



Degree Program in Strategic Management

Course of Business Modeling and Planning

Challenges in the mountain industry:
handling changes in the business environment
while staying competitive and attractive year-round.

Prof. Donato Iacovone

SUPERVISOR

Prof. Giovanni Valentini

CO-SUPERVISOR

Alberto Baietto ID 769411

CANDIDATE

Academic Year 2023/2024

Table of contents:

CHAPTER 1 3

1.1 Introduction 3

1.2 An overview of the research question and paper’s aims 4

1.3 Examination of the context: the mountain sector 6

1.4 History and evolution of alpine skiing and the winter sports-related industry 9

1.5 Current issues concerning the sustainability of snow 11

CHAPTER 2 13

2.1 Relating alpine ski tourism to a physical product: Shake out and Dominant Design 13

2.2 What is the company’s business environment? Mintzberg and the Environmental School
..... 15

2.3 SWOT and VRIO: frameworks supporting industry competitive advantage analysis..... 16

CHAPTER 3 18

3.1 Introduction to the case studies: Val Susa and Val Maira..... 18

3.2 Methodology 21

3.3 Analysis..... 22

CHAPTER 4 27

4.1 The role of technology: how it can foster business innovation..... 27

4.2 Discussion 33

4.3 Conclusion..... 35

ANNEX..... 36

BIBLIOGRAPHY: 39

Chapter 1

1.1 Introduction

The mountain industry plays a crucial role for many local economies, offers significant economic opportunities and contributes to cultural and environmental conservation. However, mountain regions are facing increasing challenges related to climate change, fluctuations in tourism flows and the need to maintain long-term sustainability. In particular, two alpine valleys in Piedmont, Val Susa and Val Maira, offer an ideal context for analyzing these dynamics as they represent different adaptation and development strategies.

This study aims to explore how mountain businesses can meet these challenges through innovation in processes and business models. The need to diversify the tourism offer and deseasonalise activities has emerged as a key strategy to reduce dependence on winter seasons, broadening the visitor target and helping stabilize the local economy by reducing the risks associated with seasonality (Cholakova & Dogramadjieva 2023).

The literature review highlights that sustainability in the mountain sector requires an integrated approach, including technological innovations, wise management of natural resources and collaboration between various stakeholders. The importance of strategic adaptation in a dynamic environment is emphasized, with reference to mountain businesses that must respond rapidly to changes in the market and climate.

This ongoing challenge implies a broader issue involving environmental change and regional development. Although several studies - such as those by Steiger et al. (2019) - have explored the direct impacts of climate variability on alpine tourism, there remains a gap in research concerning business adaptations in these regions that are effective in the long term. In particular, the literature often overlooks the potential of business model transformation in mountain areas as a response to climate variability.

The focus of this research, therefore, is to examine how companies in the mountain regions of Val Susa and Val Maira are innovating their processes and business models not only to survive, but to thrive in the future. This involves investigating how these businesses are diversifying their offerings to extend their operating seasons beyond the traditional winter months.

Using an approach that combines qualitative data with quantitative data, this study seeks to understand strategies that can foster resilience and sustainable growth in mountain economies.

In conclusion, this work aims to provide an in-depth understanding of the current dynamics of the mountain industry, proposing practical strategies to address future challenges. The aim is to make a contribution to the existing literature and provide useful information for industry professionals and policy makers who are engaged in promoting the sustainable development of mountain areas.

1.2 An overview of the research question and paper's aims

This dissertation's research question, is as follows: What are the challenges for the mountain industry in coping with the changing business environment, remaining competitive and attractive throughout the year and in the long term?

The main objective of this study is to understand and analyze the key elements that mountain industry companies can adopt in order to remain competitive in the long term and attractive throughout the year. In particular, the paper aims to examine the impact of certain elements of the business environment such as climate change, tourist flows and technological innovation on mountain businesses, investigating the need to change the past operating paradigm. During the discussion of the case studies, the elements that emerged from the study will be analyzed to understand whether a change in business strategy is necessary and what direction companies should follow.

The Italian Alpine Club (C.A.I.) points out that “climate data projections for the 21st century in alpine areas indicate that the stability and durability of the snowpack will be increasingly compromised at least up to an altitude of 2,000 m. At higher altitudes, there will still be reductions in the annual volume of snow available. Climate factors, together with the conditions set by a highly “mature” and competitive ski market, impose further investments to implement adaptation strategies, if tourism operators want to follow a “traditional” expansion logic and try to support existing businesses with few changes” (Club Alpino Italiano 2020, page 7).

It is also true that “destinations depend on their primary tourism products as key pull factors motivating tourists to visit them” (Benur & Bramwell 2015). With regard to that, ski sector plays an even more important role in mountain areas as it becomes the driving force behind tourism

attraction. However, there are additional variables to consider when assessing the drivers behind tourists' travels. Among those, for instance, has been observed that visitors' preference for one location over another is also influenced by the fact that they "want to gain connected with the legacy of environmental and socio-cultural characteristics of specific destinations" (Benur & Bramwell 2015), therefore, it's critical to exercise caution so as not to "dismantle" their identity while implementing changes to meet market demand. On this respect, we can point out that "diversification, intensification and linkage of [tourist] products can be crucial for the competitiveness and sustainable development of destinations" (Benur & Bramwell 2015); as a result, a different paradigm is needed from the one that is currently in place.

The long-term sustainability of the mountain sector economy is to be analyzed in the light of the diversification of the products offered, with the integration of the concept of "deseasonalisation". Different tourist offers do not necessarily aim at reaching the same customer segments as the current offers, but diversification can be an opportunity to open up to new tourist clusters.

"This way [mountain destinations] would rely on different types of tourism, with various market segments, neutralizing all risk, including those related to climate change" (Cholakova & Dogramadjieva 2023).

This change of course requires the participation of all stakeholders involved, from policy makers, to the citizens of mountain villages and even entrepreneurs, who own businesses in the area. In fact, "Such product diversification can provide destinations with the benefits of economies of scope, as distinct from economies of scale" (Benur & Bramwell 2015).

This dissertation aims to provide some answers to these issues, with a special focus on the mountain territory of Piedmont. The area analyzed covers the Val Susa and the Val Maira.

The following chapters provide a global description of the mountain industry, in order to better understand its origins, the main stakeholders and the leading businesses of the industry. A further level of analysis presents the competitive advantages and weaknesses, helping to form a complete overview, so as to have the necessary elements for the analysis of the case studies.

1.3 Examination of the context: the mountain sector

In order to fully understand this topic and conduct a comprehensive analysis of the research question, it is essential to acquire a detailed knowledge of the sector of reference: the mountain industry. This sector is a vital element for many local economies and provides a significant support to the creation of job opportunities and tourism development. It is not always easy to figure out all the actors of a sector that contribute to the constitution of the industry itself. This chapter explains what are the main elements and provides the historical background on the origin of skiing and the transformation of tourist destinations from small mountain villages to well-equipped resorts.

The mountain industry encompasses a wide range of economic activities that take place in mountain regions, mainly focused on tourism, sport and leisure. This includes a variety of experiences, from winter sports such as skiing and snowboarding to summer adventures such as hiking, cycling and climbing.

In addition to recreational activities, the mountain industry includes an extensive network of hospitality and accommodation services, including hotels, restaurants, sports equipment rentals, ski schools, wellness centers and many other tourist infrastructures.

At a global level, mountain tourism contributes significantly to world tourism, generating between 15% and 20% of the annual turnover, which translates into approximately USD 70-90 billion per year. In addition, mountain tourism accounts for between 9% and 16% of total international tourist arrivals, equivalent to between 195 million and 375 million international arrivals, based on 2019 figures, we do know, however, that in the first quarter of 2023 international arrivals reached 80% of pre-pandemic levels. If we want to take a closer look at the arrival of tourists by macro-region, estimates indicate that mountain tourism in Europe and the Americas represents between 9% and 17% of international tourism, which means that a significant portion overall travelers choose a destination among those regions. (UNWTO 2023).

In Italy, the mountain industry represents a fundamental pillar of the national tourism economy and provides a significant contribution to its growth and development. According to data reported by the Ministry of Tourism, this sector has an economic value of about EUR 22 billion per year (Strada 2024). In 2023, the winter sector alone mobilized 12 million Italians and generated a turnover of 9.6 billion euros, thus confirming the primary role of the winter season for the entire industry. (Federalberghi 2023).

Recently, a government grant of 250 million euro was given to the mountain industry for innovative and sustainable projects related to economic, social and environmental aspects. The definition of sustainability of the industry provided by the Ministry is interesting and emphasizes the central topic of the research question: the time frame and long-term sustainability. These elements are interconnected and blended into a broader concept - deseasonalisation - as the article states: “economic, social and environmental sustainability that cannot disregard deseasonalisation to develop a new idea of the mountains: livable for local communities and accessible for tourists regardless of weather conditions and season” (Strada 2024).

During winter, alpine skiing is the reigning activity, with its companies, including ski lift companies, ski schools, ski clubs, sports equipment rentals and snowmaking companies. It significantly contributes to the sustainability of local economies.

During the summer months, on the other hand, the Italian mountains offer a wide range of outdoor activities, including hiking, cycling, climbing and many other attractions. In this context, the accommodation sector - hotels, restaurants and mountain huts - is essential for summer tourism.

The complexity of this industry and its natural exposure to changes in the business context cause a number of challenges for all the related activities, first of all the environmental challenge. As environmental awareness and concern about climate change increase, mountain businesses are under pressure to adopt sustainable practices in order to reduce their footprint. Unlike, for example, a large multinational company that measures its environmental impact according to the GHG Protocol, a protocol for the measurement and management of greenhouse gas emissions, the European CSRD (Corporate Sustainability Reporting Directive) Directives on corporate sustainability reporting, and the recent CS3D Corporate Sustainability Due Diligence Directive, concerning governance and reporting on respect for human rights and the environment aimed at integrating certain procedures into corporate management, and finally the Science Based Targets (SBTi) - initiatives that promote science-based emission reduction targets. Mountain businesses can immediately see the consequences of their actions. This means they have to implement tangible practices such as energy saving, conservation of sensitive ecosystems and a careful extraction of local water resources. They are also responsible for raising awareness amongst the main external stakeholders: the tourists, who must take devoted care of the mountain environment, becoming advocates of sustainable and responsible tourism.

The industry's business environment compels sustainable behavior towards nature, but it also poses challenges on how activities are proposed. This topic will be addressed in more detail in the following chapters, but another significant challenge that mountain resorts are facing is the diversification of their tourism proposals. They offer alternatives to the classic seasonal activities to reduce dependence on them.

