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Indoor Ski Facilities – Potentials and Challenges of Cross-Country Skiing in Finland

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ABSTRACT

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Cross-country skiing has an important cultural status in Finland. Equal interest despite the socio-economic and geographical differences, good skiing conditions and international success have all emphasised the role of cross-country skiing as a national sport. However, several challenges, such as the doping case of Finnish skiers in 2001, winters with minimal snow cover and a lack of interest among younger generations of Finns during recent decades have questioned this role. It is predicted that climate change creates socio-economic and geographical differences for practising cross-country skiing. Those who want to continue to ski need to adapt to the changing conditions either by finding new climate suitable activities, travelling to snow-guaranteed locations or investing in new types of skiing possibilities.

Indoor ski facilities could be an answer to the above-mentioned challenges. These facilities and their importance have been little studied previously, although a wider understanding of skiers and their preferences would help to adjust and design suitable sports services for skiers. Therefore, this qualitative case study tries to fill in the gap by forming a multifaceted picture of the role of indoor ski facilities for Finnish cross-country skiing. Methods, theories, data collection and analysis of this study were triangulated. Data was collected during the autumn 2009 with questionnaires (n=96) for skiers and theme interviews (n=2) for service providers. Data was analysed by thematic content analysis and descriptive statistics. The methodological approach is based on the abductive argumentation that refers to the theory bound analysis where the impact of previous knowledge is recognisable, although the aim is not only test the theory, but also to create something new.

This study portrays that indoor ski facilities exemplify the technological, privately owned and indoor-focused modern sports culture that allows practising sports year-round. These facilities have an important role for Finnish cross-country skiing. The skiers and service providers in this study considered that indoor ski facilities help to increase the numbers of skiers in the future, equalise the skiing conditions inside the country and offer a constant, good year-round conditions. In addition, skiers were mainly satisfied with the facilities and they were willing to return skiing indoors. This study also indicated that facilities have attracted new *experimenters* to try skiing. Cross-country skiing is still an important leisure time activity for many Finns who have either competitive or pleasure-related objectives for participation. These *serious* and *pleasure skiers* are ready to invest in finding the right conditions for skiing. This willingness creates potentials not only for cross-country skiing, but also for indoor ski facilities that have struggled with financial challenges created by among others a discrete peak season and building costs of the facility.

Keywords: Cross-country Skiing – Case Study – Indoor Ski Facilities

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1 INTRODUCTION

1.1 Cross-country skiing in Finland

The roots of cross-country skiing in Finland are deep. It is estimated that the birth of skiing in Finland has taken place some thousands of years ago. (Nygren, Raevuori and Mäki-Kuutti 1983, 6) The oldest finding of a ski in the world is dated to 3250 B.C. to eastern Finnish Lapland (Jussila 1998, 197). Historically, cross-country skis were an important aid in work and a necessary method of transportation in the Finnish countryside. Using skis mainly for work or travelling continued until well into the 20th century because of the strong wood industry and a low level of technical development in the Finnish countryside. When mandatory military service was established in Finland, cross-country skiing became an important part of this education. The military role emphasised the status of cross-country skiing as the most important sport in Finland. (Heikkinen 1981, 195-197; Nygren et al 1983, 34)

Industrialisation and urbanisation of Finnish society from the 1880's onwards have improved the living conditions of Finns. This has also meant that the status of cross-country skiing has changed from a compulsory work- and travel-based towards a voluntary leisure time activity. At first, leisure skiing had a strongly competitive nature meaning that skiing was practised for competitions rather than for well-being. (Heikkinen 1981, 195-197) A competition on ice in Helsinki in March 1886 was considered to be the starting point for competitive skiing in Finland, and several competitions were organised all over the country after this event. Besides these national competitions, Finns participated successfully in international competitions. The first international competition with Finnish participation was organised in Stockholm in 1892. Although cross-country skiing had a strong competitive nature at that time, numerous ski clubs and craft-clubs began to organize successful trekking trips, usually on Sundays. (Nygren et al 1983, 16-19, 25, 55)

These races and trekking trips created a solid base for the general interest in skiing, and this enthusiasm for skiing continued in the 20th century. Through these trekking trips

and several competitions, Finns realised that skiing was also for amusement. Skis were not understood only as a practical aid in travelling and working anymore, but rather as a good way to spend quality leisure time. This change in attitude also stressed the importance of the health aspect – in other words that cross-country skiing was starting to be seen as a good healthy form of exercise for everyone. Cross-country skiing and its importance as physical exercise were underlined in the 1920s, when maintaining one's own well-being and health was emphasised as a motivator for participation in skiing rather than the competitions. After the economic depression in the beginning of the 1930s, skiing became even more popular. This meant that even wider groups of Finns became interested in skiing. Skiing was not part of every Finn's life, but it was widely popular despite differences between socio-economic groups and places of residence. This was also one of the reasons why cross-country skiing was identified a national sport. (Heikkinen 1981, 195-197; Nygren et al 1983, 35)

In the past, Finns skied on flat areas such as on ice, whereas skiing in forests and cross-country areas was more common in Scandinavia. During the 1920s, Finns began to ski in forests, and this change created new challenges for skiers, as the tracks became more demanding. (Heikkinen 1981, 195-197) Prepared ski tracks were constructed in municipalities all over the country in the 1960s. An illuminated ski track was practically built in every municipality during this decade. This development of tracks made skiing more easily accessible to everyone. (Heikkinen 1981, 195-197; Hintikka 2009, 31) Nowadays, Finns usually ski on prepared ski tracks that are situated in recreational areas close to home, although public right of access allows every Finn to ski in forests, fields and on ice-covered lakes. The prepared tracks are usually provided by the municipal public recreation agency. (Pouta et al, 2009)

