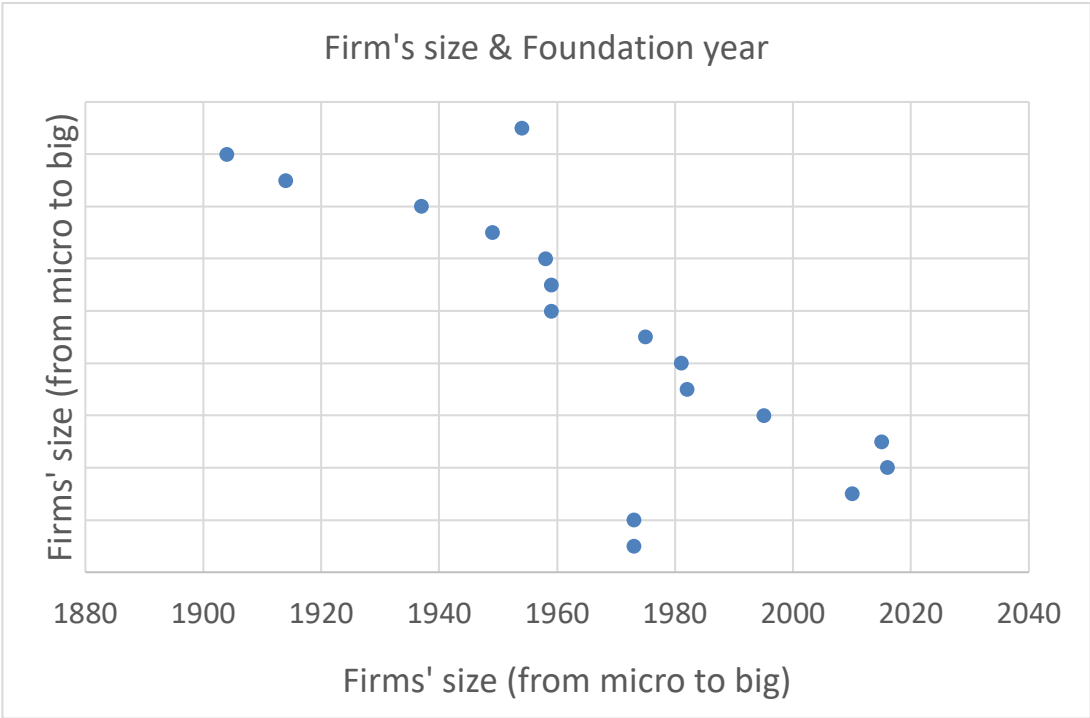


Figure 87: Size & Foundation year

More specifically, figure 88 shows that none of the micro wine cellars were founded before the year 1950, while 50% of the wine cellars founded after the year 1990 are micro.

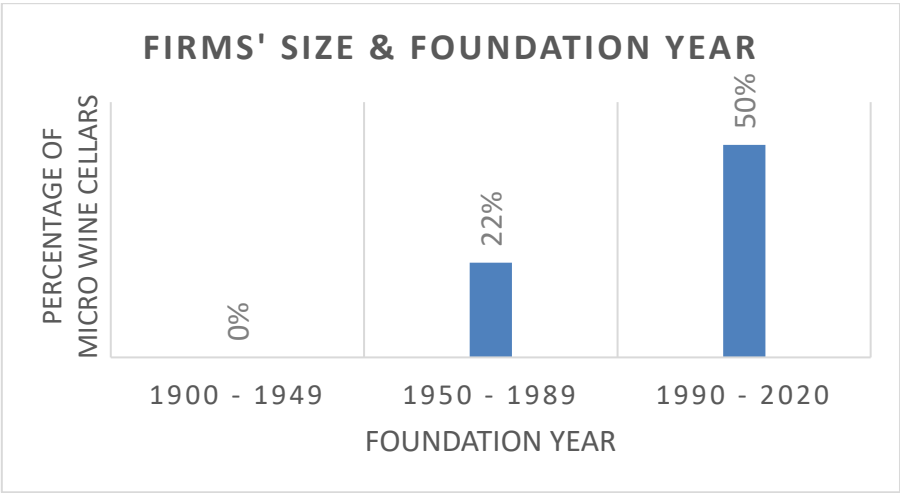


Figure 88: Size & Foundation year - percentage of micro wine cellars

Figure 89 shows the correlation existing between the size of the wine cellars and the percentage of stages of the wine production process which are vertically integrated. Indeed, the smaller are the wine cellars the lower is the percentage of stages which are vertically integrated.

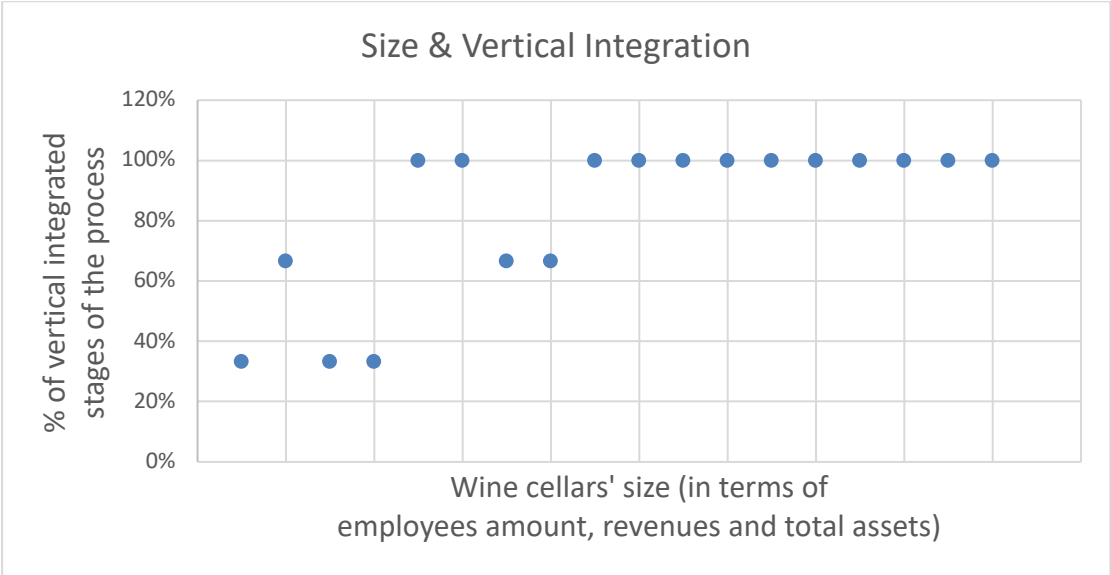


Figure 89: Size & Vertical Integration

Figure 90 underlines an additional feature to the previous correlation. Only 50% of the micro wine cellars are totally vertically integrated (undertake the whole stages of the wine production process), while the percentage raises to 71% in case of small and big wine cellars.

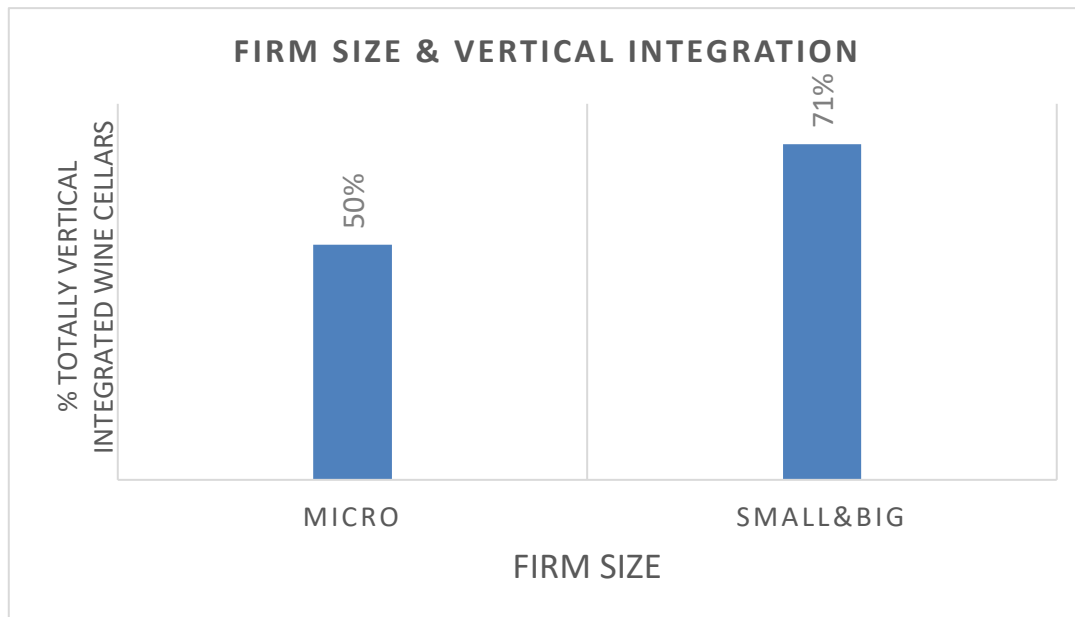


Figure 90: Size & Vertical Integration - percentage of totally vertical integrated wine cellars

The size of the wine cellars also influences the adoption of some communication channels. In particular, figure 91 shows that all the micro firms rely on the word of mouth with respect to only the 50% of the small and big wine cellars. Moreover, only 43% of the micro wine cellars have taken part in exhibitions, while the percentage doubles in case of small and big ones.