For example, many mountain resorts are investing in attractions like adventure parks, mountain bike trails, via ferrata, and other outdoor activities to support tourism during the summer months. An example of this, are the 38 mountain bike routes in Val Maira, suitable for all levels of experience, the 8 via ferrata in Val Susa or the 4 via ferrata built in Val Maira.

In addition, cultural and ethnographic festivals and sporting events can help stimulate off-season tourism, thus increasing tourists' interest in destinations perceived as strictly linked to one season. In particular, many spring events are organized in Val Maira, such as "La fiera degli Acciugai", "Terra Anima" - an exhibition of drawings and watercolor paintings - and "La rassegna Scarabocchi", an event dedicated to theatre and film shows. (PiemonteOutdoor s.a.; Vallemaira s.a.).

Diversification of the offer not only leads to greater profitability for local businesses, but also helps to keep mountain communities alive and preserve their cultural and natural identity. "Product diversification can also encourage "alternative" products that potentially are more socially and environmentally sustainable for destinations, such as because they encourage appreciation of a destination's special character" (Benur & Bramwell 2015). So, a variety of new activities could arise from the benefit of diversification that can lead to experiment new alternatives and new combinations of different activities (e.g. hiking with food tasting, sky observation and night ski touring excursion and so forth).

It is true that in contexts such as the mountains, the different stakeholders may sometimes follow dynamics of local patriotism, which are not easy to eliminate despite possible economic opportunities. This issue is also discussed in the paper "Tourism product development and product diversification in destination" where it is stated that "A further complication is that destinations often develop with several primary tourism products, and amongst them there are usually complex relationships, synergies and tensions" (Benur & Bramwell 2015).

Finally, the adoption of innovative technologies is essential to improve the visitor experience and increase operational efficiency in mountain regions. However, implementing these technologies can be particularly challenging in mountain areas, not only because of infrastructure

problems - a frequent lack of Internet connection - but also because of sometimes narrow-minded cultural legacies, that prevent the adoption of new practices. Yet, in some areas, innovative systems for booking both winter and summer mountain experiences are spreading. Their aim is to reach an ever-increasing audience and improve the market competitiveness of the mountain sector.

At a national level, several ski resorts are developing increasingly practical tools. The resort of Cervinia for example has implemented an online platform that allows the integrated booking of ski passes, ski lessons and accommodation, in addition to mobile applications to improve orientation and access to ski services (Cervinia.it 2024). Similarly, a system has been developed in Cortina d'Ampezzo that makes it easier to book cultural and sporting events throughout the year, as well as applications that provide information on weather and ski slope availability in real time (Dolomiti.org 2024).

In Madonna di Campiglio, an integrated system for the management of accommodation, ski-passes and rental equipment has been introduced, promoting a smooth and complete user experience through the use of digital platforms (Campigliodolomiti.it 2024).

These initiatives contribute to making those destinations particularly attractive and competitive on the market when compared with French ski resorts such as Maribel, Courchevel, and the entire Les Trois Vallées area. These resorts are recognized as being at the forefront of technology, innovation, and service integration.

1.4 History and evolution of alpine skiing and the winter sports-related industry

The previous chapter provided an overview of the mountain industry, of the main activities and companies in the sector. Before delving into the issues of the business environment, let us focus on the driving activity of the mountain industry: alpine skiing.

It is difficult to establish an exact “invention” date for skiing, its origin being much debated. Traces of ski-like objects are present in cave paintings. We know that Nordic peoples used “proto-skis”, and there are records of skis being used in the military during the 10th century in Norway. (F.I.S.I. 2024).

The real breakthrough came in the early 1900s in Austria, where Mathias Zdarsky - considered the father of alpine skiing - had the idea to shorten of skis from 2.5 meters to 180 centimeters.

He not only reduced the length but also realized that to be effective on steep slopes, the heels had to be connected to the skis. This was the invention of alpine skiing.

From this moment on, Austrians, Swiss and Italians performed experiments and technical theories. Skiing developed greatly and, in 1936, it became an Olympic sport in the Garmish competitions, with the downhill, slalom and alpine-combined.

In the 1930s, the growing interest in skiing attracted the transport sector - in particular cableways. The existing technical solutions were made available to this sports discipline.

The construction of the first cableways to transport people began: these infrastructures were dedicated to ski tourism, designed to reduce the effort to ascent and increase the enjoyment of skiing down the white slopes.

In 1932, for example, one of the first cableways was built in Claviere, a small village in the Val Susa, an Italian outpost on the Montgenèvre Pass. The Ceretti e Tanfani company from Milan, celebrated the construction of the cableway with a technical-descriptive book in which the engineering innovation of the installation was praised and its importance was confirmed, given the nobility and prestige of this ski resort.

“Clavières, the small alpine village is one of the municipalities with the highest elevation in Italy (1760 m), and appears nestled in the splendid basin sloping down from the Montgenèvre Pass, crossed by the Napoleonic road and dominated by the pyramids of the French Mount Janus and our own Mount Chaberton. The village lies to the left of the little Dora river, where the Gimont and Rio Secco valleys converge. In a short space of time, it became one of the most renowned centres for winter sports thanks to its snow and the tourist equipment that a few enthusiasts have been able to create”. (Ceretti & Tanfani 1932).

Cableways are just one of the economic developments that alpine skiing brought to small mountain resorts.

Another sector that developed thanks to alpine skiing is that of snow groomers, the so-called “snowcats”. These powerful crawlers smooth the slopes and prepare them for skiers. The first snowcat was produced in 1962 in Italy (Frittoli 2023), in Ortisei - Val Gardena, from Prinoth workshop, today a world leader in the sector. A series of experiments and technical innovations, the result of constant research and development, made this business to become a world market leader, with over 900 employees (Prinoth 2024) and contributes significantly to the valley’s economy.

In the context of the care and maintenance of ski slopes, the snowmaking sector is also one that has developed thanks to the leading role that skiing plays in the mountain industry. The first cannons were produced in the United States, almost by accident, from an irrigation system for

cultivated fields. Since then, this “technical solution” has evolved and the first factories producing snow cannons were established. As with snow groomers, the Italian snowmaking industry is a world leader, with companies such as TechnoAlpin and Demacenko. It is not surprising that “Italy is amongst the Alpine countries most dependent on artificial snow, with 90% of its slopes artificially covered in snow” (Legambiente 2023).

In the following chapters, the advantages and disadvantages of this practice will be described, as well as possible future developments related to this technology, which in recent decades has enabled a “regular” ski season, thus saving the mountain industry’s profits.

1.5 Current issues concerning the sustainability of snow

Is the “snow system” of today reasonable?

Seeking the answer to this question requires the investigation of both environmental and economic aspects. The snow industry, as stated previously, is the main source of income for mountain economies, the main attraction factor for tourism, but can this paradigm remain unchanged in the near future?

For the most part, the profitability of ski lift companies does not seem to be in danger, since a large number of them receives public subsidies. It appears a well-established fact that “the size of ski districts plays a key role for the profitability of ski lift companies. Larger ski resorts seem to ensure higher financial returns and have a less worrying debt situation than medium-sized and small resorts. In addition, they seem to offer greater customer attractiveness” (Moreno-Gené et al. 2018). This is further confirmed by the fact that large ski resorts adopt innovative strategies to attract visitors throughout the year, such as diversifying the activities they offer and investing in modern infrastructure, thus improving their attractiveness and economic resilience (Domínguez 2024). This is why companies try to connect ski resorts with each other. In the eyes of tourists, a more attractive product is offered, with more kilometers of skiable area. From a business perspective, it is an opportunity to exploit economies of scale and all its advantages.

Clearly, not everyone can play this game. There are many small ski resorts throughout the country and abroad that, despite their small size, actively contribute to support small communities, businesses and accommodation facilities.

This also prevents the depopulation of areas like Prali, Pian del Fraiss, Ala di Stura, Alpe di Mera, Usseglio, Alagna (all located in the Piedmont region) and many others.

This dualism based on the size of the ski resorts provides peace of mind to the more organized facilities. On the other hand, it reveals the weaknesses and challenges that this sector will soon have to face, with regard to critical aspects for smaller resorts.

Using artificial snowmaking systems is an expensive remedy, about €5.00 / m³ (Negri 2024) and about 220 l/sqm of water consumption (Pintaldi et al. 2017). This is not affordable for everyone. However, this temporary solution does not address the root of the problem. In addition, artificial snow equipment “requires considerable investments in the construction of the water supply network and reservoirs, as well as a large consumption of energy and water, which is diverted from ecosystems or other uses” (Club Alpino Italiano 2020, page 6).

Alpine skiing cannot disregard economic and above all environmental sustainability. Indeed, “the occupation of a mountain area by a ski resort causes significant disturbances to habitats, species and soil, which have been widely documented for a long time” (Coppes et al. 2018). Therefore, strategies based on finding the right climatic conditions where one is certain to find them do not seem feasible. “In some ski resorts, skiable areas will be expanded to a higher altitude or towards the unused north-facing slopes, where the snow remains longer, or even constructing slopes and facilities on glacier surfaces” (Club Alpino Italiano 2020, page 7).

Attacking pristine alpine environments is an act of arrogance towards nature, which seriously harms flora and fauna, leads to a negative change in the biodiversity of entire ecosystems and erases the natural characteristics of the area.

Therefore, the challenges for this sector are many: “it is necessary to adopt a type of development of mountain areas based on a profound reflection on the economics of downhill skiing, offering valid alternatives to mountain communities, wherever they are located and regardless of the presence of ski lifts” (Club Alpino Italiano 2020, page 10).

The involvement of local communities is extremely important in the process of change towards a conscious and sustainable diversification of the tourism offer. Studies show that “local populations are aware that appropriate diversification is now essential” (Balbi et al 2011). Local communities are not only amongst the first beneficiaries of this transition, but also its enablers, as they are often the owners of restaurants, hotels and other businesses. Only with their help can a successful outcome be achieved, built through a concerted effort and collaboration between local communities, small entrepreneurs and big chairlift companies.

Chapter 2

2.1 Relating alpine ski tourism to a physical product: Shake out and Dominant Design

In the previous chapter, the mountain industry was presented, the different stakeholders were listed and a specific focus was placed on alpine skiing as the driving activity for the entire winter sector and the industry as a whole.

In this chapter, before moving on to the analysis of how companies interact with the specific business environment, let's carry out a theoretical exercise by comparing alpine skiing to a tangible product (e.g. smartphone, bicycle, etc.) in order to gain insights into the lifecycle of this discipline and its future prospects, having established the central role played by this sport in the industry.