Cross-country skiing was named as a national sport in Finland because of its status in military education, its widespread general popularity and the success of Finnish skiers in international competitions (Heikkinen 1981, 195-197). This statement is supported in contemporary times as well. Finns are still interested in cross-country skiing, although skiing has experienced changes in the forms of techniques, skis and waxing methods. Almost all Finns, over 90 percent, report being able to cross-country ski (Sievänen et al 2005; Pouta et al 2009). Cross-country skiing is a similar kind of physical exercise to

biking or swimming. When the ability and technique are learnt during childhood, they are easy to summon up later in the life. (Huotari 2007, 405-406) Finns learn skiing early: children are taught to ski on average at the age of five (Sievänen et al 2005; Pouta et al 2009). According to the latest national sports survey in 2010, 663 000 adults mentioned that skiing is their hobby, making it the fourth most popular sport in Finland. In addition, about 147 000 children mentioned skiing as their hobby. (FSF 2010) The statistics of Finnish Forest Institute about outdoor recreation activity (2010) support the results of national sports survey. 37 percent of adults report that they cross-country skied in winter 2009. According to the survey, an individual Finn skied approximately 13 times during that particular winter (2009). This number is somewhat smaller than previously, which is partly explained by the several consecutive winters with minimal snow cover. (Finnish forest research institute 2010)



Figure 1. Many Finns travelled to Vancouver to cheer for Finnish cross-country skiers in the Olympics in 2010. (Määttä 2010)

Cross-country skiing is considered a good form of exercise for everyone despite one's age or physical condition. It is a leisure time activity for all Finns regardless of the socioeconomic class or place of residence. Skiers come from across the country, and skiers represent different backgrounds in education and profession. Both women and men are equally interested in skiing. Cross-country skiing is therefore an important everyday leisure activity for many Finns, but similarly it is a popular way to spend active holidays. Skiing is the main purpose for about 10 percent of tourist trips in the category of outdoor and nature activities (Landauer, Sievänen & Neuvonen 2009). Cross-country skiing can therefore be a motive for travelling for Finns. Finns are also

enthusiastic followers of winter sports on television and on the ground at international competitions. (Figure 1)

Competitive success in international competitions has continued from the beginning of the major international competitions in the 1920s to contemporary times (Nygren et al 1983, 19, 55) According to the statistics of International Ski Federation (FIS), Finns have achieved 75 Olympic medals in cross-country skiing events since the beginning of the Winter Olympics in 1924. In addition, Finns have also celebrated the success of 165 cross-country skiing medals in World championships of Nordic disciplines since 1924. In recent years, skiers in the national cross-country skiing team of Finland have celebrated two overall world cup victories, several world championships medals, Olympic medals, not to mention the individual victories of several skiers in world cups. This success has made team Finland one of the strongest cross-country skiing teams in the world. (FIS statistics 2010)

Cross-country skiing in Finland has also faced several challenges and problems. The doping case of Finnish skiers in 2001, inconsistent general interest in skiing and poor snow conditions in winters has posed a question about the future position of cross-country skiing. Can cross-country skiing be considered a national sport also in the future? The changing climate, in particular, might have a negative influence on the cross-country skiing activity in the future. Cross-country skiing is actually mentioned as one of the most sensitive outdoor activities in case of changeable climate conditions. Without good and extensive snowy conditions, skiing is difficult. (Sievänen et al 2005)

Based on different scenarios, the snow cover in winters will become thinner, particularly in Southern Finland. Furthermore, winters will become warmer and more humid all over the country. Some of the changes have already been noticeable in the recent decades: springs and winters have been especially mild in Finland, seasons of snow cover have shortened and the amount of snowfall decreased in Southern Finland. These changes will eventually escalate during future decades. (Carter 2007) Similarly, the Finnish Environment Institute has estimated that the number of snow-covered days will decrease in the future. Figure 2 illustrates the average number of snow-covered days between years 1961 and 1990 and also shows the prognoses for years 2010 and

2019 as well as for years 2070 and 2090. The decrease in snow-covered days during this century will be radical. If this estimation becomes the reality, the natural conditions for skiing might be difficult to find, particularly in Southern Finland, where the majority of Finns live.