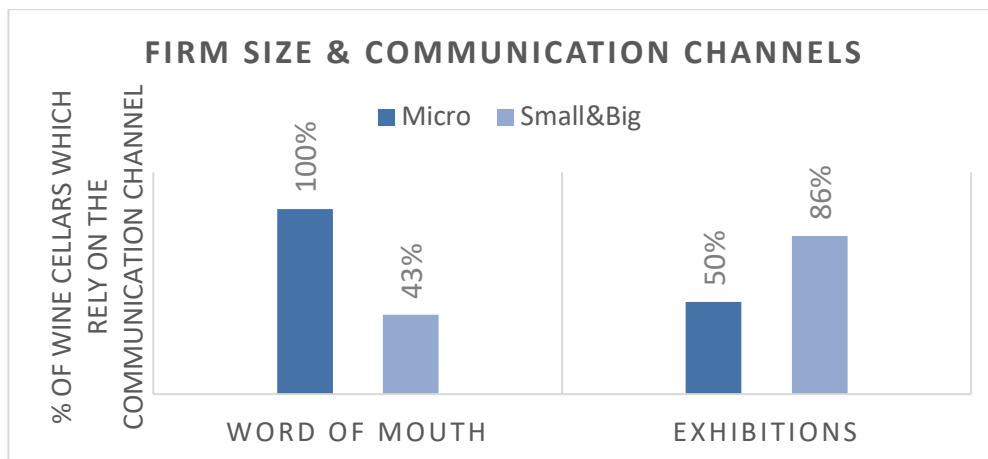


Figure 91: Size & Communication Channels - Word of mouth and Exhibitions

Independently of the size, wine cellars are likely to provide extra services in addition to the strict wine production. One of the services which are often provided is the use of their conference rooms. However, the provision of this service seems to be influenced by the size

of the wine cellars. Indeed, figure 92 shows that only the 25% of the micro wine cellars provide their conference rooms to external users, while the percentage significantly raise to 43% in case of small and big wine cellars.

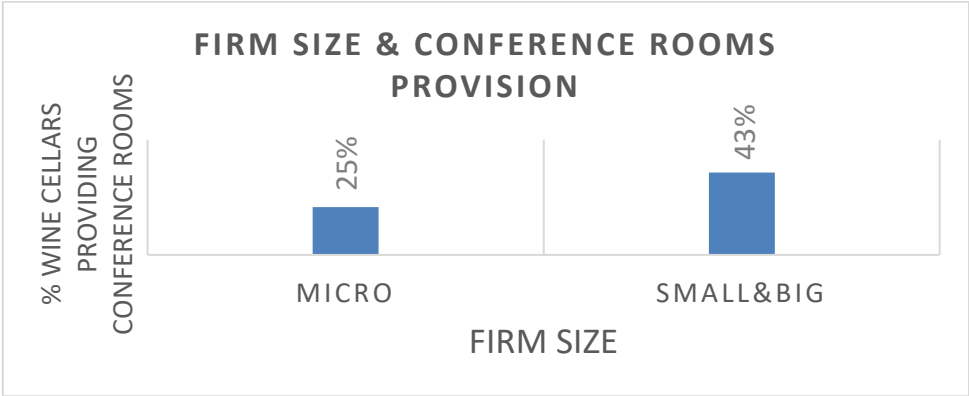


Figure 92: Size and Extra services provision - Conference rooms

Figure 93 shows the correlation between wine cellars’ size and the propensity to undertake initiatives which may deliver a social impact. In particular, none of the micro firms interviewed are involved in activities which aim to engage the local community in ethical and educational issues. By contrast, a significant share (79%) of the small and big wine cellars do have undertaken such initiatives.

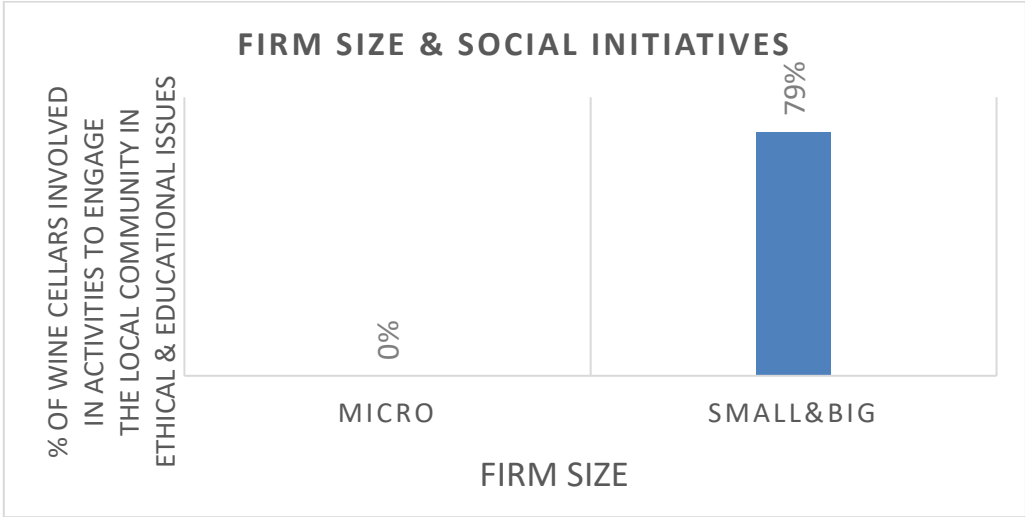


Figure 93: Size & Social Initiatives - local community engagement in ethical and educational issues

Also the involvement in environmentally sustainable initiatives varies according to the wine cellars’ size. As can be seen from figure 94, the correlation has resulted in case of carbon and water footprint assessment and the adoption of sustainable packaging designs. Specifically, none of the micro wine cellars undertake the sustainable activities previously mentioned. On the other hand, 64% of the small and big wine cellars assess their carbon and water footprint, while 86% adopt sustainable packaging for their products.

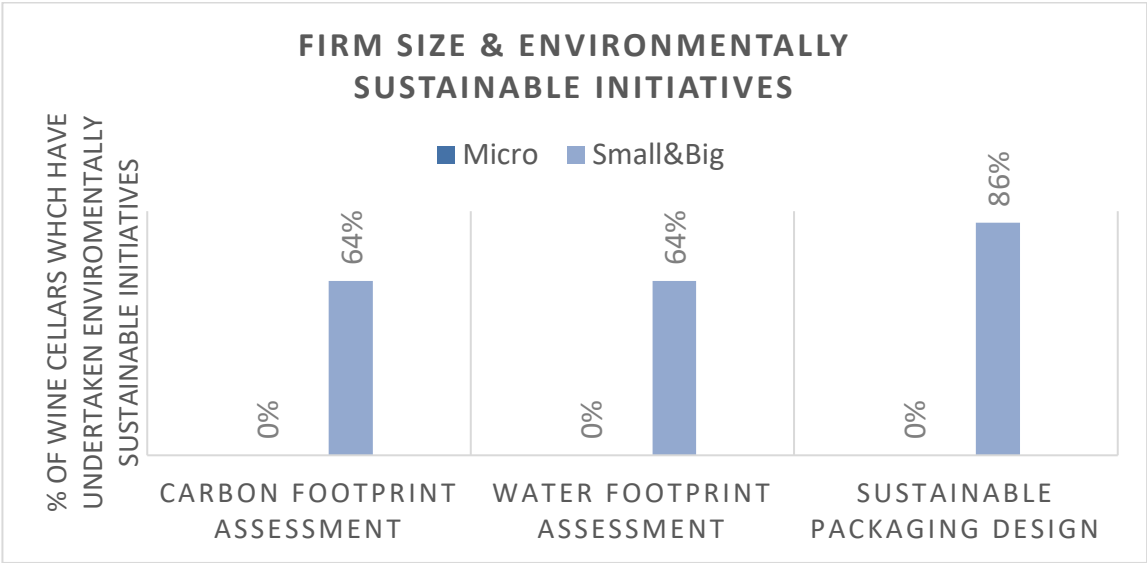


Figure 94: Size & Environmentally sustainable initiatives – percentage of firms which undertake sustainable initiatives

The last variable correlated to the wine cellars’ size is the expectation of corporate welfare decrease due to the pandemic. Figure 95 shows that the 75% of the micro wine cellars expect it to be significant (more than 20% average impact on welfare), while only the 50% of the small and big wine cellars expect it to be significant.