Using Klepper's concepts of the life cycle as a theoretical reference, we know that in the first stage of a product's life cycle, entrant accounts for a disproportionate amount of product innovation (Klepper 1996) and there is a high volatility of market shares and, consequently, a great competition amongst the various players. In the more advanced stages of a product's life cycle, the efforts of companies in the industry are directed towards the innovation and efficiency of processes rather than of products (Klepper 1996).

At this stage of maturity, it is interesting to analyze the shake-out phenomenon: a phase in which the number of companies is constantly decreasing, even though the profitability of the sector is constantly increasing. A paradox where some players are forced to leave the sector, not because of low profitability, but because of external factors that make it impossible for the company to operate in a sustainable way.

This instability leads to a dominant design, a form that the industry and the market have recognized as successful for the product, sustainable for the company and appreciated by consumers. As Utterback and Abernathy theorize, "those firms unable to efficiently produce the dominant design leave by contributing to the shakeout (drastic reduction in the number of firms in the sector)". (Utterback & Abernathy 1975).

Applying this theoretical framework to alpine skiing, we see an initial phase in which the sport entered the market as a new product designed to meet the needs of winter sports enthusiasts. The innovators and pioneers of skiing contributed to its spreading and initial popularity.

The first equipment and technologies were primitive, but represented a major step forward compared to previous skiing practices.

This was followed by the so-called take-off period, a phase of growth during which alpine skiing became increasingly popular and widespread amongst winter sports enthusiasts. Technology was rapidly improving, enabling better performance on skis and a safer, more adrenaline-charged sporting experience. The number of players in the alpine ski industry increased, from ski resorts - with the development of the accommodation sector - to cableways and snow grooming companies, sports equipment manufacturers and technical clothing manufacturers: a situation of increasing competition and enthusiastic development.

The take-off phase was followed by a settling phase, in which the sector reached a certain maturity, the main players strengthened and the market became more saturated.

Competition intensified and profit margins tended to fall. In the evolution of alpine skiing, this phase took place in the last decade of the last century. After the great development and expansion of the 1970s and 1980s, from a commercial point of view, skiing stabilized around consolidated standards, ski resorts appeared in alpine areas where this was possible thanks to morphological and climatic conditions. The technology of the sector was well established, consumers were being “educated” and a certain stability was being established around this sporting activity.

As is the case with the life cycle of more “tangible” products than alpine skiing, this sector also entered a phase of adjustment during which several players in the sector suffered the consequences of the shake-out. This phenomenon was partly caused and certainly accelerated by external agents such as climate, and it confronted ski resorts with an industrial paradigm shift. Natural snow did not reach the altitudes it did a decade earlier, ski lift technologies were evolving and required more electricity, artificial snowmaking was becoming indispensable to ensure that the resorts stayed open long enough to generate a profit. These elements caused many players to exit the industry as they were no longer able to compete in the market, despite the snow industry being a profitable sector in itself.

The shake-out phase led to a stage of maturity in the industry. The “surviving” companies gained large market shares and concerted on process innovation to maintain their dominance.

The maturity stage was accompanied by a “dominant design”, a paradigm representing a set of technology features and standards that became widely accepted and adopted by the industry as a whole. The dominant design was the result of competition and market evolution, and was generally regarded as the benchmark for the entire industry. Alpine skiing reached a stage of maturity, the lifecycle of the industry went through all the stages of natural development and was about to face a period of difficulty in which the known paradigm could undergo major upheavals from the changing business arena, once again because of external factors, such as climate.

2.2 What is the company's business environment? Mintzberg and the Environmental School

The concept of business environment refers to the set of external factors that influence a company's operations and decisions. These factors can include economic, political, legal, social, technological and environmental elements that can have a significant impact on a company's performance and success. (Worthington & Britton 2006, page 36). This definition highlights the importance of considering both the macro- and micro-economic aspects of a company's external environment, and how these factors can impact a wide range of business areas, including strategy, marketing, finance and human resource management.

It is crucial for companies to understand and adapt to this changing environment in order to ensure long-term success.

Even Henry Mintzberg, one of the most influential scholars in business strategy, dedicates an entire school of strategic thought to the environment in his handbook "Strategy Safari".

The Environmental School places special emphasis on the external environment as the main driver of corporate strategies. According to Mintzberg, what surrounds the company is a critical factor that can influence strategic decisions. This environment can be composed of a wide range of elements, including economic, technological, social, political and environmental factors. However, Mintzberg speaks of the dynamism of the external environment and its mutability over time. Companies that implement decision-making processes following the Environmental School theory appear to be very sensitive to changes in the business environment. This means that they are constantly looking for indicators that may suggest imminent changes or emerging trends in their sector or market. In addition, they are able to quickly adapt their strategies and operations to respond to such changes. A key aspect of the Environmental School is the importance of organizational learning. Companies must be able to gather information from the external environment, critically analyze it and apply the knowledge gained to improve their corporate practices. (Mintzberg et al. 2009, pages 285-300). This continuous learning process allows companies to remain flexible and able to adapt to environmental changes.

It is immediately clear that in the case of mountain companies, the business environment and external agents capable of influencing the company's operations are numerous and highly important. Think of climate change, snowmaking, the scarcity of natural resources such as water, or the increasing cost of electricity, the driving force of ski lifts and snowmaking systems. Companies in this sector must be able to adapt quickly to change (Donaldson & Joffe 2014) and

their structure must allow for easy and fast circulation of information within the different departments, with a hierarchical scheme that is not too strict, so as to allow human capital the necessary independence and autonomy to make decisions. (Bernstein 2016).

This is what one would expect, but is this really the case in the mountain business environment? In this dissertation, some specific aspects will be discussed, with the aim of understanding if and how companies are able to adapt and whether the organizational strategies being implemented are sufficient to ensure sustainable, long-term development.

2.3 SWOT and VRIO: frameworks supporting industry competitive advantage analysis

In order to have all the elements needed to approach the case study analysis, some tools such as SWOT Analysis and VRIO Analysis can be useful.

SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) is a strategic planning tool used to assess the strengths, weaknesses, opportunities and threats in a company or a specific project. It can be used to analyze a situation from a strategic point of view, with the aim of making the right decisions, mitigating risks and creating a competitive advantage. (Helms & Nixon, 2010). Recent studies have shown that SWOT analysis can also be effectively applied at the sectoral level to identify the competitive dynamics and growth opportunities of entire economic sectors (Hayati et al. 2023). Similarly, VRIO Analysis - usually used to assess companies' internal resources and capabilities - has been adapted to examine the distinctive characteristics and unique resources that define the competitiveness of a sector as a whole (Ioppolo et al. 2012; Lopes et al. 2018). These unconventional applications of SWOT and VRIO analyses at the industry level provide a holistic and integrated view of the driving forces and challenges that characterize the sector, offering valuable insights for strategic planning and policy formulation.

Due to their natural charm, mountain areas attract visitors and tourists who are intrigued by the many possibilities these areas have to offer - from winter sports to summer walks in the woods, from ice climbing to via ferrata, cycling and good food. These activities are not only part of an active lifestyle, with significant benefits for physical and mental health, but also allow one to explore the rich cultural and historical heritage of mountain areas: ancient trails, local museums, traditional architecture and typical folklore events.

However, the mountain tourism sector - as presented in the previous chapters - faces considerable challenges. Mountain areas are often difficult to access, which can make it difficult to reach and

move in these villages. Ever-increasing costs (daily ski passes, motorway tolls, overnight stays and food) do not favor an increase in users and in the popularity of sporting activities in alpine areas.

“Rural territories are worse equipped than urban ones in terms of accessibility to services and opportunities, due to their scattered development and peripheral character. Increasing cuts to loss-making services in traditional public transport contributed to increased social inequality and marginality, in so doing undermining the livability of rural communities” (Vitale Brovarone & Cotella 2020). In addition, dependence on seasonal activities such as skiing, places a limit on the continuity of the flow of tourists and on economic stability throughout the year. Another weakness in mountain areas is the maintenance of essential infrastructure, such as roads and trails. This represents a high cost for local communities, forcing them to balance development projects with land conservation projects.

Despite these challenges, several opportunities for the mountain industry are also evident. Increased consumer interest in sustainable tourism offers opportunities to develop practices that respect the environment and promote local sustainability. Technological innovation, such as the use of augmented reality, outdoor applications and GPS, can improve accessibility and enrich the tourists’ experience. However, the sector also faces serious threats, such as climate change, which reduces snow cover and threatens winter sports. The economy of mountain regions is jeopardized, as they are dependent on ski tourism.

To delve further into the analysis of the mountain sector’s potential and fully understand the key elements that could offer a competitive advantage, it is useful to conduct a VRIO analysis. This is a strategic assessment tool used to examine an organization’s internal resources with the aim of determining its competitive potential in its market environment. (Barney et al. 2001). VRIO is an acronym that stands for Value (does the resource add value by enabling the organization to exploit opportunities or neutralize threats in the environment?), Rarity (measures the uniqueness of a resource), Imitability (the difficulty for other companies to imitate a particular resource) and Organization (does the organizational structure allow a good exploitation of the resource?).

In attributing the characteristics of mountain tourism to each area of the VRIO analysis, territory and nature are the most recurrent elements. A characteristic that gives value to this industry is the morphology of the territory, the uniqueness that each natural landscape is able to offer and the emotions it can arouse. The specificities of the territory are also rare to find, each mountain area has unique features. In terms of characteristics that are difficult to imitate, sports facilities surely are. Cableways are a difficult resource to imitate and expensive to build. In the

organization section, it is more difficult to identify one characteristic that provides a competitive advantage over other sectors. Mountain territories and local communities have a tendency not to create a system including different players (sports and accommodation facilities, etc.). The entire sector is therefore exposed to weaknesses and the possible competitive advantage over other tourist destinations is reduced.

Chapter 3

3.1 Introduction to the case studies: Val Susa and Val Maira

In order to carry out a practical analysis of the topics of the research question, an analysis was conducted on two alpine areas in Piedmont: the Val Susa and the Val Maira. This choice is due to the geographical position of the two valleys, that are located in Piedmont and thus share an important common background. The study of tourism in these two geographic areas aims at understanding what the current processes are and whether there is a will to have a tourism offer that can increasingly meet the market's requests, despite the fact that they imply and need changes in the current traditional methods.

The idea is to understand a possible approach that is sustainable in the long term, allowing for a flourishing economic development of these areas that cannot avoid experiencing fluctuations in tourist flows, with a strong dependence on winter tourism.

This chapter is dedicated to an introduction of the two areas, in order to better understand their history, cultural, sporting and tourism features.