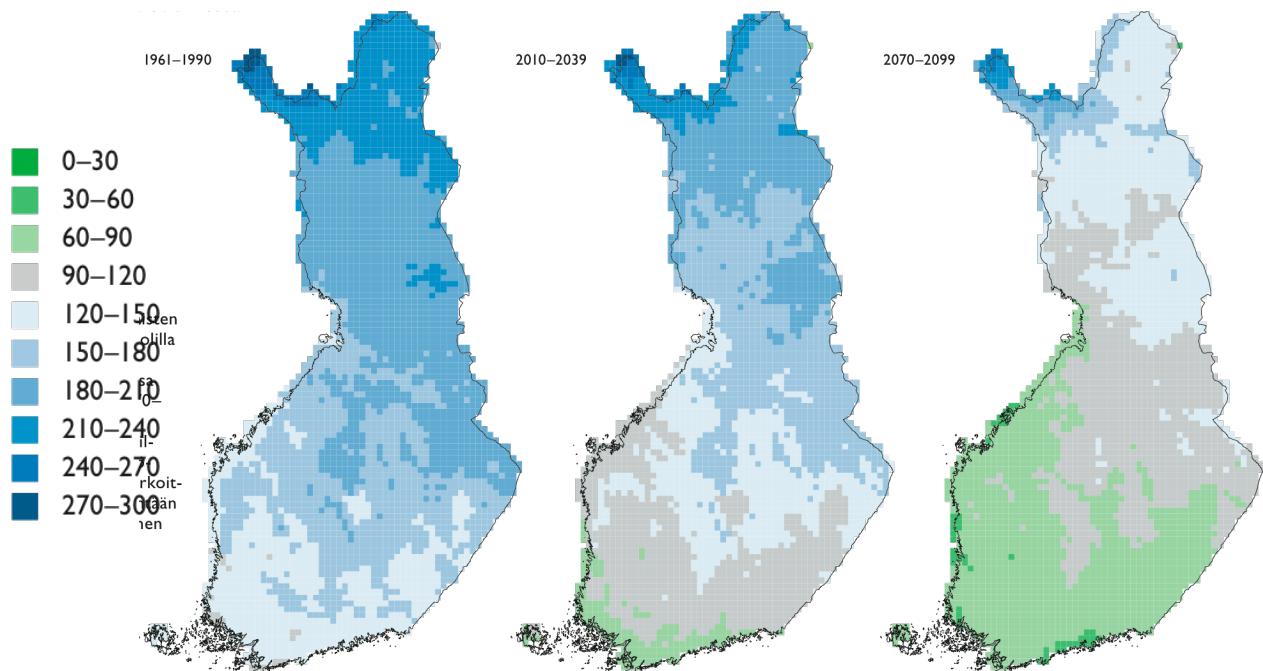


Figure 2. Snow-covered days in Finland between years 1961-1990 and prognoses for years 2010-2019 and 2070-2090 (Finnish Environment Institute 2008)

Climate change is considered to be a notable threat for all the stakeholders of winter sports recreation and winter tourism. Among others, economic losses might be significant for winter tourism businesses and for communities that have invested in winter tourism. Consequences of climate change create multifaceted challenges that each stakeholder, such as individuals, public institutions and businesses, needs to consider, and eventually adapt his behaviour to match the changing conditions. The aim of public institutions is to secure general health and well-being. In other words, their aim is to make sure that all Finns have equal, sustainable social and environmental possibilities for winter sports recreation in the future as well. This equality means that public agencies try to provide opportunities for all citizen groups including those who have a weaker capacity to adapt to the climate change. In contrast, the private sector concentrates on securing its own future either by developing technological methods or by creating new businesses. (Scott and Mcboyle 2007) Development of snowmaking

systems and man-made ski tracks are examples of improvements that several winter ski resorts have undertaken. In Finland, indoor cross-country ski halls, artificially cooled ski tracks and first snow ski tracks exist in several municipalities to secure the conditions for cross-country skiing. First snow ski tracks are opened early in autumn before natural snow-cover season. These tracks are made of the preceding winter's snow that is preserved under sawdust during summer. Artificially cooled ski tracks have a cooling system under the track to maintain the quality of snow. This cooling system allows the opening of tracks early in autumn. (Ketola 2009; FSF 2006, 7, 43-44)

If private and public sectors need to pay attention to the conditions in the future, skiers need to adjust their own behaviour to the changing conditions. Finns already have extensive experience in dealing with variable weather conditions, because of the extreme differences between the four seasons at this high latitude. This practical knowledge of weather conditions during different seasons is taken into account in building facilities, constructing traffic connections or in everyday life of individuals. When climate becomes warmer and extreme climate conditions increase in Finland, these traditional heuristics might not hold true anymore. Climate change will also have multiple indirect influences on health and well-being of individuals and societies. (Vaarama 2010, 151-152; Ruhala 2010, 57) The impact of climate change on sport is one of these consequences. Participation in outdoor recreation is a popular way to spend leisure time in Finland. A diverse natural heritage and four seasons offer opportunities for different leisure time activities such as sailing, Nordic walking, skiing and hiking. These outdoor activities have a positive impact on the health and well-being of Finns.

However, outdoor recreation in Finland is dependant on the climate, meaning that if the climate changes, possibilities for outdoor recreation change. If difficulties in practicing outdoors recreation lead to a fall in the amount of physical activity in general, the health-related impact is obvious. Cross-country skiing is a strongly recommended winter activity for all population groups because of its manifold physical benefits. Changes in recreational opportunities in one's local environment alter the conditions required for participation in physically demanding recreation activities; for instance, more effort and time would be required to go skiing. If people stop skiing, negative

impacts on people's involvement in recreation in general might occur. Is it possible to find new activities to compensate skiing? (Sievänen et al, 2005)

It is predicted that Finns will adapt to climate change gradually. New generations adapt by taking up 'climate-suitable' hobbies, and eventually these adapted habits become dominant. Cross-country skiing might become a sport for those Finns, whose disposable time and income allow travelling to snow-guaranteed locations. Every Finn might not have financial capability to invest in the increased costs of skiing. This inequality has its influence on the status of cross-country skiing as an equally interesting outdoor activity that all Finns despite of socio-economical and geographical location may enjoy. If this scenario is realised, cross-country skiing does not remain as a symbol of Finnish national culture. (Pouta et al 2009; Sievänen et al 2005)

1.2 Purpose of this study

There were several reasons for choosing indoor ski facilities as a case study. One of the main reasons was that the significance of these facilities to Finnish cross-country skiing has been little studied before, although six facilities already exist in Finland. Therefore, this case study tries to understand the role of indoor ski facilities for cross-country skiing in Finland. The main purpose is to form an extensive picture of the indoor ski facilities. The data was thus collected from service providers, skiers and from different theoretical viewpoints. To have a multifaceted picture of indoor ski facilities, the goal is to try to *understand* the context of indoor ski facilities and *identify* the users of these facilities. The role of indoor ski facilities for cross-country skiing will also be pointed out and the financial challenges and potentials concerning these facilities will be *presented*. In fact, the original idea for the main theme was to discuss the financial situation of these facilities in this study. In the process of data collection and analysis, sociological perspectives and viewpoints on climate change came to the fore, while the financial aspect assumed a smaller role.