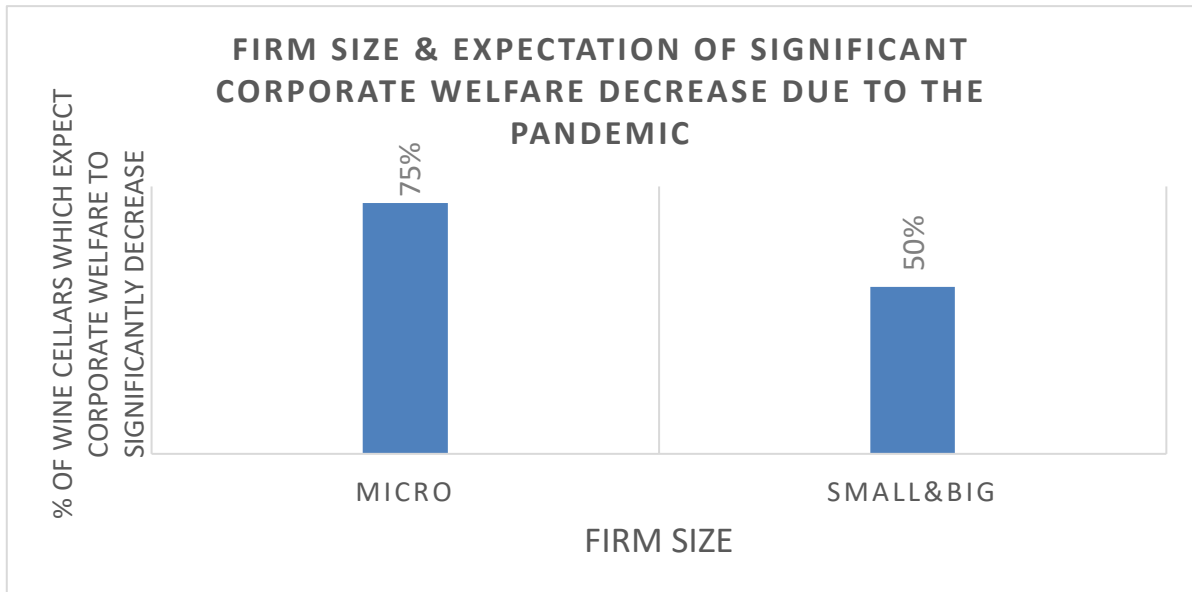


Figure 95: Size & Corporate Welfare decrease expectation

3.3.2 Foundation year & other variables

Figure 96 shows that the younger are the wine cellars, the more they are likely to look at the crisis as opportunity for change. In particular, only 25% of the wine cellars which were founded in the first half of the last century are trying to exploit the current crisis as an opportunity for change. The percentage becomes three times higher in case of wine cellars which were founded within the last thirty year.

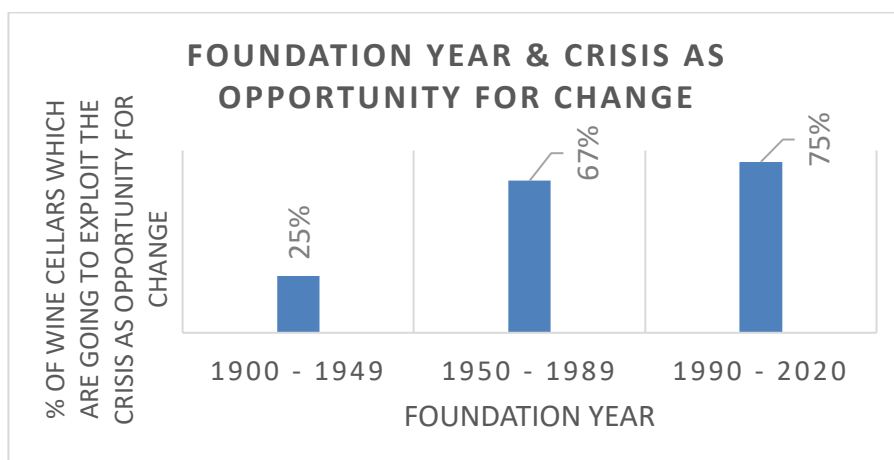


Figure 96: Foundation year & Crisis as opportunity for change

As can be seen from figure 97, the foundation year also influences whether the wine cellars have replanned their logistics. Indeed, 75% of the wine cellars which were founded within the last thirty years have replanned their logistics. The percentage drops to 25% for the wine cellars which were founded in the first half of the last century.

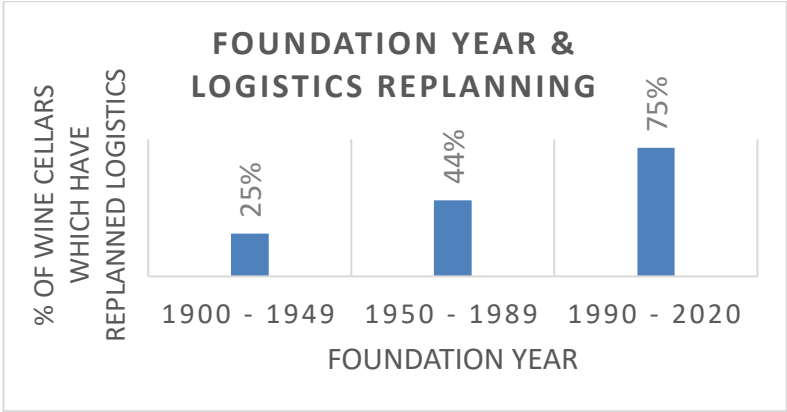


Figure 97: Foundation year & Logistics replanning

3.3.3 Annual bottles production & Services

Figure 98 shows the correlation existing between the average amount of bottles produced every year and the number of provided services. In particular, only 67% of the wine cellars which produce more than 500k bottles per year also provide at least three different services. On the other hand, all the wine cellars producing less than 500k bottles per year provide three services or even more.

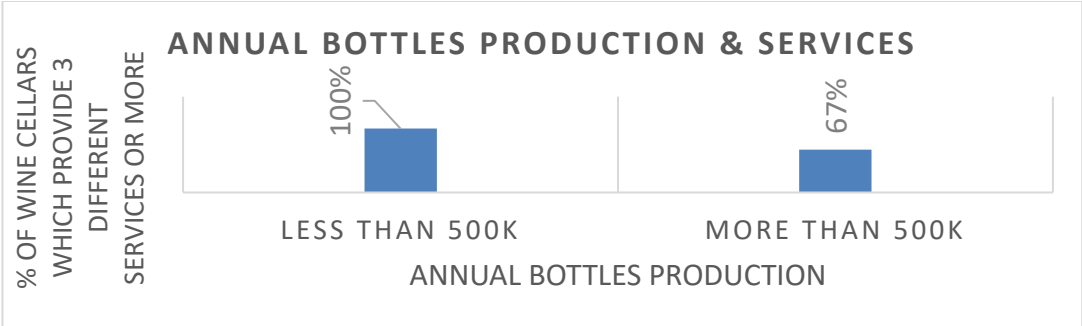


Figure 98: Annual bottles production & Additional services provision

3.3.4 Vertical integrated stages of the wine production process & other variables

Figure 99 shows how the number of stages of the wine production process and the number of provided services are correlated. All the wine cellars which cope with the grape-harvest stage only provide also five different services or even more. By contrast, only 93% of the wine cellars which have vertically integrated the whole process provide less than five services.

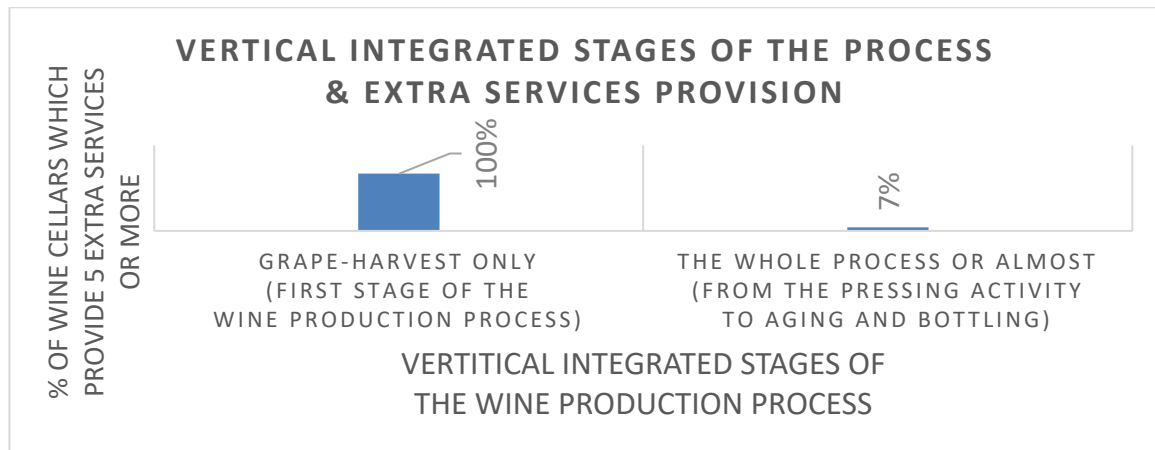


Figure 99: Vertical Integration & Additional services provision

Figure 100 shows the correlation between the vertical integrated stages of the process and the percentage of wine cellars which have undertaken some sustainable and responsible activities. In particular, the activities which are influenced by the vertical integrated stages are the assessment of the Life-Cycle, carbon and water footprint and the ISO 14001 certification. As can be seen from the graph, none of the firms which cope only with the first stage of the process have undertaken the activities previously mentioned. In addition to this, the more are the vertical integrated stages, the more are the sustainable and responsible activities undertaken. Indeed, 50% or 58% of the wine cellars which have vertically integrated the whole production process have also undertaken those activities.