- Val Susa:

The Val Susa - in the Piedmont region - is an area rich in history, culture and breathtaking natural landscapes. Located between the Graian Alps to the north and the Cottian Alps to the south, this valley is a crossroads of ancient trade routes and pilgrimage routes, a destination for outdoor sports enthusiasts, especially skiers.

During the Roman era, the Val Susa was a vital route of the Empire, a part of the Via Domitia, that connected Gaul with the Italian peninsula across the Alps, facilitating the movement of troops and trade. In the Middle Ages, this valley gained further importance thanks to the Via Francigena, a pilgrimage route connecting northern Europe with Rome, that made it a crossroads of cultural and economic exchange. These relationships with peoples from beyond the Alps are also reflected in the linguistic heritage of the area. In some areas, Franco-Provençal and Occitan

dialects are still preserved, evidence of the historical French influence on the region. (Fiora & Gambelli 2006; Italia.it 2023; Turismo Torino e Provincia s.a; Vallesusa Tesori s.a.).

As far as the type of businesses is concerned, most of them belong to the tourism sector - with the sports sector in the lead - followed by accommodation, hotels and restaurants. The economy in valley is mainly based on winter tourism activities. Val Susa hosts some of the most important Italian and European ski resorts: the Vialattea, the Bardonecchia ski resort and a number of smaller resorts, over 96 ski lifts and about 520 km of skiable slopes.

The ski resorts bring in an annual turnover of around EUR 36 million and hundreds of seasonal employees. (Bardonecchiaski s.a.; Vialattea s.a).

In addition to the tourism sector, the food industry is also present in Val Susa, with some farms producing local specialities, cheese and mountain spirits.

Nowadays, Val Susa is an attractive destination the tourist and sports opportunities that the area offers. In this regard, it is interesting to briefly focus on the Vialattea, the most important ski resort in the upper part of Val Susa, one of the main tourist attractions in the area.

The resort's origins date back to the 1930s when Sestriere - one of the world's first designed ski resorts - was built on the initiative of Giovanni Agnelli, founder of FIAT. This ski resort helped transform the area into a winter sports center. Over the years, the area has expanded to include the other neighboring sites and improved the connections between them, thus creating a huge skiable area across the French-Italian border. In the 1980s and 1990s, significant investments were made in infrastructures, including the construction of snowmaking facilities, a first for Italy at the time. The area has continued to grow with the addition of new ski lifts and the expansion of the ski slopes. Today, Vialattea offers around 400 km of slopes and 70 ski lifts, making it one of the largest ski areas in Europe. (Vialattea s.a.).

The turning point for the resort was undoubtedly the Winter Olympic Games in 2006. Sestriere and the other resorts of the Vialattea hosted numerous events, attracting international attention and further investment. The Olympic Games not only led to further evolution of infrastructure such as motorways and tunnels, but also left an important legacy of sports facilities.

The development of the Vialattea has had a significant impact on regional tourism and transformed the area into a major international year-round tourist destination.

In addition to skiing, the Val Susa also offers great opportunities for summer tourism, making partial use of the winter infrastructure. Activities such as hiking, mountain biking, climbing and golfing attract visitors during the warmer months.

- **Val Maira:**

Val Maira is an alpine valley located in the south-west of Piedmont, in the province of Cuneo. It is renowned for its natural beauty, rich history and cultural diversity. Differently from other areas of Piedmont, the local culture is the result of its historical roots, its isolated geographic position and Occitan influences.

Traces of human settlements dating back to the Bronze Age have been found, but it was during the 20th century that socio-economic changes occurred which shaped the valley's current economic structure. The main activities of agriculture and livestock breeding came to a halt when the population of the valley migrated to the large cities and abandoned the mountain territories. It was not until the 1970s that there was a cultural and tourist revival, through the promotion of sustainable tourism and outdoor activities such as hiking and mountain biking, a real *unicum* at that time.

Val Maira's cultural heritage is also important. This is one of the last areas in Italy where the Occitan language is spoken, the "Lenga d'òc", which is still preserved and celebrated through festivals and cultural events. (Vallemaira s.a.; Verticalife 2018).

Nowadays, Val Maira is well known for being a suitable destination for outdoor sports enthusiasts and tourists looking for a quiet landscape and natural beauty. Sporting activities - particularly trekking and mountaineering - have deep roots along the numerous trails that cross the mountains and the scenic alpine landscapes.

Over the years, sports in the Val Maira have spread - including trail running, road cycling and mountain biking - thus increasing the tourist offer with dedicated itineraries that explore the extensive network of forest roads and old military roads. Various events have attracted an ever-increasing number of visitors and sports enthusiasts. For instance, the "Valle Maira Sky Marathon" and routes such as the "Occitan Trail": a hiking itinerary that combines the beauty of the valley itself with the Occitan cultural and artistic heritage. (Vallemaira s.a.).

The winter season transforms the Val Maira into a sports paradise. Many are the opportunities for cross-country skiing, ski mountaineering and snowshoe treks on well-marked trails and charming views.

However, this area also faced periods of tourism decline mainly due to its remote location and national economic difficulties. Nevertheless, recent sustainable tourism initiatives and the promotion of local traditions - including Occitan festivals and cultural celebrations - have supported the interest in a form of tourism that respects the environment and enhances local heritage.

As far as alpine skiing is concerned, there is no major facility. Only in the village of Acceglio is there a “carpet” used to teach young skiers and beginners (LostLift s.a.). The main offer concerns ski mountaineering, thanks to the wild nature, a perfect setting for excursionists and off-piste enthusiasts. The winter tourist offer, aims to attract tourists with a more authentic, intimate experience, far from the crowds of the more commercial alpine resorts.

3.2 Methodology

The purpose of this research is to analyze the long-term sustainability of the mountain economy, in particular focusing on two alpine valleys in Piedmont, Val Susa and Val Maira. The two territories differ in one important characteristic: Val Susa is strongly dependent on winter tourism related to alpine skiing. In Val Maira, on the other hand, “slow” tourism is more widespread. It is still linked to skiing but with a different approach. Therefore, the objective is to compare companies belonging to different sectors of the industry (sports, accommodation, etc.) from the two areas and analyze their behavior, perceptions and future strategies in order to remain competitive and attractive in the long term.

- *Distribution and data collection:*

The questionnaire was distributed by e-mail with a direct link to the online form.

Participants were informed about the anonymous treatment of their personal data and about the possibility to withdraw from the study at any time. Data collection lasted three weeks, a sufficient time to allow for a good response rate.

- *Techniques used for data analysis:*

Data analysis included both quantitative and qualitative methods, depending on the surveys conducted.

Thematic analyses were used for qualitative survey objectives, as well as descriptive statistics parameters to provide readers with a good overview of the results obtained.

As far as the quantitative analysis is concerned, both parametric and non-parametric techniques were used, such as the ANOVA Test, the Chi-squared, t-student and the Kruskal-Wallis and Mann-Whitney U.

A brief description of the methodologies used is provided below in order to facilitate the understanding and analysis of the results.

ANOVA analysis was used to determine whether statistically significant differences existed between the averages of several independent groups. In fact, ANOVA is used to compare the averages of several groups simultaneously by testing the null hypothesis that all group averages are equal. If the null hypothesis is rejected, it means that there is at least one significant difference between the group averages (Howell 2013). A t-student analysis was also used for the same purpose.

Instead, the Chi-squared test, which “examines the frequencies of categories observed in a sample and compares them with the expected frequencies, calculated from the proportions of relative categories present in the overall population” (Gravetter & Wallnau 2016), was used to test hypotheses on contingency tables by testing the independence of two variables in a population sample.

In cases where the answers to the questions could not be parameterized, the Kruskal-Wallis test was used. This non-parametric method is used to determine whether significant differences exist between two or more groups of an independent factor on an ordinal or continuous dependent variable that does not necessarily follow a normal distribution. Finally, the Mann-Whitney U test was used to determine the presence of significant differences between two samples of independent groups.

3.3 Analysis

The questionnaire was completed by a sample of 17 respondents, 52.9% of whom were workers in Val Maira and 47.1% workers in Val Susa. 29.4% of the respondents are aged between 18 and 34 years, most of the total respondents work as employees (35.3%) and the business sector with the highest representation in this sample is the sports sector (freelance ski instructors, ski school directors, owners of sports equipment rentals) with 41.2% of the total respondents.

Descriptive statistical techniques are applied in order to provide a general picture of the respondents' opinion, the mode of the answers to a general question such as: “In the last three years, have you perceived a change in customer demands due to a change in environmental conditions (climate change and/or lack of snow or difficult snowmaking, very hot summers in the city, etc.)?” The answer was given through a modular choice based on a Likert-type scale from a value of 1 (disagree) to a value of 7 (strongly agree). The mode was 6. This shows that the sample of respondents completely agreed that in recent years there has been a change in

consumer demands due to a change in external agents, thus emphasizing the importance of the business environment in influencing the mountain tourism market.

It also emerged that 77% of respondents are favorable to diversify the tourism offer from alpine skiing, demonstrating a growing interest in new proposals to keep the area attractive.

In addition, the questionnaire aims at investigating some aspects related to the corporate organization of businesses operating in a mountain context. The subsequent strategic considerations describe the structure of the companies and the shared objectives in terms of diversification of offers, change in consumer behavior and in general on future changes in the business environment, which emerged as significant elements from the survey.

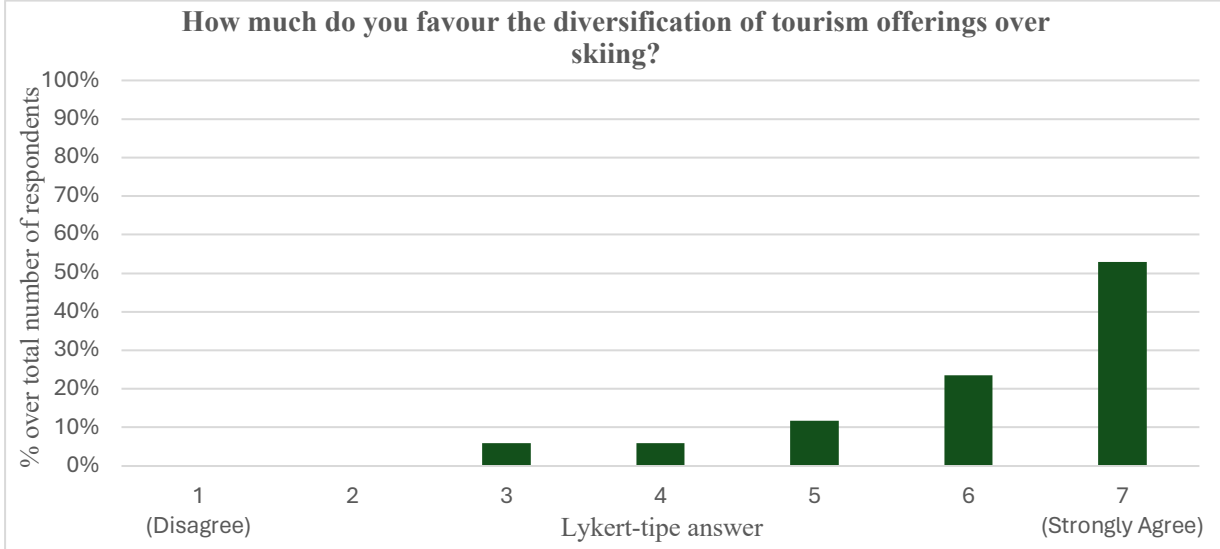


Table 1. “Graphic representation of the level of agreement on the diversification of the tourism offer from skiing”.