Another important reason was to find out the motivation behind skiing indoors and what the adaptation plans of skiers for changing climate conditions are. Adaptation of cross-country skiers to changing weather conditions has not been studied very much in Finland. Several international studies have concentrated on adaptation of alpine skiers

to climate change but cross-country skiers have been mostly ignored. These groups are not identical. Conditions for practising cross-country skiing are different compared to those for alpine skiing, and therefore, it is important to understand more about the adaptation of cross-country skiers. Landauer and Pröbstl (2008) have studied the adaptation methods of cross-country skiers in Austria and in Finland. They observed that adaptation to climate change varies between these countries. An explanation for the difference is the cultural role of cross-country skiing, which is more significant in Finland than in many other countries. Therefore, it is important to have more researched information of Finnish skiers and their adaptation plans. Studying the behavioural reactions of individuals under changing climate helps eventually the private and public sector to adjust their own services and future investments. Finding out skiers' preferences and motives under changing conditions of climate change helps in understanding the potential adaptation strategies and skiing behaviour. Accurate predictions will help mitigate the impact of climate change. (Sievänen et al 2005)

1.3 Case studies: the Ski Tunnel of Vuokatti in Sotkamo and Ylläs-halli in Helsinki

There are currently six indoor ski facilities for cross-country skiing in Finland (figure 3) and at least two in other countries. Discussion and planning process of new indoor cross-country skiing facilities is progressing in several municipalities in Finland. Two new facilities in Southern Finland should be opened in the near future. Indoor facilities for downhill skiing exist in several countries, and building of an indoor downhill ski facility in Finland is under discussion. Conditions in indoor ski facilities are wintery: the temperature is a few degrees below zero and the track is made either of natural snow or of artificial snow. The length of ski tracks is usually one to three kilometres. Some of these indoor facilities provide other sports beside cross-country skiing, such as skating and roller-skating in a hall. Similarly, services such as cafeterias and changing rooms are provided for skiers.

I chose to concentrate on two indoor ski facilities in this study: Ylläs-Halli in Helsinki and Vuokatti Ski Tunnel in Sotkamo. Vuokatti Ski Tunnel, which was opened in 1998, is the first indoor cross-country skiing tunnel in the world, whereas Ylläs-halli in

Helsinki is the latest so far, opened in autumn 2009. The oldest and the newest indoor cross-country skiing facilities in Finland were chosen to illustrate the widest possible picture of the phenomenon. Similarly, Vuokatti is the northernmost ski tunnel, whereas Ylläs-halli is the southernmost indoor facility in Finland at the moment.

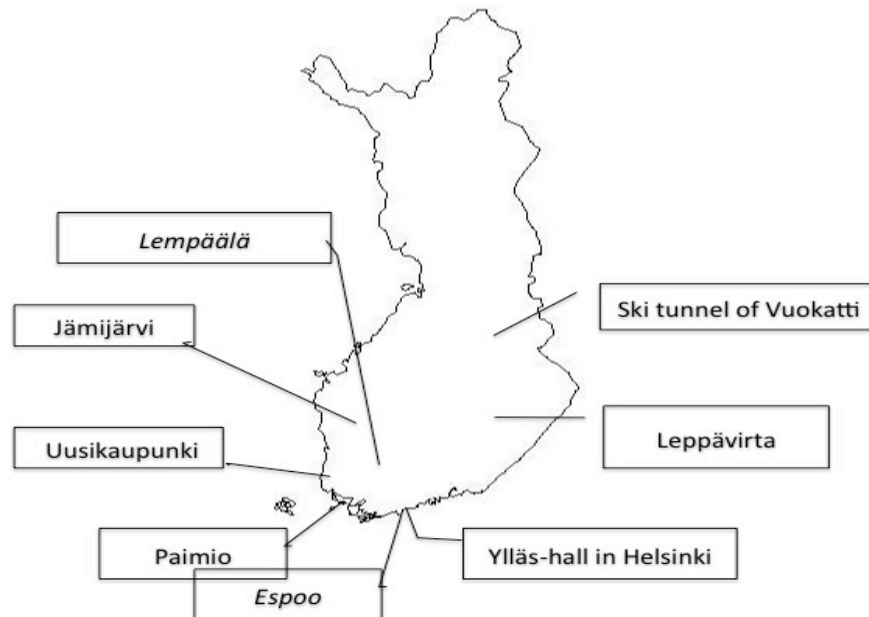


Figure 3. The indoor ski facilities in Finland in 2010 and two facilities in italics (Lempäälä and Espoo) are supposed to open in the near future.

Ylläs-halli, which is known also as arctic sport center, is situated in Helsinki and it is the first indoor ski facility in the capital region (figure 4). The name “Ylläs” comes from a popular ski resort in Finnish Lapland. The service provider of Ylläs-halli and Ylläs travel association is co-operated in marketing sector. The Ylläs-halli could be called a winter wonderland, because cross-country skiing is not the only sports activity in the hall. The training of skating and curling, among others, is possible in the hall. The temperature on the skiing track is constantly between -4 and -6 degrees Celsius. The length of the track is about 1,5 kilometres, although tracks can be modified for different purposes. The huge painting of Ylläs- Mountain creates a feeling of skiing in the middle of nature in Ylläs-halli. The fee is 15 Euros for one-time use. Skiers have also the possibility to buy a share in Ylläs-halli. The share gives special benefits together with the possibility to ski freely.

Vuokatti is a famous sports and recreation centre situated in the town of Sotkamo in Eastern Finland. The ski tunnel is open from May to December and also during winters if it is too cold to ski outdoors. Because of the differences in altitude and slopes, 2,4-kilometre-long tracks are suitable for variable training. The indoor ski tunnel is connected with first-snow ski track during autumns, thus providing the conditions for challenging pre-season training on snow. The air and snow temperatures are usually between -5 and -9 Celsius. The fee for onetime use varies between 14 to 17 Euros depending on the season.



Figure 4. Indoor ski facility reminds other indoor multisport halls. This facility is Ylläs-halli situated in Helsinki. (Määttä 2010b)

1.4 Structure of the thesis

This study continues by describing how the research was conducted. Chapter two introduces the research tasks, methods of data collection and the method of analysis. This chapter also includes the definition of the case study. After this chapter, the results of the analysis are in the main role. Analytical results are divided into four parts that together construct an extensive picture of the phenomenon in question.

Firstly, the role of indoor ski facilities in modern sports culture is described in chapter three. Then the thesis proceeds to a historical and sports sociological description of the development of Finnish society and sports culture, although the main focus is on modern sports culture. This chapter also focuses on the interest for cross-country skiing.