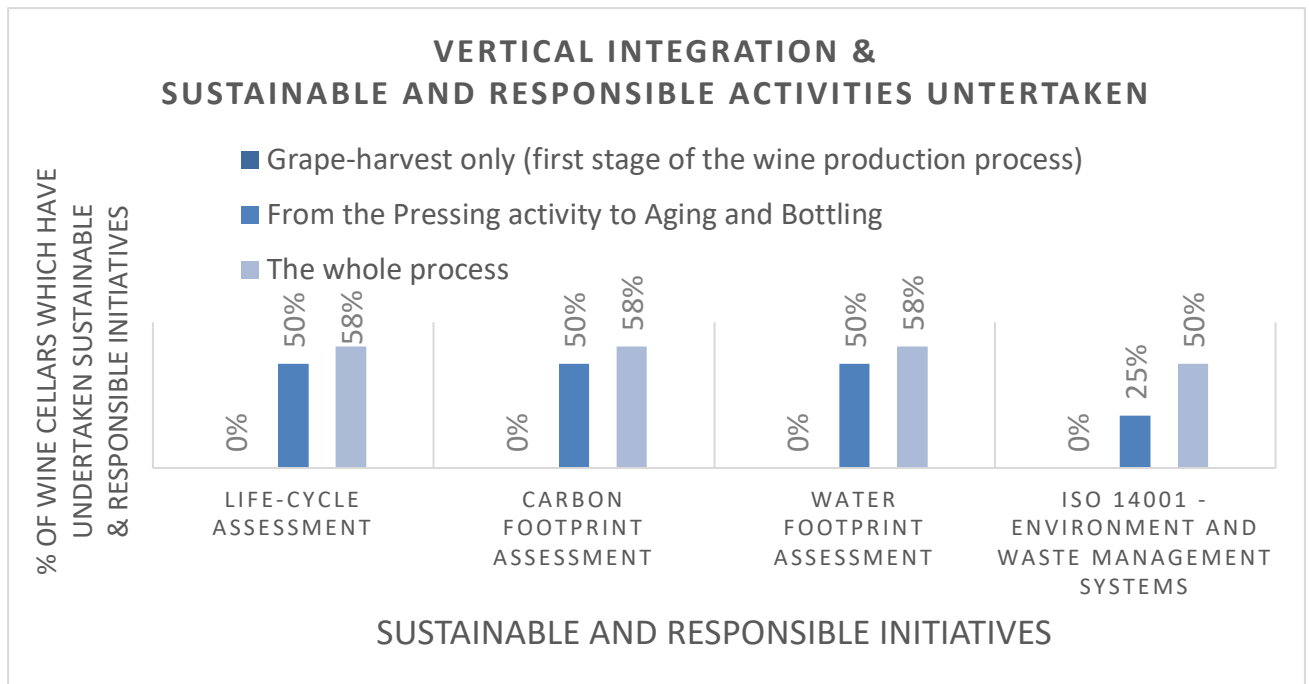


Figure 100: Vertical Integration & Sustainable and responsible activities

3.3.5 Considerations about the correlation analysis

Based on the correlation analysis presented above, it could be suggested that the firms' size may influence several other aspects, such as annual production, vertical integration, communication channels adopted, provision of additional services, propensity to undertake social or environmental initiatives and future expectations. Moreover, the foundation year affects the firms' size, the way to look at the current crisis and the propensity to replan logistics. Furthermore, it is interesting to see that the number of services provided is negatively correlated to both the annual bottles production and the percentage of vertical integration. Indeed, it makes sense that the more the wine cellars are involved in traditional bottles sales and/ or traditional activities of the wine production process, the less they are likely to also provide additional services. Lastly, it is reassuring that the vertical integration level is positively correlated to the sustainable activities undertaken, since it can be assumed that the higher is the amount of undertaken stages of the production process, the higher the wine cellar is likely to impact the environment.

3.4 Interview to a micro wine cellar: the case of Monte Oliveto di Casà

A detailed interview has been carried out with one of the owners of the firm called Monte Oliveto di Casà, which is based in Monticello D'Alba (CN), Italy and was founded about ten years ago. It can be classified as a micro firm, since the number of employees is lower than ten and the average annual revenues amount to less than 2 M€. The owner defined the staff as a close-knit team that enjoys keeping traditions and supporting regional products. The business model has deeply been changed throughout the ten years lifetime.

At the beginning, they coped with two different business lines. On the one hand, they implemented all the traditional activities of the wine production process, so that they also got their own wine label to make their wine. On the other hand, they also provided some extra services.

As time went by, they realized where they are the best, so that they innovated their business plan. Hence, in the year 2016, they deeply renewed their business. For what concerns the wine production process, they drastically vertically disintegrated. As a result, now they only cope with the agricultural stages for the grapes production, i.e. the early phase of the whole wine production process. Once grapes are produced, these are then supplied to actual wine makers. The grapes varieties which are treated are strictly the traditional ones from the local area, such as Nebbiolo and Barbera. Apart from the agricultural side of the business, they started to focus mostly on services provision, specifically highly customized events organization with minimum thirty guests, such as weddings, other kind of parties and business meetings. In this context, their strengths points are the restaurant service and the suggestive location. Two of the human resources take each customer by the hand, build an ad-hoc menu and carefully plan the whole event in all the details. Usually, this also implies engaging local suppliers in order to meet particular customers' requirements which may concern aspects which are not treated by the firm. For example, when hosting business meetings in their

conference rooms, they engage their reliable supplier to provide technical tools, such as projectors, microphones and speakers. Thus, their current value proposition is providing a versatile location which is then able to cover the specific needs of each customer in all the aspects of the event with a particular attention to the restorative one. Their current biggest share of the business concerns weddings planning.

The two sides of the business, i.e. the agricultural and services sides, are ultimately connected. Indeed, during the events, providing wine which is said to come from home-grown grapes turns out to be effective from a marketing standpoint. However, the wines provided at the events are not only the ones produced from the home-grown grapes, since they vary according to the specific customers' needs.

3.4.1 How this case is consistent with the general results of the questionnaire

The results of the interview have been analyzed and then compared to the correlations, which were deducted from the results of the questionnaires and presented in the paragraph 3.3 of the thesis. There are several aspects of the Monte Oliveto di Casà case that are consistent with the previous results. In particular, as the majority of the micro firms of the sample, its foundation occurred recently (figures 87 and 88) and the number of the vertical integrated stages of the wine production process is low (figure 89). Moreover, consistently with the results reported in figure 99, although its engagement in the wine production process stops at the early phases, the firm is greatly engaged in the services market. With this regard, the Monte Oliveto di Casà differentiates itself from the other micro firms by providing their conference rooms to external guests. Indeed, according to the figure 92, only 25% of the micro firms offer this service. As expected from the result shown in figure 91, as all the other micro firms of the sample, also Monte Oliveto di Casà strongly relies on the word of mouth as communication channel.

3.4.2 Its impact on the environment

In terms of impact on the environment, the firm monitors neither its carbon nor water footprint of the agricultural activities and this is consistent with the result shown in figure 94. However, Monte Oliveto di Casà is currently working on making its grape as biological as possible. An additional and even relevant sustainable initiative undertaken concerns the food waste reduction, since the restaurant service belongs to its core competences. The owner of the firm underlined that, at the beginning of the activity, they realized that at the end of each event the amount of wasted food was significant. Thus, event after event, they have analyzed the restorative activities in details and, consequently, optimized the quantities of dishes made by the chef. As a result, they almost totally avoided food-waste and now the owner can hardly remember the last time they had to throw residual food. It was also underlined that such a great result was facilitated by the fact that they know in advance the number of guests who are going to attend each event. Otherwise, in case of traditional restaurants that are open to the public, food-waste may still be an issue.