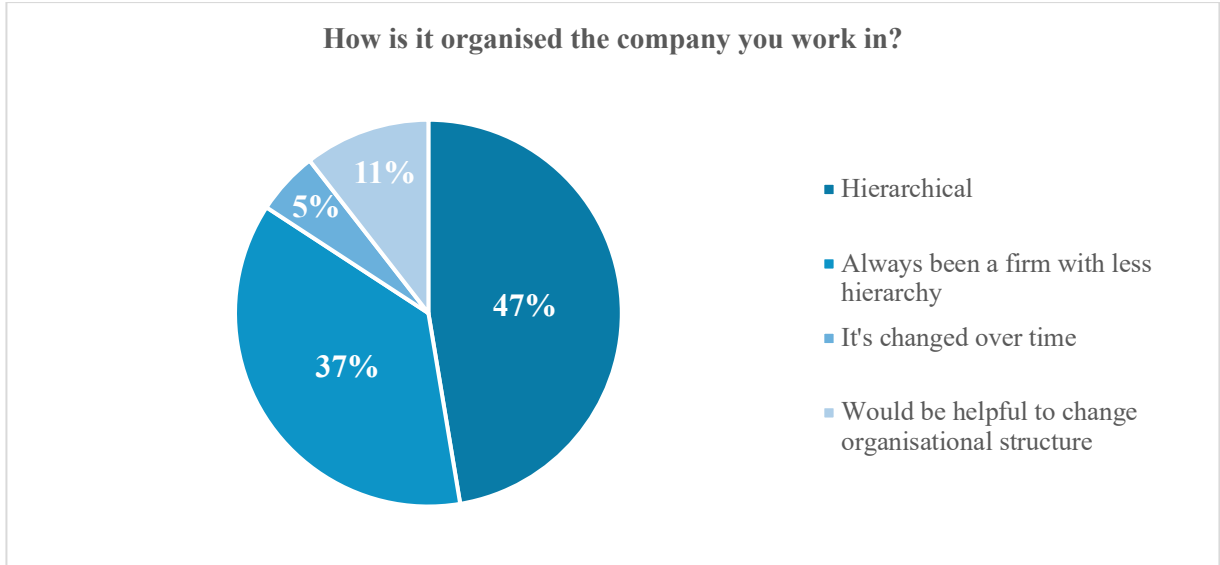


Table 2. “Graphic representation of the current situation in terms of organizational structure in mountain firms”.

The main objective of the research question is to investigate the ability of companies operating in a mountain context to remain competitive in the long term. Having affirmed the central role of alpine skiing in the mountain economy, an analysis was conducted on the basis of the questions in the questionnaire to see if there is a different perception of the role of alpine skiing between Val Susa and Val Maira. The two areas are very different on this issue as the former hosts one of Europe's most important ski resorts, the latter has focused its winter activities on different styles of skiing.

In order to verify this, the Chi-squared technique was applied with the null hypothesis H0: "*There is no significant difference in the perception of dependence on alpine skiing between participants from the Susa and Maira valleys*" and the alternative hypothesis H1: "There is a significant difference in the perception of dependence on alpine skiing between participants from the Susa and Maira valleys".

The calculations were performed as follows: $\chi^2 = [(8 - 6.67)^2 / 6.67] + [(3 - 2.33)^2 / 2.33] + [(1 - 1.99)^2 / 1.99] = 1.05 + 0.25 + 0.01 = 1.31$

In order to determine the critical value of the Chi-squared to be used for comparison, we can consult a Chi-squared table with a significance level (α) of 0.05 and 4 degrees of freedom. The critical value in this case is 7.815.

Since the calculated Chi-square value (1.31) is lower than the critical Chi-square value (7.815), we cannot reject the null hypothesis. This means that there is insufficient evidence to conclude that there is a significant difference in the perception of dependence on alpine skiing between participants from the Susa and Maira valleys.

Continuing with the analysis of the dataset, it was decided to verify whether there was a variation in the respondents' opinion about the central role played by alpine skiing according to their age. To this end, the Kruskal-Wallis technique was used, which involves calculating an H-value that follows a Chi-squared distribution with degrees of freedom equal to the number of groups minus one. If the calculated H-value is greater than the critical Chi-squared value with a certain level of significance (α) and the specified degrees of freedom, the null hypothesis is rejected and it is concluded that there is a significant difference in the perception of dependence on alpine skiing between participants of different ages.

The null hypothesis H0: *“There is no significant difference in the perception of dependence on alpine skiing between participants of different ages”* and the alternative hypothesis H1: *“There is a significant difference in the perception of dependence on alpine skiing between participants of different ages”*.

Using statistical software, the calculated H-value for this test is 2.10 with 2 degrees of freedom. The critical Chi-squared value with $\alpha = 0.05$ and 2 degrees of freedom is 5.99.

Since the calculated H-value (2.10) is lower than the critical value of the Chi-squared (5.99), we cannot reject the null hypothesis. This means that there is insufficient evidence to conclude that there is a significant difference in the perception of dependence on alpine skiing between participants of different ages.

A further useful aspect to investigate in order to draw conclusions on the research question lies in correlating the geographical area with the respondents' perception of the future of the mountain economy. In order to test for a dependency between the two variables, the Mann-Whitney U test was used to assess whether there was a significant difference in the concern about the future of the mountain economy between participants from the Susa and Maira valleys.

The null hypothesis formulated is H0: *“There is no significant difference in the concern about the future of the mountain economy between participants from Val Susa and Val Maira”*, the alternative hypothesis H1: *“Participants from Val Maira are less concerned about the future of the mountain economy than participants from Val Susa”*

The Mann-Whitney U test calculates a U value that follows a specific distribution with degrees of freedom equal to the number of observations in the smallest group minus one and the number of observations in the largest group minus one. If the calculated U value is lower (or higher, depending on the direction of the hypothesized difference) than the critical U value with a certain level of significance (α) and the specified degrees of freedom, the null hypothesis is rejected and it is concluded that there is a significant difference in the concern for the future of the mountain economy between the participants in the Val Susa and Val Maira.

Using statistical software, the calculated U value for this test is 12 with 5 and 5 degrees of freedom. The critical value of U with $\alpha = 0.05$ and 5 and 5 degrees of freedom is 15.

Since the calculated U value (12) is lower than the critical value of U (15), we can reject the null hypothesis. This means that there is sufficient evidence to conclude that participants from Val Maira are less concerned about the future of the mountain economy than participants from Val Susa.

Lastly, a further objective is to lay scientific foundations on considerations related to the diversification of the tourism offer in order to support long-term development and ensure that the alpine resorts remain attractive to visitors throughout the year. To this end, a possible statistically significant correlation was analysed between the perception of the future of companies in the mountain industry and the perception of dependence on alpine skiing amongst the participants in the two valleys (Val Susa and Val Maira). The data used are the individual values of the perceived future of mountain businesses and the perceived dependence on alpine skiing for each respondent and the valley in which they are located.

Since data are not distributed as usual, a non-parametric test - the Spearman correlation test - was used to assess the relationship between the two variables. The Spearman correlation test calculates a correlation coefficient rho (ρ) that varies between -1 and 1. A positive ρ value indicates a direct correlation, while a negative ρ value indicates an inverse correlation. A ρ value of 0 indicates that there is no correlation between the variables.

The result of the test indicates a rho value of (0.38), consequently we can state that there is a statistically significant correlation ($p < 0.05$) between the perception of the future of mountain businesses and the perception of dependence on alpine skiing.

- **Interpretation of results:**

The analysis of the questionnaire reveals several interesting aspects about the perception of dependence on alpine skiing amongst participants from Val Susa and Val Maira. First of all, the test showed no significant differences between participants from the two valleys. This means that, despite the absence of ski lifts and tourist resorts for skiers in Val Maira, the activity is still perceived as one of the most important in terms of tourist attraction.

The analyses also show that there are no major differences in terms of perceived dependence on alpine skiing amongst respondents of different ages. This result may lead to interesting discussions on generational succession and change management in an industry where business practices are often handed down. It is also an important indicator especially considering the younger generation, who are undoubtedly living and experiencing a difficult time in skiing, more

so than in the past. The fact that they do not have a different perception than older respondents highlights how skiing is firmly rooted in mountain culture.

The Mann-Whitney U test revealed that respondents from Val Maira were less concerned about the future of the mountain economy than respondents from Val Susa. In percentage terms, the respondents who expressed concern for the future of their activities in Val Maira were 33% of the total respondents, compared to 75% of the respondents from Val di Susa. This difference could be due to several factors, such as the different economic dependence on alpine skiing, the different perception of future opportunities or the greater diversification of the existing tourism offer, which ensures a greater feeling of confidence in facing uncertainties related to the future to Val Maira responders compared to Val Susa participants.

Finally, Spearman's correlation coefficient indicated a direct and statistically significant correlation between the perceived dependence on alpine skiing and the perceived future of mountain businesses. Participants who perceive greater dependence on alpine skiing tend to have a more pessimistic view of the future of mountain businesses. This result is crucial for the analysis of the research question and the final discussion of the dissertation, as it proves the importance of diversifying economic activities in mountain areas to ensure their future sustainability.

Chapter 4

4.1 The role of technology: how it can foster business innovation

Before discussing the results of the analysis and concluding the research, it is useful to emphasize the importance of technology and the enabling role it can play in changing the tourism offer and its evolution. This chapter will also present a number of startups in the winter industry, describe their innovative aspects, the difficulties they encounter and the role they play in their economy.

Innovation is “an iterative process triggered by a perceived opportunity in a new market and/or a new service and/or a new technological development, which can bring commercial success thanks to the definition, design, development and marketing of the new invention” (OECD 2005). Innovations do not only concern products and services but also processes, technologies and business models that enable their production and marketing (Iacovone 2023).