The actives in skiing in different decades and the importance of skiing for the Finnish way of living are discussed in this chapter. Thus, it could be said that the purpose of this chapter is to *understand* the context of the indoor ski facilities.

Chapter four concentrates on describing the indoor skiers. The aim is to *identify* three types of indoor skiers, and to explain the importance of cross-country skiing for these skiers. Formed types are based on the analysis of this study, and these types are demonstrated with the help of previous sports sociological studies. These types show that competitors are not the only users of indoor ski facilities anymore.

Climate change and its influence on cross-country skiing is the theme in chapter five. This chapter *points out* the role of indoor ski facilities in a changeable climate. This chapter begins by introducing the previous theoretical studies related to this theme. These studies were also the starting point for constructing questions for the questionnaires and the theme interviews in this study. Then the chapter concentrates on the opinions of skiers and service providers. This chapter shows how the skiers are ready to adapt to snowless winters and how the role of indoor ski facilities is seen in case of winters with minimal snow cover. The last part of this chapter concentrates on the role of nature in overall cross-country skiing experience, an aspect which was highlighted by many skiers.

The fourth part of introducing the results concentrates on financial challenges and potentials. This chapter (chapter six) illustrates the challenges and potentials related to creating a financially profitable business from the viewpoint of indoor ski facilities. Therefore, user fees, possible target groups of the facilities and the influence of tourism for the facilities are considered. The aim of this chapter is to *present* factors that have influence on financial success of indoor ski facilities. The purpose of this chapter is not to introduce any numbers or sums, but rather to describe the financial challenges and potentials of these facilities qualitatively.

Finally, conclusions are drawn in chapter seven. The main results are summarized and pondered on. Furthermore, the critical evaluation of this study and its implementation is considered. The recommendations for future studies related to the subject matter are also suggested.

2 RESEARCH TASK AND METHOD

This chapter focuses on introducing the research tasks and methods of collecting and analysing data. Firstly, the qualitative case study and triangulation, which was in a major role, are defined. Then, the main research task and the sub-tasks are specified. Several methods of collecting data were used to find the answer to the research task. These all methods will also be introduced in this chapter. Similarly, the results of analysing data were based on several methods, which all are described well. In the end, the background information of respondents in the study is portrayed.

2.1 Qualitative case study

Qualitative research includes different traditions, approaches and methods of collecting and analysing data, but the common aim is to understand actors' perception and interpretation of reality and how these are related to actors' behaviour. The researcher tries to experience the world from the viewpoint of the actors and not from the viewpoint of his or her own personal values, beliefs and attitudes. The purpose of qualitative research is therefore to interpret the actors' experience. The actors and their behaviour are usually observed in their natural settings. The researcher is directly involved with the actors and therefore, an in-depth understanding about life and its meaning to the actors is acquired in this interaction. In qualitative studies, the analytical, conceptual and categorical components of explanations are built from the data itself. Because pre-built theories and measurement techniques are not required, the flexibility increases; the direction of the study might change as the researcher acquaintances with the phenomenon. (Chadwick, Bahr & Albrecht 1984, 206-236)

A case study is defined as a detailed, in-depth exploration of a bounded system. This case is unique and hence important as well as interesting to study. (Creswell 1998, 61-64) Yin (1994, 1-8) continues that case studies should concentrate on contemporary events in the natural settings where individuals' behaviour cannot be manipulated. This context may be a physical setting or the social, historical and economic setting of the case, but the aim is to understand this complex social phenomenon. This context is

relevant in understanding and explaining the phenomenon and therefore it cannot be excluded. Researcher usually poses the ‘why?’ and ‘how?’ questions in case studies, because the aim is to explain the case rather than to find out the frequencies and incidences. Researcher is described as an active interpreter, who builds certain interpretation of the case. Interpretation is based on theoretical concepts and ideas of empirical analysis. The interesting themes of the case are told and taught for readers of the study. (Eriksson and Koistinen 2005, 16-17) The case study is therefore a good story about real life, which is interesting to tell to others (Creswell 1998, 61-64).

Case studies can handle a full variety of evidences and using multiple sources of evidence is recommended when conducting case studies. This variety increases the reliability of the study, because any finding or conclusion in a case study is more convincing and accurate when it is based on multiple sources of information. Using many sources allows including a broader range of historical, attitudinal and behavioural issues in the study. Prevailing principle in data collection is the use of multiple sources of evidence and the convergence of these pieces of evidence on the same set of facts or findings. This unification is called triangulation of data sources. Triangulation of researchers, theories and methods is also used in case studies to increase their reliability and broaden the included viewpoints. (Yin 1994, 1-16; Eriksson & Koistinen 2005, 26)

Data collection can include both qualitative and quantitative methods, and case studies do not necessarily need to base on direct, detailed observations. This freedom allows the use of multiple and variable methods and enhances the interpretability later in the analysis process. The prior development of theoretical propositions is an advantage for data collection and analysis. In fact, theory development is even mentioned to be the essential before data collection. This theory does not need to be a masterpiece or a grand social theory, but rather a sufficient guideline for the study. This theoretical framework can be descriptive, explanatory or exploratory. (Yin 1994, 13-14, 28)

2.2 Triangulation

Triangulation means combining variable methods, researchers, data sources or theories in the same study. Triangulation helps to deepen and extend the information about a specific phenomenon. Researcher is, therefore, forming a manifold picture of the researched case. The purpose of triangulation in qualitative research is to increase the credibility and validity of the results, because the results based on multiple sources are more convincing and accurate. There are different types of triangulation. Triangulation of methods, researchers, data sources and theory are the most common ones, but also types of multilevel, analysis, longitudinal and informatics triangulations are mentioned as forms of triangulation. (Tuomi & Sarajärvi 2009, 140-143; Eskola & Suoranta 2005, 68-70)