3.4.3 Its impact on society

The firm Monte Oliveto di Casà greatly affects social aspects. Since the cycle of weddings planning is quite long, the firm is able to build not only customers' loyalty but also brand reputation. They are widely active in communicating the corporate values. Indeed, they have the opportunity to do that during the long relationships with the clients to organize the events through their suggestions and choices. For example, they always select local and biological products. The firm also takes care of their employees: both the chef and the employee in charge of the vineyard management take from 2 to 4 specialization courses per year, which are beyond the mandatory ones. Furthermore, it involves migrants in agricultural tasks as it is common in the wine sector. The broad involvement of the wine cellar in social activities and

the consequent influence to the local community make the firm differentiates itself from the other micro firms of the sample, whose result is shown in the figure 93.

3.4.4 The interviewee's opinion about SROI

At the end, the interviewee was asked to share his opinion about the SROI framework and whether this could be expected to be useful to his firm. Understandably, he thinks that the size of the firm may influence the utility of such a methodology. In particular, one of the main features of the SROI is the stakeholders' involvement, so that the firm can realize its impact beyond the limited beliefs of the executives. In the particular case of a micro firm, the number of stakeholders involved is so low that each of them is regularly in contact with all the others. As a consequence, he assumes that in case of micro firms the SROI may lose part of its utility.

3.5 Interview to a SME: the Duca di Salapatura, Sicilian wine group

An additional interview has been carried out with the internal quality and food safety manager of Duca di Salapatura, Sicilian wine group. Initially, this enterprise was supposed to be the object of the SROI case study. However, because of the activities' slowdown due to the current pandemic, it was not possible to collect the other stakeholders' opinions on time. Both the interview's outcome and the structure of the four questionnaires (appendices B, C, D and E), which were prepared for the other stakeholders, have been included in the thesis anyway as they are still part of the work which has been carried out and may be useful for future developments.

3.5.1 The Duca di Salapatura wine group

To the Duca di Salapatura group belong three estates, two of them are located on the outskirts of Palermo, while the third is located in Marsala (TR). From the first half of the 19th century to today, Duca di Salaparuta, Corvo and Florio have helped to shape the history of Sicily and Italy. The Duca di Salaparuta Group owns three historic wine brands that represent Sicily and Italy worldwide: Corvo and Duca di Salaparuta, founded in 1824, and Florio launched in 1833. The companies together today constitute the largest private wine group in Sicily. They

express the island's history and its land through their suggestive Estates and the historic Marsala (TR) and Casteldaccia (PA) Wine Cellars. Since the total amount of employees is 85 and the average annual revenues are 35 M€, the Duca di Salapatura group is classified as a small- medium sized enterprise (SMEs).

3.5.2 Products and Services

With respect to the wine bottles, the enterprise entered in two different markets with two different quality products. In particular, high quality wines are sold in their two wine shops and to restaurants, while the lower quality wines are sold to large retailers. The firm undertakes the whole wine production process, from the grape-harvest to the bottling stage. The grape varieties which are treated are nero d'avola, grillo, chardonay, grecanico, frappato, insolia, nerello mascalese and moscato bianco (MAP). However, only two of the plants are dedicated to the agricultural stages. The home-grown grapes are used to make the high-quality wines to be sold in their wine shops and to restaurants. Duca di Salapatura also use grapes supplied by external providers. These grapes are used to make the wine bottles which are going to be sold to large retailers. Moreover, the three plants treat different types of wine. In particular, the two plants in Palermo treat still and sparkling wines, while the one located in Marsala is dedicated to fortified wine, Marsala, Passito and others.

In addition to the wine bottles production, Duca di Salapatura also undertakes other activities, such as wine-testing experiences and events at night during the summer season.

3.5.3 Commitment to environmental sustainability

With regard to sustainable initiatives, Duca di Salapatura is currently working on new projects to optimize its water and energy consumptions. For the former, they have recently acquired a new bottling line which provides an innovative system to recycle rinse water and reuse it in other activities. The enterprise is also about to undertake a detailed energy analysis in order to

know their energy consumption starting point for each of the activities. Accounting for its current consumption is going to help set improvement objectives to be reached in the future. In order to take track of consumption, they are considering whether to adhere to the VIVA or EQUALITAS standards. Both of them allow to compute their performance under the pillars of sustainability. Such initiatives are going to be undertaken for either business requirements or willingness to communicate the firm's commitment to environmental sustainability.

3.5.4 How this case is consistent with the general results of the questionnaire

The data collected during the interview has been analyzed and then compared to the correlations among different variables, which were deducted from the results of the questionnaire and presented in the paragraph 3.3 of the thesis. There are several aspects of the Duca di Salapatura case that are consistent with the previous results. In particular, the size of the enterprise under analysis is negatively correlated with respect to the foundation year (figure 87). Indeed, it is older than all the others which belong to the sample of the questionnaire and, at the same time, it does not belong to the micro firms category. Moreover, its size is positively correlated to the percentage of the wine production process stages which are vertically integrated (figure 89) as it undertakes the whole wine production process. Another consistency which has been noticed concerns the positive correlation between the firm's size and its propensity to undertake environmentally sustainable initiatives (figure 94). As the majority of the biggest wine cellars of the sample, the Duca di Salapatura group is working on its water footprint assessment, as previously discussed.

4 Case study: Crealto wine cellar

4.1 Introduction

Sustainability of the sector means seeking the best methodologies in order to minimize the environmental impact and, as a consequence, conserve the natural resources for the next generations. Nowadays, the demand for biologic wine is increasing and this phenomenon is spreading all over the world. On the other side, also the number of cooperatives producing biologic wine is increasing in Italy.

The spread of the SROI framework is due to its capacity to provide quantitative evidence of intangible factors, such as environmental and social impacts. This method has been adopted by those organizations which incorporate environmental and social objectives within their mission. The process, which is presented in the paragraph 2.3.6, has been undertaken to assess the impact of the wine cellar Crealto. The results showed below belong to a research which has recently been conducted by Sigma NL, spin-off of the University of Genoa. This is an innovative start-up which undertakes impact assessments using the SROI framework.

4.2 Crealto wine cellar

Crealto is located in a charming corner of Monferrato (AT) and was born from the passion of four guys, who decided to move from the city to the countryside and live there. Here they started to make biological wine and focused on welcoming their guests in a panoramic, eco-friendly and cozy setting. Eleonora and Luigi are wine enthusiasts since many years, so they decided to leave the town and follow their dream with Andrea and Elisa, great chef.

The Crealto's offer includes the wine cellar, overnight stay and restaurant. The 5 hectares of vineyard are dedicated the early stages for the production of wines, such as Grignolino,

Barbera and Nebbiolo. These are biological as the use of pesticides, chemical fertilizers and herbicides has totally been avoided. Thanks to the organic and biodynamic practices adopted, the resulting grapes are characterized by high quality. This leads to an annual production of 25k wine bottles.

4.3 Stakeholders

When conducting a SROI analysis, it is crucial to investigate on the effects of the organization on its stakeholders and from their standpoint. Hence, they have been involved in the analysis process through questionnaires on online platforms, which mainly focused on their perception and satisfaction with respect to the wine cellar under analysis. The categories of stakeholders are described below.

- Wine consumers: They belong to the primary stakeholders as they have access to the main product realized by the wine cellar.
- Services users: they are the clients who exploit the services offered, such as restaurant and Bed&Breakfast. They are also primary stakeholders as they directly benefit from some of the wine cellar's offers delivered to the market. Services users represent an integral and substantial part in the impact computation. Thanks to their active and emotional participation, they bring home an effect (whether this is positive or negative) which may influence even other scenarios.
- Suppliers of the wine cellar.
- Third parties which are indirectly influenced by the presence of the wine cellar, such as other commercial activities located nearby.
- Local community

4.4 The social, environmental and economic impact generated by Crealto

Figure 101 shows the resulting distribution of the impact among the three dimensions (economic, social and environmental)