The literature distinguishes between different types of innovation. Amongst the most classic approaches are strategies that fall under the so-called “closed innovation”, i.e. company-

governed innovation, which does not exceed their limits of reference and focusses mainly on process improvement. This is an incremental approach to innovation, aimed at generating new solutions for the specific market in which the company operates. In contrast to this paradigm for innovation is what the literature defines as “Open Innovation”: an interdisciplinary approach that assumes that companies can and should exploit external and internal ideas to advance their technology and compete in the market (Chesbrough 2003; 2006). Key characteristics include dynamism, decentralization, flexibility, collaboration. Dynamism is the ability to quickly adapt to market and technological changes, enabling companies to seize new opportunities promptly and to exploit innovative ideas from both internal and external sources. Decentralization implies a wider distribution of the innovation process, as opposed to traditional centralized models, allowing ideas and solutions to emerge from different areas of the company network, including external stakeholders. Flexibility allows companies to easily integrate new technologies and ideas, regardless of their origin, fostering a working environment that embraces change and stimulates continuous innovation. Collaboration is key, involving various actors, including other companies, academic institutions and consumers, facilitating the exchange of information, promoting open and efficient interaction. Actions taken in Open Innovation aim to improve the end-user experience, making this approach strongly customer-oriented.

The importance of opening up to other sectors and letting other disciplines contribute to shaping a service that is more and more suitable for the needs of the market and the wishes of consumers: these are elements of discussion about the importance of consumers in the definition of the offer, especially in the tourism industry.

Customer centricity is “is the manifestation of a firm’s ability to make customers the focal point by establishing continuous interactions with customers, involving customers in decision making, and integrating internal and external resources and stakeholders” (Lamberti 2013).

This definition is important because it challenges the well-established paradigm for companies’ approach to the market, i.e. the product/service-centric approach, according to which consumers should adapt to products and not vice versa. The co-creation of value is fundamental, differently from the alpine industry, “other industries had reported the importance of customers as innovation co-creators and stimulators, tourism destination stakeholders tend to be less aware of such potential. This circumstance is somewhat incomprehensible given that tourism is by definition a customer-driven activity and sector, in which customers are described as prosumers, i.e., both producers and consumers” (Pikkemaat et al. 2018).

This resistance to suggestions from the outside is also explained by the answers to the questionnaire, where a difficulty is apparent in changing a traditional organizational set-up, characterized by well-defined hierarchical relationships. Companies in the mountain industry have a very traditional approach to operations, which is reflected both in the organizational chart and in the approach to the market and innovation.

However, it is true that in recent years some potentially disruptive elements have entered into play in the alpine industry, such as technology and its implementation in the outdoor sector - from online hotel and restaurant bookings to ski pass sales, outdoor tracking applications and even the booking of ski lessons and rental of technical equipment. Technology has been adopted to provide a number of services to facilitate access and extend their reach in terms of customer base.

These processes are part of a broader concept of digital transformation or “Process of using digital technologies to create new - or modify existing - business processes, culture, and customer experiences to meet changing business and market requirements” (Salesforce s.a.).

In the light of these considerations, some examples will be presented of mountain companies in the Val Susa which have innovated both their processes and their business model, implementing new elements to meet consumer needs and fill gaps in the tourism offer. These companies in the Val Susa area were selected for their resilience and ability to innovate, despite the fact that - as the analysis showed - this area is traditionally more focused on winter activities of alpine skiing and less inclined to innovate the offer.

The first company is Preskige, a startup founded in 2016 with the aim of connecting customers and ski instructors through an online platform. The customer segment they address is represented by experienced skiers who are willing to improve their technique with top professionals. “The platform connects experienced skiers who want to perfect their skiing technique at any time of the season with a selection of the best professionals, [...], all focussing only on customised courses of the highest quality and with an extreme level of specialisation” (Il Sole 24 Ore 2018). So, the founders’ aim is to engage a portion of skiers who are usually not interested in taking a ski lesson because they do not perceive any added value to their skills. This is done through a high-quality service with an innovative access method, an app.

The project has received several rounds of funding for the implementation and expansion of the online platform, making it more effective and attractive to consumers.

In 2019, Preskige opened a physical place in Sestriere with the goal of expanding their reach. Their customer base expanded and the platform began to adopt an approach more similar to that of traditional ski schools.

In a recent interview with the founder Eugenio Marsaglia, he stated: “Our initial platform was designed to connect skiers and ski instructors, but today we have expanded to e-bikes, and we also aim at adding services for the sea” (Garrone Foundation 2020). This shows how the business environment in which companies operate has an important influence on their business models and strategic business decisions. In the case of Preskige, the operating environment led to a change from the initial idea in order to ensure a long-term profitability. This shows that in the Val Susa, the attachment to alpine skiing - and in particular to a very traditional interpretation of this industry - may sometimes inhibit any evolution process.

The newly founded Skirank is another innovator in the alpine skiing market thanks to its digital transformation process. A start-up that owns a software to keep track of the sporting progress of young athletes, clients of ski schools or of freelance instructors. It includes a scheduling area to manage the booking calendar, as well as various functionalities to customize the user’s experience and preserve in time the memory of moments spent on skis.

In 2023, the startup signed an agreement with the national association of ski instructors A.M.S.I., with the aim of standardizing the databases and data collection of Italian ski schools whilst adapting the service to the needs of consumers through digital reports, photos and videos, and voice comments to complement their skiing experience. (SkiRank s.a.).

Skirank can be considered an example of open innovation thanks to its ability to implement features and functionalities from different sectors. Its partnership with A.M.S.I. provides access to a lot of data that was initially proprietary to ski schools. This information was integrated into the platform, thus ensuring the development of features that respond to customer needs. The continuous analysis of institutional and private users’ feedback not only allows to improve their experience, but also demonstrates a customer-oriented approach. This is crucial in open innovation, where external input is used to drive product development.

Skirank also implements advanced technologies such as image (photo and video) processing and voice recognition to improve and speed up the user experience within the platform. This relentless pursuit of new ideas and improvements underlines the commitment to open innovation, whereby not only internal company resources are utilized, but new opportunities are actively sought through external collaborations.

This is an example of innovation in the operating model, i.e. the “way a company organizes and manages resources to create value to deliver to customers, guided by strategic objectives” (Iacovone 2023).

The third company founded in the Upper Val Susa has adopted an innovative business model not only in its - marginal - use of technology, but above all in the organization of their corporate structure. Chaberton Outdoor Activities is a mountain experience association founded by young professionals whose vision is “Be the landmark of your leisure” (Chaberton Outdoor 2023). In this case, for the first time, the focus is entirely on outdoor activities. The association offers a landmark for sporting activities, not only winter sports, with the ambition of creating a diversified hub capable of adapting to changes in the business environment and the needs of customers.

“The main purposes for which Chaberton Outdoor Activities operates are the enhancement of the Valsusa area through the supply of a wide range of entertaining, leisure and sport activities. Focusing especially on outdoor sports as a tool for individual and collective improvement. We work to improve the sensibilization of the public towards sustainability of mountain environment. We actively work to promote the area on which we operate to a national and international audience, organizing several sport events, and taking care of this same area, working in order to map and digitalize trails belonging to our region” (Chaberton Outdoor 2023). Mountain experiences range from ski mountaineering to summer trekking, MTB excursions, yoga sessions, walks to listening to deer belling, events such as the “Claviere Bike Festival” and cultural events, organized thanks to a network of local museums whose goal is to support tourism in small and often unknown places.

The network of professionals follows an organizational scheme characterized by the near absence of hierarchy. This approach ensures greater flexibility and adaptability to changes in the market, promoting broad participation and a rapid exchange of information between team members. This organization tends to be agile and responsive, improves productivity and employee satisfaction (Laloux 2014). In addition, it ensures customized service, which is crucial for a unique and engaging experience.

The discussions that emerged from the analyses conducted will be examined in the next section, highlighting the main features and focusing in particular on the issues of diversification, deseasonalisation and the crucial collaboration between the various stakeholders in the mountain

sector. The fundamental role of policy-makers in promoting development policies that support sustainable growth in mountain areas will also be emphasized.

In fact, the latter have the authority to implement laws preserving mountain ecosystems, regulate tourism, and support environmentally friendly farming practices in alongside providing grants and incentives for initiatives that support environmental conservation. In order to inform citizens and tourism operators about the best practices in social and environmental sustainability, policy makers may also plan or promote training initiatives. They can encourage the construction of environmentally friendly infrastructure, such hiking and biking paths, which will enhance people's standard of life while lessening the negative effects of tourism on the environment. Furthermore, they could promote partnerships between the public sector, private companies and nonprofit organizations in order to bring to life innovative projects that could boost local economies.

As a demonstration of this, there's the document: "Provisions for the development and enhancement of mountain areas", issued by the Italian legislator where there are all the statutory laws concerning the effort of the government in favor of mountain territories, such as the one of article 14 of the document. "Article 14 introduces a tax credit for small and microenterprises that, starting in 2023, undertake a new activity in mountain municipalities, and where the owner or at least one of the operators is under 36 years of age on the effective date of the law under review" (Senato.it 2022). This provision is a proof of the willingness to bring new ideas and young firms in mountain territories. Another tangible example of the commitment of policy makers are Eco-museums, financed by Regione Piemonte, to enhance the cultural heritage of some territories, in fact, Eco-museums are "projects carried out by local communities to make the territory grow throughout a sustainable development" (Parchialpicozie.it 2024). An example of this is the Eco-museum Colombano Roman, in Susa Valley, where "ancient buildings, handcrafts and tools used in everyday life tell centuries of history and exploitation of territorial resources, acting as demonstration points for production activities carried out using traditional techniques" (Parchialpicozie.it 2024), fostering a valuable alternative to mass tourism and promoting sustainable visitors flow, distributing them all over the territory and without a clearly defined seasonality.

Furthermore, looking at the recent provisions deployed by the municipality of Sestriere, we notice the effort of policy makers in renewing marketing projects aimed at local growth and territorial sponsorship. In this general register resolution (n°151 of the 27/05/2024) are also present incentive for sport activities and culture initiatives with the goal of widening the municipality offer, reaching new tourism segments. (Comune di Sestriere 2024).

In conclusion, these initiative and legislative efforts supported by decision-makers, show a tangible commitment in helping the economic and cultural development of mountain areas, encouraging entrepreneurial innovation, enhancing local heritage, and promoting sustainable tourism.