Overall, this case study can be identified as a multilevel triangulation, because several types of triangulation are used. This study includes triangulation of data sources, theories, analyses and methods. Triangulation of data sources is used when different data sources are included, including also the collection of data from different objects. Theme interviews, national sports surveys and questionnaires formed the main sources of data in this study. Theory triangulation is defined as using variable theoretical viewpoints. The theoretical viewpoints to this study were searched from the fields of climate research, sports sociology and social sciences in order to have a wide picture of studies related to cross-country skiing. (Tuomi & Sarajärvi 2009, 143-149; Eskola & Suoranta 2005, 68-70)

Triangulation of methods means using variable data collection methods in the same study, which were theme interviews and questionnaires in this study. In addition, analysis triangulation is defined, which means the analysing of the collected data is done with the help of several analysis methods. Thematising and grouping into types were the main analysis methods in this study, and these were supported with additional methods. (Tuomi & Sarajärvi 2009, 143-149; Eskola & Suoranta 2005, 68-70) All of the methods of data collection, data sources and methods of analysis are described in more detail in the coming chapters when the research task, data collection and methods of analysis are introduced.

2.3 Research task and data collection

This study discusses the current conditions and challenges of cross-country skiing. The main research task is to examine how the indoor ski facilities reflect the challenges and present state of cross-country skiing in Finland. This main task is divided into three sub-tasks. These sub-tasks are:

1. What is the contemporary role of cross-country skiing in Finland?
2. What are the current challenges of cross-country skiing in Finland?
3. What are the financial potentials and challenges of indoor ski facilities?

The research tasks are based on theoretical propositions and on previous research. This argumentation is described as abductive meaning that some theoretical thoughts have been ready before the data collection, and the data itself completes the theoretical assumptions. (Hirsjärvi & Hurme 2009, 136) Researcher doing abductive reasoning is working together with prepared models, theoretical propositions and the collected data. It is possible to recognize the influence of earlier information, but the aim is not only to test the theory, but also to create something new. (Tuomi & Sarajärvi 2009, 97) This prior development of theoretical propositions benefits the data collection and analysis by guiding the focus on certain data and theme (Yin 1994, 13-14). These theoretical propositions are also the starting point for analysis in this case study.

In qualitative studies, the target group is usually chosen purposefully. The choice of the target group is dependent on the definition of the phenomenon that is studied. Furthermore, the target group of this study was chosen purposefully – in other words interviewees with similar experience worlds at certain points and relevant knowledge of the theme were chosen, because this increases the possibilities of making generalisations of the study. It is also beneficial if the interviewees are interested in the study itself. (Eskola & Suoranta 2005, 18, 65-66) Both service providers and skiers of indoor facilities were included in this study in order to have a wider picture of the phenomenon. These target groups were considered to be interested in this theme and they have certain important knowledge about indoor ski facilities. In order to have an extensive picture, two facilities were chosen. Ylläs-halli was chosen as a case study, because it is a new facility, whereas Ski Tunnel of Vuokatti was chosen because it was

the first facility of the like in the world. This offered the possibility to view indoor ski facilities in a historic perspective. In addition, these two facilities gave the possibility to collect wide groups of questionnaires around Finland, because these facilities are situated in different parts of Finland geographically.

2.3.1 Previous studies

Several previous studies, articles in mass media and statistics were the main sources in completing the sub-task of the contemporary role of cross-country skiing in Finland. In answering to the other sub-tasks, the results of the analysis are combined with the findings of previous studies (such as Pouta et al 2009, Zacheus 2008 & Stebbins 2005). This wide variety of data sources makes it possible to view the phenomenon from different perspectives, and therefore it helps in forming an extensive picture of indoor ski facilities. The previous studies and articles related to cross-country skiing helped also in planning the questions for the theme interviews and questionnaires.

These previous studies were collected from relevant sources that included academic databases related to climate change research, sports sociology and social sciences. Articles related to Finnish cross-country skiing or to adaptation to climate change were sought. In addition, sociological articles of sports activity helped to understand the behaviour of skiers and changes in sports culture. National sports surveys and books about the history of cross-country skiing show the development of interest in cross-country skiing in Finland. National sports surveys also point out clearly the current interest in cross-country skiing. The results of two latest national sports surveys were included, because the reports of the latest survey were not published completely before finishing this study.

Finnish newspapers and their archives were also important sources, because the articles in newspapers illustrate well the contemporary situation of cross-country skiing in Finland. Indoor ski facilities have been an interesting topic in newspapers for discussion and therefore, these articles are a useful source of information in understanding the context for indoor ski facilities. These articles were searched from the archives of the biggest newspapers in Finland such as Helsingin Sanomat and Kaleva. The articles were

search by using the key words ‘cross-country skiing’ (maastohiihto) and ‘indoor ski facilities’ (sisähihtopaikka, Ylläs-halli, Vuokatin hiihtotunneli).

2.3.2 Questionnaires

Questionnaires are an important method of collecting data and viewing multilevel and complicated topics, such as societal phenomena or individuals’ attitudes, behaviour and values (Vehkalahti 2008, 11). The skiers of indoor ski facilities were interviewed by using a semi-structured form that included questions about personal opinions about the facility as well as about the respondents’ relationship to cross-country skiing. The aim of the questionnaire was to form a viewpoint of the skiers on the challenges facing cross-country skiing, which was the second sub-task in this study. An observation diary was kept to record the process of conducting questionnaires. This diary recorded my feelings and thoughts as well as the basic facts about the day and the environment. This diary supported the major findings and helped me to reflect on the conditions when the data was collected.

The questionnaire used can be divided into three parts: background information, open questions and statements. Relevant background information such as age, gender and education was asked, because it helped to describe the participants in this questionnaire. Descriptive statistics, such as mean values and frequencies, were calculated of this background information. This method and its results will be introduced in the chapters 2.4.3 and 2.5. The open questions in this questionnaire were based on the previous theoretical materials and discussion in media about cross-country skiing. Relevant and interesting themes in these sources were formed as open questions. These questions concerned climate change and its influence on cross-country skiing and indoor ski facilities, but also the importance of cross-country skiing for these skiers. In addition, some questions about the usage and the satisfaction on the facilities were also included, but these questions were not in a major role when analysing the data.