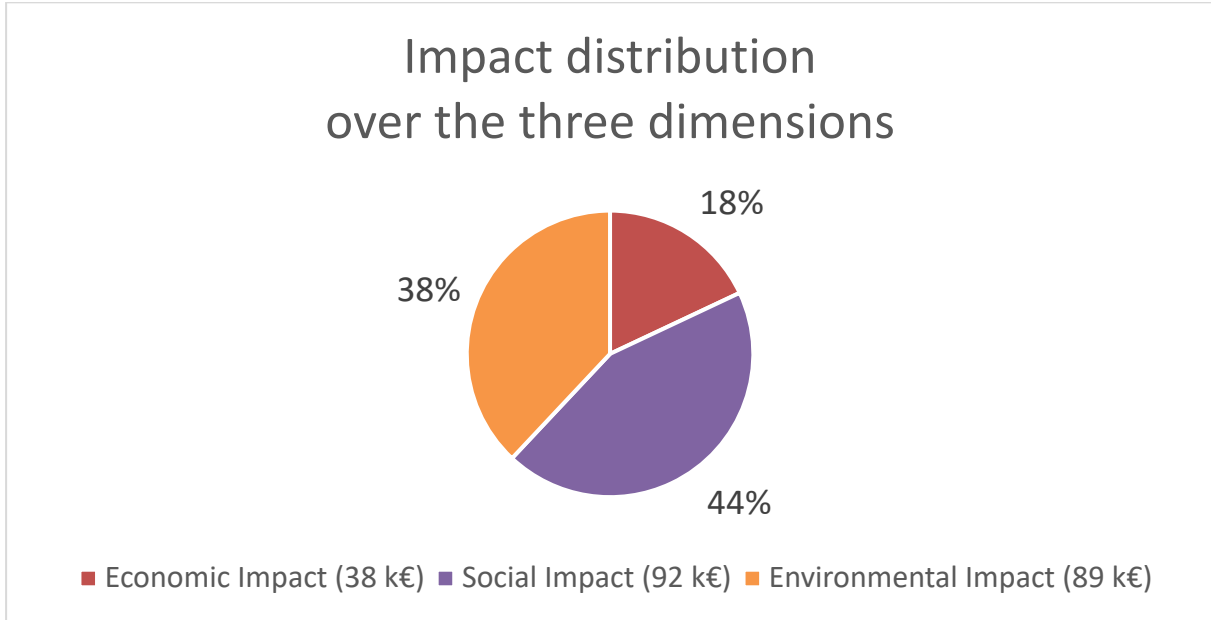


Figure 101: Impact distribution over the three dimensions

4.4.1 Economic Impact

It has been assessed the clients' willingness to pay for a certain service. The final estimate is quite prudential as appropriate percentages of deadweight, displacement, attribution and drop-off have been taken into account. Moreover, it has been tracked their loyalty to the wine cellar, so that there is a continuative relationship between the two. Loyalty is defined as a constant experience of integrity, transparency, commitment and confidence. Additional stakeholders' taken into account are suppliers, other third parties working nearby that are indirectly affected by the wine cellar's activities and local administrator. Even in this case, the assessment has been carried out in a quite prudential way as appropriate attenuation percentages have been considered. The economic impact turns out to be influenced by sustainability and Circular Economy practices. In particular, the best performances do not result to be associated to singular sustainability indicators, but rather to a set of actions which

have been undertaken and that mutually reinforce each other. Sustainability positively affect the value generated by the firm from two different standpoints, which are differentiation and costs reduction. These considerations led to the value of € 38,000 as impact associated to the economic dimension.

4.4.2 Social Impact

With respect to social aspects, the result is that users benefit in terms of mental flexibility, social skills enhancement, motivation to self-improvement and stress reduction. Indeed, services’ users have been asked how stressed they feel before and after visiting the wine cellar. The table 5 shows the percentage of the different answers.

Table 5: Services users & Stress perception

| Stress level | Before | After |
|--------------|--------|------------|
| Not at all | 25% | 38% |
| A little | 22% | 26% |
| Fairly | 32% | 14% |
| Much | 15% | 20% |
| Very much | 6% | 2% |

This highlights how people benefit from experiencing activities which are out of their routine. The estimate of the social impact generated is about €92,000 per year. Also this computation takes into account that the change in the stress level may be due to other factors besides the experience in the wine cellar.

4.4.3 Environmental Impact

This dimension of impact has been assessed with respect to the cultivation practices which are undertaken in order to make biologic wine. Some of these practices are the uses of agrochemicals and pesticides and their consequent impact on the quality of water, air and soil.

The indicators are about water and energy consumption and the absence of chemical products. They take into account the size of the cultivation area and the presence of a solar power system, which leads to save the 20% of energy. The sustainable management of the vineyard widely reduce the environmental impact. As a result, the environmental impact is about €80,000, which is the value of the avoidance of the environmental impact which would have occurred if the cellar had not undertaken the sustainable and biological practices.

4.5 Impact distribution over the stakeholders' categories

The impact generated by the wine cellar has been distributed even over the different stakeholders' categories (figure 102).

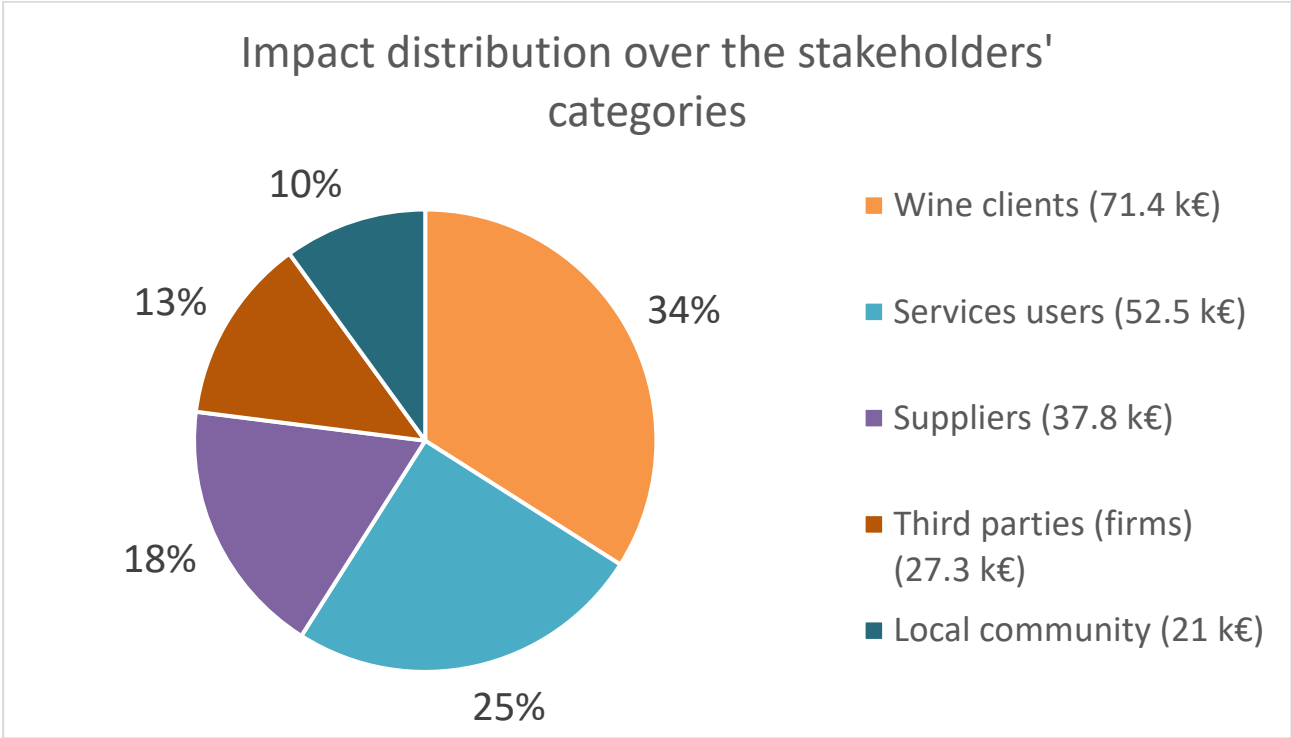


Figure 102: Impact distribution over the stakeholders' categories

4.6 Conclusion of the case study

The annual impact generated by the Crealto wine cellar is the sum of the impact of the three dimensions previously mentioned, which amounts to about € 210,000. On the other hand, the annual investment is about € 100,000. Thus, € 2.10 are generated per each euro invested by

the firm. The Social Return on the Investment of Crealto is then € 2.10. The SROI case study highlighted the value delivered not only in economic terms, but also social and environmental. Furthermore, it raised the awareness about topics, such as environment preservation and mental care.

5 Conclusions and future developments

In this chapter, the conclusions of the research previously described are discussed. The chapter highlights the major contributions and limitations of the research developed. In particular, the value added to the Italian wine cellars by undertaking an impact assessment through the SROI framework. Moreover, the future developments are discussed.

The present study was interested not only in exploring the existing literature about the Social Return on Investment framework and the related concepts of Theory of Change and Circular Economy, but also in presenting an actual SROI case study applied to an Italian wine cellar, after the collection of data from multiple Italian wine cellars. The latter was undertaken in order to get the big picture of such an important industry in the Italian economy.

Every activity, whether it is carried out in the public, private or non-profit-making sectors, has an impact on the economic, environmental and social dimensions. However, impact assessments are usually limited to the economic dimension. By contrast, all investments should be evaluated for their whole range of impact and directed towards sustainable and equitable solutions.