4.2 Discussion

The purpose of this work is to investigate what are the main challenges for the mountain industry in order to preserve its profitability and facilitate its competitive position over time. Through the description of the sector and some other useful notions - such as those concerning the business environment - the context of this industry in two alpine valleys of the Piedmont region was analyzed in order to study its trends and to identify any common traits, main socio-cultural differences and above all the diversity in the approach to tourism as a key element for the long-term development of the mountain area.

The results obtained from the analysis conducted through the questionnaire firstly showed how most of the mountain industry is deeply linked to the winter sector, mainly to the sports and accommodation industries. Skiing is perceived as a key activity for industry profitability and tourist attraction. The difficulties this market faces were also illustrated, which are bound to increase over time.

For this reason, the analysis conducted revealed a correlation between dependence on skiing and concern about the future of tourism in the mountains. Indeed, respondents from the area most dependent on skiing (Val Susa) are more uncertain and concerned about the future of their area. On the one hand, they see the supremacy of skiing threatened and, on the other, alternatives are few.

Two main issues are therefore raised: deseasonalisation and diversification, which have a mutually dependent relationship, since deseasonalising means creating tourist flows during the low season and this objective can only be achieved by diversifying tourist offers.

In this regard, the Val Maira was found to be better prepared to face the challenges posed by the business environment. The tourist offer is less dependent on a single activity, the winter sector is characterized by the almost total absence of alpine skiing, and the entire valley relies on the natural, cultural and historical aspects as distinctive factors on which to base its future development.

Interestingly, the greater propensity towards diversification goes hand in hand with less rigidity in business organization. The questionnaire revealed that Val Maira companies tend to have less

rigid hierarchical relationships, which implies greater freedom of action and implementation of new ideas. Everyone can actively contribute to the development of projects and ideas without necessarily submitting them to higher levels.

Together with the absence of ski facilities and therefore of large companies, these conditions mean that companies have an equal relationship with each other, with easier networking in the area. This is why the Val Maira proves united, also from a marketing point of view. There is a single website for different territories and activities, which gives a solid brand image. Collaboration amongst the players fosters development, innovation and paves the way for long-term sustainability.

This dissertation focusses on the economy of the mountain sector and provides an overview of the current approach and preparedness for future challenges, in particular in the areas of the Val Susa and Val Maira. The potential benefits of diversifying tourism offerings to deseasonalise flows are explored. According to the results, new research areas could be explored. For instance, how technology can be used to bring innovation in the business model and go-to-market process, with the aim of improving the tourism experience whilst minimizing the environmental impact. In addition, there is a need to further explore the dynamics of cooperation amongst local stakeholders for a more effective management of natural resources and a greater enhancement of historical and cultural aspects.

For the professionals in the sector, the study emphasizes the importance of adopting a proactive approach in adapting to market conditions and climate change risk mitigation strategies. For all industry players, the results emphasize the importance of supporting responsible tourism practices that enhance the natural and cultural heritage of mountain areas, thus contributing to their preservation and benefitting from a stable economy in the future.

Limitations of the study are due to the geographical concentration on the Piedmont territory, which may not reflect the rest of mountain regions, where the environmental, climatic and economic conditions are different. In addition, small enterprises in mountain regions may have a reduced financial and sometimes technical capacity to implement innovative solutions to cope with changes in the business environment.

4.3 Conclusion

This study analyzed the challenges and opportunities for the mountain industry in the contemporary context, with a specific focus on the dynamics of the alpine valleys of Piedmont, Val Susa and Val Maira. Through an integrated research methodology that included qualitative and quantitative analyses, the interactions were examined between mountain companies and their business environment, which is strongly influenced by climate change and the competitiveness of the sector in a mature environment.

The literature review and data analysis revealed that the mountain industry is experiencing a period of significant transformation due to the need to adapt to an increasingly variable environment and growing economic and environmental pressures. The analysis revealed that diversification of tourism offers, deseasonalisation and the adoption of innovative technologies emerge as key strategies to overcome dependence on winter sports and to attract a steady and sustainable flow of tourists throughout the year.

Furthermore, the results demonstrated the critical importance of adopting sustainable approaches that not only protect the natural environment but also promote the cultural heritage and social well-being of local communities. It was found that initiatives that encourage responsible and environmentally friendly tourism can significantly contribute to maintaining the natural environment, without damaging its authenticity, and to supporting local economies, creating a virtuous circle of economic development and environmental conservation.

Collaboration amongst local stakeholders, including entrepreneurs, local administrators and residents, has been identified as a key factor in the success of mountain development strategies. This study highlighted how cooperation can facilitate the implementation of effective policies that address both economic and environmental needs, emphasizing the urgency for a shared commitment to long-term sustainability goals.

In conclusion, this dissertation offered a detailed overview of current challenges and potential strategies for the mountain industry. Although specific for the Piedmont valleys, the findings and recommendations may provide insights applicable in other mountain regions facing similar problems in a mature and highly competitive market. It is essential for future research to explore new solutions and deepen understanding of economic and environmental dynamics to ensure the resilience and prosperity of mountain destinations in a rapidly changing environment.

ANNEX

Questionnaire Design:

The questionnaire was designed to collect qualitative and quantitative data from participants working in different companies within the mountain industry. Questions were formulated to explore various aspects of the industry, with the aim of gathering insights from a heterogeneous audience in terms of position - employees, managers, business owners or freelancers.

The first questions aimed to investigate general aspects for analysing the dataset, such as the geographical area - Val Susa or Val Maira - age, company role and sector of reference (sports, hospitality, production or others).

Participants were then asked to express an opinion using a Likert-type rating scale with values from 1 to 7 on various aspects such as the role of alpine skiing in the mountain economy, the perception of the sector's outlook and the level of hierarchy in business processes. The objective is to collect data useful for applying comparison techniques to different variables in order to draw statistically valid conclusions from the analysis of the dataset.

Finally, respondents were asked open-ended questions, with the aim of collecting personal opinions on sensitive topics from the inside of the industry, such as deseasonalisation and the role of technology.

Questions:

1. In which valley do you live?

- Val Susa
- Val Maira

2. How old are you?

- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65 and over

3. Which is your role within the company?

- Employee
- Owner
- Manager
- Freelancer
- Other

4. In what industry does the company operate?:

- Hospitality
- Sports
- Manufacturing
- Other

5. How much do you agree with the following statement, “The economy of mountain valleys is dependent on alpine skiing”:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1 Not at all	2	3	4	5	6	7 Very Much

6. How concerned are you about the future of the economy of companies operating in a mountain environment?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1 Not at all	2	3	4	5	6	7 Very Much

7. How much do you favor diversifying tourism offerings from skiing?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1 Not at all	2	3	4	5	6	7 Very Much

8. In the past three years, did you perceive a change in customer demands that can be attributed to environmental changes (climate changes or lack of snow, high-temperature summers in the city, etc.):

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1 Not at all	2	3	4	5	6	7 Very Much

9. How is your company organized? Is there a defined hierarchy or there have been changes over time giving the opportunity to everyone in the organization to raise some new ideas?

- Well-defined hierarchical order
- Changed over time
- Always had little hierarchy
- Need for organizational change but it’s difficult to implement

10. How much do you agree with the statement “The current organizational structure of my company prevents the introduction of new procedures and a quick response to changes”.

1 Not at all 2 3 4 5 6 7 Very Much

11. What do you think is the best alternative to alpine skiing for the economic development of mountain regions?

- Alternative tourism (cycling, trekking, climbing)
- Sports events
- Cultural events
- Conferences
- Other outdoor activities
- Other

12. How do you perceive the future for companies operating in the mountain industry compared to the present?

- Better in terms of opportunities
- In line with previous years
- Worse in terms of opportunities

BIBLIOGRAPHY:

Balbi, S., Giupponi, C., & Bonzanigo, L. (2011). Climate Change and Its Impacts on Tourism in the Alps - The Pilot Area of Auronzo Di Cadore (Belluno). *SSRN Electronic Journal*. Available at: <https://doi.org/10.2139/ssrn.2076036>.

Bardonecchiaski.com (s.a.). Home page. Available at: <https://www.bardonecchiaski.com/it>. Accessed: 26 May 2024.

Barney, J., Wright, M., & Ketchen, D. J. (2001). The resource-based view of the firm: Ten years after 1991. *Journal of Management*, vol. 27(6), pp. 625–641. Available at: <https://doi.org/10.1177/014920630102700601>.

Benur, A. M., & Bramwell, B. (2015). Tourism product development and product diversification in destinations. *Tourism Management*, vol. 50, pp. 213–224. Available at: <https://doi.org/10.1016/j.tourman.2015.02.005>.

Bernstein, E. (2016). *Beyond the Holacracy Hype*. Harvard Business Review. Available at: <https://hbr.org/2016/07/beyond-the-holacracy-hype>. Accessed 29 April 2024.

Campigliodolomiti.it (2024). Where Mountains Meet Humans. Available at: <https://www.campigliodolomiti.it/it>. Accessed: 19 May 2024.

Ceretti & Tanfani S.A. (1932). *Funivia Pian del Sole, Clavieres*. Available at: <https://www.funivie.org/web/claviere-funivia-pian-del-sole/>. Accessed 28 April 2024.

Cervinia.it (2024). Home page. Available at: <https://www.cervinia.it/>. Accessed: 19 May 2024.

Chaberton Outdoor Activities (2023). *About us*. Available at: <https://www.chabertonoutdoor.org/about-our-story/>. Accessed: 19 May 2024.

Chesbrough, H. (2003). *Open innovation: The new imperative for creating and profiting from technology*. Harvard Business Press.

Chesbrough, H. (2006). *Open business models: How to thrive in the new innovation landscape*. Harvard Business Press.

Cholakova, S., & Dogramadjieva, E. (2023). Climate change adaptation in the ski industry: Stakeholders' perceptions regarding a mountain resort in Southeastern Europe. *Journal of Outdoor Recreation and Tourism*, vol. 42, 100611. Available at: <https://doi.org/10.1016/j.jort.2023.100611>.

Club Alpino Italiano (2020). Cambiamenti climatici, neve, industria dello sci. *Commissione Centrale Tutela Ambiente Montano*, pp. 1-15, Available at: <https://www.cai.it/il-futuro-della-montagna-passa-dal-superamento-della-monocultura-dello-sci-alpino/>. Accessed 28 April 2024.

Comune di Sestriere. (2024). *Albo pretorio digitale*. Determinazione registro generale N. 151 del 27/05/2024. Available at: <https://www.serviziopubblicaamministrazione.it/servizi/saturnweb/Pubblicazioni.aspx?&RicCro=1&CE=ssstr1225>. Accessed: 1 June 2024.