Nine statements were included in the questionnaire. The reason for forming these statements was their supportive role. In other words, these statements would support the answers of the open questions. These statements were also formed on the basis of the theoretical propositions and turned into the form of claims. Respondents had five

possibilities to choose their answer from: totally agreed, somewhat agreed, no opinion, somewhat disagreed and totally disagreed. The structure of the questionnaires was almost identical in both places. Some additional questions of using other sports services in Ylläs-halli were asked. The full structure of questionnaire can be found as an appendix.

The service providers were asked to inform the present writer of a suitable day for conducting the questionnaires. These days for conducting the questionnaires were selected because of its popularity among skiers, and the facility was open for all skiers. Ylläs-halli organises private events for companies and sports clubs in the hall. Days with private events were not suitable for conducting the questionnaire, because the aim was to collect as wide a group of answerers as possible. The questionnaires were collected in Vuokatti on October 17, 2009 and in Ylläs-Halli the questionnaires were collected October 28, 2009 and November 1, 2009. On October 28, over 90 percent of all the skiers in Ylläs-halli, were men. This observation resulted in the choice for doing the surveys on November 1, which was Sunday. I wanted to see whether the users represented a broader picture during weekend. Overall, 96 questionnaires for skiers were completed.

I asked the interviewees' interest to participate in the questionnaire after their skiing experience. Skiers could either answer privately to the questionnaire, or I could interview them and write down their answers. Skiers could choose themselves the best possible option to answer these questionnaires. Because this is a qualitative study, the quality of the answers was more important than the number of completed questionnaires. Therefore, I asked them to consider the questions carefully and write down all the possible thoughts they had on the matter.

2.3.3 Theme interviews

The aim of the theme interviews for service providers was to find out answers for the third sub-task about financial potentials and challenges of indoor ski facilities. In addition, viewpoint of service providers for other sub-tasks were asked.

Theme interview means that detailed questions are not asked, but given themes guide the interaction instead. This method is semi-structured, because the themes are same for

each conducted interview. The aim in theme interview is to become aware of the interviewees' interpretation of the themes and how interviewees explain the themes under discussion. This understanding is created in interaction during the interview. The interviewees' experience world is valued, because the purpose is to describe the interviewees' experiences, feelings, beliefs and thoughts about the themes. The advantage of using theme interviews is that it does not bind the researcher into either qualitative or quantitative group. It does not require a certain amount of interviews or certain depth in processing the theme. Instead, it gives certain freedom for the researcher to realise the interview. (Hirsjärvi and Hurme 2009, 47-49)

Two theme interviews for service providers were conducted in autumn 2009. The interview in Ylläs-halli was done on October 22, 2009 and the interview about Ski Tunnel of Vuokatti was conducted on November 25, 2009. The service providers were asked to mention a perfect time for these interviews and therefore they had enough time to fully concentrate on the discussion. These interviews were done face-to-face in a ski-related environment. Interview of Ylläs-halli was conducted in Ylläs-halli close-by ski tracks and interview of Vuokatti was done in the ski resort of Ruka, Kuusamo. Service providers were interested and helpful, and openly provided answers to all themes. These interviews took place in Finnish and were taped and transcribed. The interview with the service provider in Ylläs-halli lasted about one hour and fifteen minutes and the interview with the service provider in Ski Tunnel of Vuokatti about 25 minutes. After transcribing the tapes, I had about 20 pages of data to analyse.

The interview was based on three major themes. These themes were originally built from theoretical readings and personal acquaintance with the phenomenon. The discussed themes were the reasons for having indoor ski facilities, financial profitability of the facilities and the future of cross-country skiing. The themes were brought up in the discussion one by one, and the aim was to give the service provider a possibility to openly talk about his subjective experiences. Some supporting questions for each theme were also asked. These supportive questions concerned, among other things, the user fee, climate change and the challenges these facilities face. These supporting questions were not similar in both interviews. The answers the service providers gave led to these supportive questions and therefore, interviews formed to be different. The structure of the theme interview can be found as an appendix.

2.4 Method of analysis

Qualitative analysis can be conducted in several ways. There is no single right method, but rather there are multiple routes for doing analysis. The common aim of every analysis methods is to understand the collected data: the researcher tries to answer questions that the data seems to pose. (Chadwick, Bahr & Albrecht 1984, 345) The exact answers based on the data are rarely interesting in themselves. The researcher needs to make an interpretation of them and connect this interpretation with the cultural structures underneath the exact answers. (Sulkunen 1990, 275) Content analysis is one of the traditional basic methods for analyzing qualitative data. Content analysis can be understood either as a guiding theoretical framework or as a single method of doing analysis. (Tuomi & Sarajärvi 2009, 91-117)

The aim of content analysis is to examine the meanings of a text about the phenomenon under research, and then to create an informative picture about the research topic. These texts can be collected from variable sources. During the analysis process, the data is separated and summarized, or it is searched to find similarities or differences in it. The data is usually split into small parts, conceptualized and then organized into a new entity. Content analysis in this study has an abductive approach, meaning that the collected and interpreted data, theoretical assumptions and prepared models are combined. The findings from the data are supported and explained with the help of previous studies. Some of these findings may also diverge with previous studies. Abductive reasoning is possible when a guiding principle is involved with analyzing the findings. This guiding principle can be an intuitive assumption or a well-structure hypothesis, but this principle helps to focus the findings in certain conditions or matters. These matters or conditions are assumed to bring new ideas, theories and viewpoints about discussed phenomenon. (Tuomi & Sarajärvi 2009, 91-117; Eskola & Suoranta 2005, 65-68)

This combination of previous studies and the results of this study allow forming more profound and grounded explanations. Researcher's interpretation about the topic under research is created during this process, and this interpretation is something new and unique. The aim is to create a summarized picture of the phenomenon that connects the phenomenon into a larger context and also pays attention to other results related to the

research tasks. This is more important than statistical generalization or the amount of the data in qualitative case studies. (Tuomi & Sarajärvi 2009, 91-117; Eskola & Suoranta 2005, 65-68) Qualitative studies do not aim at making statistical generalisations. Rather, the aim is to describe, understand and interpret the chosen case as a phenomenon. Generalisations cannot be done directly from qualitative data but it is done from the interpretations of this data. (Sulkunen 1990, 267, 272-273)

The interpretation of the results is usually done during the whole qualitative research process (Eskola & Suoranta 2005, 15-16). The analysis in this study began after conducting the interviews and questionnaires, and continued throughout the process of analysis until finalising this study. Thematising and classifying by types were the main methods used in this study, and they are introduced next. In addition, supplementary methods such as cross-tabulation and quantitative frequencies were used. These all methods and their use in this study will be introduced more carefully next.