As discussed, SROI represents a useful alternative to common investment evaluations, since it accounts for social value from the stakeholders' perspective, building on the theory of change. It has the potential to expand the scope of impact analysis towards a full picture of all dimensions of impact created by all types of investments. While there's general agreement about the importance of social and environmental impacts, there's less of a consensus regarding how organizations can account for socially responsible actions. The SROI framework addresses the issue by incorporating a transparent methodology that adheres to well-established economic concepts. Hence, it differs from other impact measurement approaches, such as the Cost–Benefit Analysis, since it directly involves the stakeholders, i.e.,

those who are affected by the considered activities, allowing an evaluation of externalities such as the generation of intangible outcomes, taking into account not only the financial value produced, but also the social, economic and environmental dimensions. SROI is a tool for proving and improving. In terms of proving, SROI provides a powerful means of demonstrating and communicating social value. Objectively demonstrating the broader impact generated with respect to the investment improves an important intangible asset such as reputation, as it allows all the stakeholders to see how much, and where, social value is being created. Moreover, it makes fully understand the cause-effect relationships among activities undertaken and, thus, legitimize the decision-making process in the eyes of the stakeholders, showing that the principles of transparency, consistency and accountability have been respected. The direct involvement of stakeholders allows to get a broader view and consequently provides more detailed data for the analysis. On the other hand, it also presents limitations since it leaves a great deal of space for personal judgement and allows for discretion in setting the indicators and quantifying the impact. Additional points for improvement on the use of this tool is the ratio, which cannot be used to compare different projects and can lead to a lot of misunderstandings. As claimed in the paragraph 3.4.4, during the interview to Monte Uliveto di Casà has emerged that another limit of an SROI analysis may be the size of the organization. Indeed, the interviewee claimed that the size of the firm may influence the utility of such a methodology. In particular, one of the main features of the SROI is the stakeholders' involvement, so that the firm can realize its impact beyond the limited beliefs of the executives. In the particular case of a micro firm, the number of stakeholders involved is so low that each of them is regularly in contact with all the others. As a consequence, he assumes that in case of micro firms the SROI may lose part of its utility.

Besides the limits of the tool, the application of SROI in the Crealto wine cellar may lead to awareness creation and, as a consequence, this may drive further innovation. Most

importantly, it is of immediate relevance for being more sustainable, transparent and accountable with respect to all the stakeholders.

As already mentioned in the paragraph 3.5, the interview about the Duca di Salapatura wine group was supposed to be the first step towards the development of a SROI case study. However, because of the activities' slowdown due to the current pandemic, it was not possible to collect the other stakeholders' opinions on time. Both the interview's outcome and the structure of the four questionnaires (appendices B, C, D and E), which were prepared for the other stakeholders, have been included in the thesis anyway as they are still part of the work and may be useful for future researches. Thus, future developments include the completion of this case study through the administration of the questionnaires already provided in the appendices, as the interviewee showed her interest in accomplishing the impact assessment through the SROI framework. Indeed, the assessment of the impact is in line with the current commitment of the organization to make clear the impact generated at date and, in turn, set targets to improve in the future.

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[41] Environmental Hotspots in the Italian Wine Industry - amfori Sustainable Wine program, 2018 www.amfori.org

[42] How Product Attributes and Consumer Characteristics Influence the WTP, Resulting in a Higher Price Premium for Organic Wine - Christine Mauracher, Isabella Procidano and Marco Valentini – January 2019

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7 Appendix A

Q1) Inserisca il nome dell'azienda/cantina

Q2) Inserisca l'anno di fondazione

Q3) Dimensione aziendale

- Micro (<10 dipendenti e fatturato < 2.000.000 euro o tot. attivo <2 MLN euro)
- Piccola (>10 dipendenti e fatturato < 10.000.000 euro o tot. attivo <10 MLN euro)
- Grande (oltre 250 dipendenti e fatturato > 50 MLN euro)

Q4) Produzione annuale bottiglie

- da 1 a 10,000
- da 10,001 a 30,000
- da 30,001 a 50,000
- da 50,001 a 200,000
- da 200,001 a 500,000
- oltre 500,000

Q5) Quali fasi della produzione del vino svolgete internamente? (sono possibili più risposte)

- Vendemmia
- Dalla pigiatura ai travasi (eliminazione dei residui e impurità dal vino)
- Imbottigliamento e Stoccaggio

Q6) Descrizione indicativa delle quantità di produzione diversi dal numero di bottiglie; ad esempio, vino sfuso, cartoni, damigiane (volumi annuali medi)

Q7) Presenza di servizi aggiuntivi (sono possibili più risposte)

- Agriturismo
- B&B
- Ristorante
- Fattoria didattica
- Visite guidate
- Vendita diretta
- Degustazioni
- Matrimoni
- Sala convegni
- Wellness/ SPA
- Altro (specificare)

Q8) Categoria di appartenenza della persona che compila il questionario (scegliere posizione prevalente)

- Datore di lavoro
- Consigliere/a di amministrazione
- Direttore/ dirigente
- Operaio/ a
- Consulente esterno/ a
- Volontario/ a
- Altro (specificare)

Q9) Qual è la sua funzione in azienda/Ente?

- Vinificatore
- Manutenzione tecnica, pulizia e/o sanificazione
- Enologo/a

- Certificatore marchio qualità DOC, IGP
- Gestione delle risorse umane (HR)
- Marketing, comunicazione, rappresentanza
- Management, direzione
- Ricerca e sviluppo, ambiente, innovazione, progettazione
- Altro (specificare)

Q10) Quali sono i canali di comunicazione adottati dall'azienda?

- Sito-web
- Applicazione per Android
- Instagram
- Facebook
- LinkedIn
- Pubblicità on-line
- Pubblicità off-line
- Fiere
- Passaparola
- Altro (specificare)

Q11) Quali fra le seguenti iniziative sono state intraprese dall'azienda?

Q11.1) Progetto di "economia circolare" con chiusura dei cicli e riduzione degli sprechi (per info clicca qui)

- Attuato
- NON attuato
- Non conosco

Q11.2) Misurazione dell'impatto sociale (indotto generato, effetti educativi, effetti per comunità locale, mediante "Social-ROI")

- Attuato
- NON attuato
- Non conosco

Q11.3) Strategia basata su Responsabilità sociale d'impresa (es. misure di natura etica, sociale, ambientale, tutela e trasparenza nei confronti del consumatore)

- Attuato
- NON attuato
- Non conosco

Q11.4) Azioni di comunicazione dei valori dell'azienda sul mercato

- Attuato
- Non Attuato
- Non conosco

Q11.5) Brand Reputation & Customer Loyalty: iniziative finalizzate alla costruzione della reputazione dell'azienda e alla creazione di un forte legame con il cliente

- Attuato
- Non attuato
- Non conosco

Q11.6) Mappatura dei portatori di interessi (clienti locali/stranieri, fornitori, dipendenti, ecc.) con correlata definizione di strategie di dialogo mirato

- Attuato

- NON attuato
- Non conosco

Q11.7) Azioni di coinvolgimento etico/educativo della comunità locale

- Attuato
- NON attuato
- Non conosco

Q11.8) Azioni di consolidamento / acquisizione di mercati nazionali ed internazionali

- Attuato
- NON attuato
- Non conosco

Q11.9) Capire le esigenze di sviluppo del personale interno (Competenze trasversali e progetti ad hoc)

- Attuato
- NON attuato
- Non conosco

Q11.10) Coinvolgimento di migranti nelle attività aziendali

- Attuato
- NON attuato
- Non conosco

Q11.11) Iniziative volte alla tutela dei lavoratori (remunerazione a salute)

- Attuato
- NON attuato

- Non conosco

Q11.12) Utilizzare la fase di transizione in uscita dalla crisi come opportunità di cambiamento

- Attuato
- NON attuato
- Non conosco

Q11.13) Mappare la percezione, sui diversi driver reputazionali (condizione lavorativa, strategie di sostenibilità, attenzione al territorio), nei confronti della cantina

- Attuato
- NON attuato
- Non conosco

Q11.14) Progetti o percorsi biodinamici

- Attuato
- NON attuato
- Non conosco

Q11.15) Progetti o percorsi biologici

- Attuato
- NON attuato
- Non conosco

Q11.16) Progetti o percorsi agrituristici

- Attuato
- NON attuato
- Non conosco

Q11.17) Altro (specificare)

Q12) Quali strumenti/ pratiche sono stati adottati/e dall'azienda al fine di renderla sostenibile e responsabile?

Q12.1) Valutazione ciclo di vita (LCA) e valutazione impatto ambientale (per info clicca qui)

- Attuato
- NON attuato
- Non conosco

Q12.2) Valutazione dell'emissione di CO2 prodotta - Carbon Footprint

- Attuato
- NON attuato
- Non conosco

Q12.3) Valutazione del consumo di acqua dolce - Water Footprint

- Attuato
- NON attuato
- Non conosco

Q12.4) Certificazioni di prodotto (es. EPD) (Per info clicca qui)

- Attuato
- NON attuato
- Non conosco

Q12.5) Certificazione ISO 14001 - Sistemi di gestione ambientale e rifiuti

- Attuato

- NON attuato
- Non conosco

Q12.6) Certificazione ISO 45001 -Sistemi di gestione della salute e sicurezza sul lavoro

- Attuato
- NON attuato
- Non conosco

Q12.7) Certificazione SA 8000 - Gestione aziendale della responsabilità sociale d'impresa

- Attuato
- NON attuato
- Non conosco

Q12.8) Riduzione dei rifiuti e riutilizzo degli SCARTI della filiera vitivinicola (vinacce, feccia, raspi, ecc.)