Coppes, J., Nopp-Mayr, U., Grünschachner-Berger, V., Storch, I., Suchant, R., & Braunisch, V. (2018). Habitat suitability modulates the response of wildlife to human recreation. *Biological Conservation*, vol. 227, pp. 56–64. Available at: <https://doi.org/10.1016/j.biocon.2018.08.018>.

Dolomiti.org (2024). *Cultura ed intrattenimento*. Available at: <https://www.dolomiti.org/it/cortina/aziende/cultura-intrattenimento/>. Accessed: 19 May 2024.

Domínguez, F. B. (2024). *7 Adaptation Strategies for Ski Resorts to Thrive in a Warmer World*. Earth.Org. Available at: <https://earth.org/adapting-to-a-warmer-world-how-ski-resorts-are-thriving-with-innovative-strategies/>. Accessed: 22 May 2024.

Donaldson, L., & Joffe, G. (2014). Fit - The Key to Organizational Design. *Journal of Organization Design*, 3(3), 38. <https://doi.org/10.7146/jod.18424>.

Federalberghi (2023). Comunicato vacanze sulla neve 2023, Available at: <https://www.federalberghi.it/download/download.aspx%3Ffile%3D6723fbbc-dca5-4066-b9d6-4d138414556f%26listId%3Df24d3693-761f-4a0a-a3db-7a35dd342fc1&ved=2ahUKEwikxqrknuWFAxX1gP0HHclABIAQFnoECBkQAQ&usg=AOvVaw20QotLYpQ4vlSsropUv5cb>. Accessed 28 April 2024.

Federazione Sport Invernali (2024). *Storia dello sci*. Available at: http://formazione.fisi.org/login_coscuma.aspx. Accessed 14 April 2024.

Fiora L., Gambelli E. (2006). Le principali pietre da costruzione e da ornamento in Valle Susa (Piemonte). *Restauro Archeologico*, ALINEA Editrice, Firenze, vol. 1, pp. 18-20, ISSN 1724-9686.

Fondazione Garrone (2020). *Preskige - Storie di Giovani Imprese*. Storie Di Giovani Imprese. Available at: <https://storiedigiovaniiimpresefondazionegarrone.it/2020/09/02/preskige/>. Accessed: 18 May 2024.

Food and Agriculture Organization of the United Nations and World Tourism Organization (2023), *Understanding and Quantifying Mountain Tourism*, FAO/UNWTO, Rome/Madrid, Available at: <https://doi.org/10.18111/9789284424023>.

Frittoli, E. (2023). *Quando Ernst Prinoth inventò il gatto delle nevi*. Panorama. Available at: <https://www.panorama.it/economia/industria/gatto-delle-nevi>. Accessed 17 April 2024.

Gravetter, F. J., & Wallnau, L. B. (2016). *Statistics for The Behavioral Sciences*. Cengage Learning.

Hayati, M., Mahdevari, S., & Barani, K. (2023). An improved MADM-based SWOT analysis for strategic planning in dimension stones industry. *Resources Policy*, vol. 80, 103287. Available at: <https://doi.org/10.1016/j.resourpol.2022.103287>.

Helms, M. M., & Nixon, J. (2010). Exploring SWOT analysis – where are we now? *Journal of Strategy and Management*, vol. 3(3), pp. 215–251. Available at: <https://doi.org/10.1108/17554251011064837>.

Howell, D. C. (2013). *Statistical Methods for Psychology*. Wadsworth Publishing Company.

Iacovone D. (2023). Innovation. [Power Point]. Business Modeling and Planning. LUISS University. 31 Oct 2023, Rome. Available from: Luiss Learn. Accessed: 18 May 2024.

Iacovone D. (2023). Digital Transformation. [Power Point]. Business Modeling and Planning. LUISS University. 25 Sept 2023, Rome. Available from: Luiss Learn. Accessed: 18 May 2024.

Il Sole 24 Ore (2018). *La piattaforma di social skiing Preskige raccoglie 120mila euro*. Available at: <https://www.ilssole24ore.com/art/la-piattaforma-social-skiing-preskige-raccoglie-120mila-euro--AEZzQpkD>. Accessed: 18 May 2024.

Ioppolo, G., Saija, G., & Salomone, R. (2012). Developing a Territory Balanced Scorecard approach to manage projects for local development: Two case studies. *Land Use Policy*, vol. 29(3), pp. 629–640. Available at: <https://doi.org/10.1016/j.landusepol.2011.10.005>.

Italia.it. (2023). *The Susa Valley and Its Villages*. Available at: <https://www.italia.it/en/piedmont/things-to-do/susa-valley-and-its-villages>. Accessed 5 May 2024.

Klepper, S. (1996). Entry, Exit, Growth, and Innovation over the Product Life Cycle. *The American Economic Review*, vol. 86(3), pp. 562–583. Available at: <http://www.jstor.org/stable/2118212>. Accessed 29 April 2024.

Laloux, F. (2014). *Reinventing Organizations*. Belgium: Nelson Parker. First Edition.

Lamberti, L. (2013). Customer centricity: the construct and the operational antecedents. *Journal of Strategic Marketing*, vol. 21(7), pp. 588–612. Available at: <https://doi.org/10.1080/0965254x.2013.817476>.

Legambiente (2023). *Nevediversa 2023, i dati del nuovo report*. Legambiente. Available at: <https://www.legambiente.it/comunicati-stampa/nevediversa-2023-i-dati-del-nuovo-report/>. Accessed 29 April 2024.

Lopes, J., Farinha, L., Ferreira, J. J., & Silveira, P. (2018). Does regional VRIO model help policy-makers to assess the resources of a region? A stakeholder perception approach. *Land Use Policy*, vol. 79, pp. 659–670. Available at: <https://doi.org/10.1016/j.landusepol.2018.07.040>.

Lost Lift (s.a.). *Sciare nel passato*. Available at <https://lost-lift.weebly.com/acceglio.html>. Accessed 5 May 2024.

Mintzberg, H., Ahlstrand, B. and Lampel, J. (2009). *Strategy Safari: Your Complete Guide Through the Wilds of Strategic Management*, 2nd Edition, pp. 285-300 Pearson Education Limited UK.

Moreno-Gené, J., Sánchez-Pulido, L., Cristobal-Fransi, E., & Daries, N. (2018). The Economic Sustainability of Snow Tourism: The Case of Ski Resorts in Austria, France, and Italy. *Sustainability*, vol. 10(9), 3012. Available at: <https://doi.org/10.3390/su10093012>.

Negri, G. (2024). *Quanto costa la neve artificiale, a noi e all'ambiente*. La Repubblica. Available at: https://www.repubblica.it/green-and-blue/2024/02/10/news/neve_artificiale_come_si_fa_composizione_inquina-422043816/. Accessed 4 May 2024.

OECD (2005). Guidelines for collecting and interpreting innovation data. *The Measurement of Scientific and Technological Activities*. Available at: <https://ec.europa.eu/eurostat/documents/3859598/5889925/OSLO-EN.PDF/60a5a2f5-577a-4091-9e09-9fa9e741dcf1?version=1.0>.

ParchiAlpiCozie.it. (2024). *Ecomuseo Colombano Romean*. Available at: <https://www.parchialpicozie.it/page/view/ecomuseo-colombano-romean/>. Accessed 1 June 2024.

PiemonteOutdoor. (s.a.). *Vie Ferrate*. Available at: <https://www.piemonteoutdoor.it/it/attivita/vie-ferrate?page=1>. Accessed: 26 May 2024.

Pikkemaat, B., Peters, M., & Chan, C. S. (2018). Needs, drivers and barriers of innovation: The case of an alpine community-model destination. *Tourism Management Perspectives*, vol. 25, pp. 53–63. Available at: <https://doi.org/10.1016/j.tmp.2017.11.004>.

Pintaldi, E., Hudek, C., Stanchi, S., Spiegelberger, T., Rivella, E., & Freppaz, M. (2017). Sustainable Soil Management in Ski Areas: Threats and Challenges. *Sustainability*, vol. 9(11), 2150. Available at: <https://doi.org/10.3390/su9112150>.

Prinoth (2024). *HTI Group*. Available at: <https://www.prinoth.com/it/company/hti-group>. Accessed 18 April 2024.

Salesforce (s.a.) *What is Digital Transformation?* Available at: <https://www.salesforce.com/eu/products/platform/what-is-digital-transformation/>. Accessed: 18 May 2024.

Senato.it (2022). *Dossier Legislatura 15 Luglio 2022*. Disposizioni per lo sviluppo e le valorizzazione delle aree montane. Available at: <https://www.senato.it/service/PDF/PDFServer/BGT/01357869.pdf>.

SkiRank (s.a.) *Chi Siamo*. Available at: <https://www.skirank.com/chisiamo/>. Accessed: 18 May 2024.

Strada, S. (2024). *Neve, Santanchè: "Montagna ricchezza dell'Italia, lavoriamo per sostenibilità turismo bianco."* Available at: <https://www.ministeroturismo.gov.it/neve-santanche-montagna-ricchezza-dellitalia-lavoriamo-per-sostenibilita-turismo-bianco/#:~:text=I%20comprensori%20sciistici%20italiani%20costituiscono,a%202022%20miliar di%20di%20euro>. Accessed 28 April 2024.

Turismo Torino E Provincia. (s.a.) *Via Francigena Valle di Susa*. Available at: <https://www.turismotorino.org/en/experiences/francigena-routes-piedmont/francigena-valle-di-susa>. Accessed: 5 May 2024.

Utterback, J. M., & Abernathy, W. J. (1975). A dynamic model of process and product innovation. *Omega*, vol. 3(6), pp. 639–656. Available at: [https://doi.org/10.1016/0305-0483\(75\)90068-7](https://doi.org/10.1016/0305-0483(75)90068-7).

Vallemaira (s.a.). *Home page*. Available at: <https://www.vallemaira.org/en/>. Accessed 5 May 2024.

Vallesusa Tesori (s.a.). *Fortificazioni*. Available at: <https://www.vallesusa-tesori.it/it/tematismi/fortificazioni>. Accessed: 5 May 2024.

Verticalife (2018). *Traditions of the Alps of Italy – The Occitan Language in Val Maira*. Available at: <https://verticalife.it/en/blog/alpine-traditions-the-occitan-language>. Accessed 5 May 2024

Vialattea (s.a.). *Our history*. Available at: <https://www.vialattea.it/en/our-history/>. Accessed 5 May 2024

Vitale Brovarone, E., & Cotella, G. (2020). Improving Rural Accessibility: A Multilayer Approach. *Sustainability*, vol. 12(7), 2876. Available at: <https://doi.org/10.3390/su12072876>.

Worthington, I., & Britton, C. (2006). *The Business Environment*. Pearson Education.