- Attuato
- NON attuato
- Non conosco

Q12.9) Riprogettazione degli IMBALLAGGI per renderli più sostenibili/ riutilizzabili/ riciclabili (vetro, tappi, etichette, scatole/cartoni)

- Attuato
- NON attuato
- Non conosco

Q12.10) Interventi mirati alla riduzione del consumo di ACQUA/ recupero di acque reflue

- Attuato

- NON attuato
- Non conosco

Q12.11) Interventi mirati alla tutela della biodiversità, dato il settore fortemente dipendente da risorse naturali

- Attuato
- NON attuato
- Non conosco

Q12.12) Interventi di riprogettazione della LOGISTICA

- Attuato
- NON attuato
- Non conosco

Q12.13) Efficientamento/ ristrutturazione locali della cantina/manufatti EDILI secondo criteri sostenibili

- Attuato
- NON attuato
- Non conosco

Q12.14) Altro/ maggiori dettagli (opzionale)

Q13) Le iniziative sostenibili, oltre ad ottimizzare l'impatto ambientale, dovrebbero anche valorizzare il brand e favorire la costruzione di una solida reputazione aziendale in modo tale da attrarre potenziali clienti e/ o investitori. Tuttavia, non è sempre semplice per le imprese comunicare tali iniziative pur avendole intraprese, ad esempio a causa del fatto che queste non

trovano evidenza scritta. Nel caso della sua azienda, sono state intraprese iniziative sostenibili e responsabili che si ha difficoltà a comunicare?

- Sì
- No

Q14) Il vino realizzato con le nostre risorse è di alta qualità, specifico e identificabile mediante le caratteristiche uniche della nostra territorialità. Infatti, viene realizzato in un'area ben delimitata dove l'interazione di particolari condizioni naturali, fisiche e chimiche, terreno/ suolo, zona geografica e clima conferiscono al nostro vino determinate peculiarità nella struttura e negli aromi che lo rendono immediatamente riconoscibile (concetto di Terroir). Di conseguenza, il cliente più attento riconosce tale unicità, che permette ai nostri prodotti di differenziarsi dagli altri commercializzati.

- Vero, i nostri prodotti godono di caratteristiche non imitabili e sono quindi unici.
- Falso, le condizioni per la realizzazione dei nostri prodotti sono facilmente replicabili in numerose altre zone del mondo.

Q15) L'azienda limita le sue attività di sperimentazione ed innovazione a causa dell'aderenza a certificazioni (DOC, IGP, ...)?

- Sì
- No

Q16) Stima che, a seguito dell'emergenza Covid-19, ci sarà una diminuzione strutturale del benessere aziendale? Se "SÌ", di quanto:

- Lieve (meno del 20% di persone dipendenti o collaboratori con stress o nuove problematiche da gestire)
- Abbastanza (tra il 21% e il 50% di medio impatto sul benessere)

- Molto (oltre il 50% di persone con stress o nuove problematiche da gestire)

8 Appendix B

Q1) Indichi il suo genere:

- Donna
- Uomo
- Preferisco non dichiararlo

Q2) Indichi la sua età

- Meno di 18 anni
- Fra 18 e 25 anni
- Fra 26 e 35 anni
- Fra 36 e 45 anni
- Fra 46 e 60 anni
- Più di 60 anni

Q3) Indichi la sua regione di residenza

Q4) Quanto l'ha soddisfatta l'acquisto del/dei prodotto/i della cantina Duca di Salaparuta?

- Per niente
- Poco
- Abbastanza
- Molto

Q5) Come valuterebbe complessivamente la sua esperienza con i prodotti della cantina Duca di Salaparuta?

- Pessima
- Discreta

- Buona
- Ottima
- Non ho mai acquistato i prodotti della cantina Duca di Salaparuta

Q6) Quanto ha speso mediamente per acquistare un prodotto della cantina Duca di Salaparuta?

- Minore o uguale a 10 euro
- 11 euro – 20 euro
- 21 euro – 40 euro
- 41 euro – 70 euro
- Più di 70 euro

Q7) Quanto ritiene che sia adeguato il livello di innovazione della cantina Duca di Salaparuta?

- Per niente adeguato
- Poco adeguato
- Abbastanza adeguato
- Molto adeguato

Q8) Come ha conosciuto la cantina Duca di Salaparuta?

- Sito-web
- Applicazione per Android
- Instagram
- Facebook
- LinkedIn
- Pubblicità on-line

- Pubblicità off-line
- Fiere
- Passaparola
- Altro (specificare)

9 Appendix C

Q1) Indichi il suo genere:

- Donna
- Uomo
- Preferisco non dichiararlo

Q2) Indichi la sua età

- Meno di 18 anni
- Fra 18 e 25 anni
- Fra 26 e 35 anni
- Fra 36 e 45 anni
- Fra 46 e 60 anni
- Più di 60 anni

Q3) Indichi la sua regione di residenza

Q4) Quanto si reputa soddisfatto/a del percorso di degustazione?

- Per niente
- Poco
- Abbastanza
- Molto

Q5) Quanto si reputa invogliato/a a ripetere l'esperienza di degustazione nelle cantine?

- Per niente
- Poco
- Abbastanza

- Molto

Q6) Quanto ha speso mediamente per un servizio offerto della cantina Duca di Salaparuta?

- Minore o uguale a 10 euro
- 11 euro – 15 euro
- 16 euro – 20 euro
- 21 euro – 25 euro
- 26 euro – 50 euro
- Più di 50 euro

Q7) Quanto ritiene che sia adeguato il livello di innovazione della cantina Duca di Salaparuta?

- Per niente adeguato
- Poco adeguato
- Abbastanza adeguato
- Molto adeguato

Q8) Come ha conosciuto la cantina Duca di Salaparuta?

- Sito-web
- Applicazione per Android
- Instagram
- Facebook
- LinkedIn
- Pubblicità on-line
- Pubblicità off-line
- Fiere

- Passaparola
- Altro (specificare)

10 Appendix D

Q1) Indichi il suo genere:

- Donna
- Uomo
- Preferisco non dichiararlo

Q2) Indichi la sua età

- Meno di 18 anni
- Fra 18 e 25 anni
- Fra 26 e 35 anni
- Fra 36 e 45 anni
- Fra 46 e 60 anni
- Più di 60 anni

Q3) Da quanti anni lavora nella cantina Duca di Salaparuta?

- Meno di 1 anno
- 1-3 anni
- 4-8 anni
- 9-15 anni
- Più di 15 anni

Q4) Gli obiettivi dell'azienda sono chiari e ben definiti. Quindi mi sento di contribuire al perseguimento di questi

- Mai
- Raramente

- A volte
- Spesso

Q5) Si prova soddisfazione per quello che l'organizzazione realizza

- Mai
- Raramente
- A volte
- Spesso

Q6) Esiste collaborazione con i colleghi

- Mai
- Raramente
- A volte
- Spesso

Q7) I cambiamenti gestionali e organizzativi sono comunicati chiaramente a tutto il personale

- Mai
- Raramente
- A volte
- Spesso

Q8) L'organizzazione in cui lavora è attenta a sviluppare competenze innovative nei dipendenti

- Mai
- Raramente
- A volte

- Spesso

Q9) Lavorando per questa azienda ho sviluppato le seguenti competenze trasversali (è possibile selezionare più di una risposta):

- competenze relazionali: comunicare in modo più efficace, convincere e lavorare in team
- competenze cognitive: capire come pensare per riuscire a risolvere definitivamente problemi, in modo tale da evitare sprechi di tempo e denaro
- competenze manageriali: doti di leadership per gestire al meglio le risorse
- competenze per realizzare: sviluppo della creatività

11 Appendix E

Q1) Qual è il servizio offerto dalla sua azienda alla cantina Duca di Salaparuta?

Q2) In quale range rientra il volume d'affari legato all'indotto generato dalla collaborazione con la cantina?

- Meno di 1,000 euro
- 1,001 - 4,000 euro
- 4,001 – 10,000 euro
- Più di 10,000 euro

Q3) In che modo la collaborazione con la cantina Duca di Salaparuta influenza la reputazione della mia azienda nel mercato?

- La cantina Duca di Salaparuta ha una buona reputazione nel territorio, di conseguenza influenza positivamente la nostra reputazione
- La cantina Duca di Salaparuta non è molto conosciuta nel territorio, quindi collaborare con questa non influisce in alcun modo nella nostra reputazione
- L'operato della cantina Duca di Salaparuta non è stato/ non è apprezzato nel territorio, quindi collaborare con questa influenza negativamente la nostra reputazione