2.4.1 Thematic content analysis

To put it briefly, thematising means studying characteristics that are common for several interviewees. These themes can be based on themes of the interview, and in fact it is natural that these original themes are under review in analysing process. Besides these original themes, several other themes may arise, which are actually more interesting than the original themes. This reflection can lead to a search for some more supportive theoretical background or to completely new viewpoints of the phenomenon. Theoretical propositions can also be the starting point for the analysis process. The collected data will be reflected with these propositions. However, the formed themes are based on the interpretations that the researcher has made of the interviewees words. It is unlikely that two interviewees use exactly the same words, but these answers can be coded into the same category. (Hirsjärvi & Hurme 2009, 173) With the help of thematising, it is possible to have a group of answers or results to each question. This helps in adjusting the results to practical purposes. (Eskola & Suoranta 2005, 179)

Types are theoretical constructions that summarize and group the data. Classifying in types is defined as looking for similarities and presenting the data in forms of combined types. Types help in summarizing and grouping the collected data into meaningful units that describe the most interesting, overarching aspects of the data. (Eskola & Suoranta

2005, 181) These similarities represent similar stories that give an idealized illustration of the collected data, meaning that no one has exactly all the characters of a certain type in reality. Certain parts of collected data are grouped into one group because of multiple similarities. The importance of types lies in their ability to help in increasing the understanding of a specific phenomenon and explaining it. Thematising is usually done before classifying by types, and grouping into types usually deepens the results of thematising. (Eskola & Suoranta 2005, 181; Hirsjärvi & Hurme 2008, 173)

2.4.2 The analysis of theme interviews

The original themes in the interviews formed the basis for the analysis. The theme interviews with service providers were read through several times and relevant sentences and words were underlined each time when the data was read through. The relevant and underlined parts of theme interviews, which illustrated common opinions of service providers, were collected under headings of each original theme. I did not want to concentrate on the individual comments of the service providers, but to focus on finding the common viewpoints of the service providers about the financial situation of indoor ski facilities, the role of cross-country skiing in Finland and the existence of indoor ski facilities instead. These shared viewpoints were reflected against the theoretical propositions and the results of the questionnaires in order to find distinctive or supportive viewpoints of service providers compared to skiers and previous studies. This reflection led either to search for some more supportive theoretical material or gave new ideas about the theme under discussion. However, the viewpoints of skiers and the service providers were kept separate in this study.

The theme interviews were also in a big role in finding out the answer to the third sub-task about financial potentials and challenges. Therefore, I collected all the parts describing the financial potentials and challenges of indoor ski facilities from the transcribed interviews. This meant that I wrote down on paper all the possible potentials and challenges that was identified in the interviews. In addition, the financial weaknesses and strengths of the facilities were written down. The results of this analysis are mainly possible to read in chapter six that concentrates on financial challenges and potentials. The results of this analysis were also combined with previous studies and articles in newspapers in order to form profound picture about financial situation.

2.4.3 The analysis of questionnaires

Several different methods were used to analyze the questionnaires. The questionnaire was composed of three parts, which were the background questions, open questions and statements. All of these parts were analyzed with different methods that are described in this chapter.

The open questions in the questionnaires were analyzed with the help of thematising. Each questionnaire was read through, and the answer of each open question was written down. The answers with similar content were combined under one theme, and a descriptive name was given for each theme. These themes were not defined beforehand, but emerged from the collected data. After this collation, the deeper connections between the themes were built. Thematising was not enough for the analysis – these themes needed to be interpreted and understood. The conclusions were combined and deepened with theoretical material. The process of analysis could be described as iterative. This concept means that some theoretical propositions exist at the beginning of the process, which helps to formulate the open questions. These propositions are compared with the findings of a case, which leads to a revision the original statement. Then, other details of the case are compared with the revised statement, which, in turn, leads to the revision of the propositions. This process was repeated as many times as it was needed in this study. (Yin 1994, 111)

Grouping into types was another analysis method of the questionnaires. Questionnaires were analyzed with the aim of finding the similarities and connections with the skiers in the facilities. When examining the answers for the question why skiers were skiing indoors, three main reasons for skiing indoors were observed. Some skiers had competitive purposes for skiing indoors. Others purposes related to skiing for the pleasure of it or trying out skiing. These reasons for skiing indoors were a starting point for creating the types, because the answers were divided into three different groups. The questions about skiers' backgrounds, skiing kilometres per season and their own description of the type of skier they think they are were used as supporting evidence to highlight the differences between the types. Similarly, observations made in the field and during the theme interviews with the service providers helped to understand and define the types. The groupings were deepened with theoretical material to describe the

types and their characteristics in more detail. This analysis led to the formation of three different types of skiers in indoor ski facilities, which are described in chapter four in more detail. Descriptive names for these different types of skiers were given at the end of the process. The names of these types describe the main reasons for skiing indoors.

After thematising and grouping, the formulated themes and types were reflected against each other. This reflection process is referred to as cross-tabulation. Cross-tabulation indicates how many times each formulated theme appeared in the group of each type. As a result of this cross-tabulation, two contingency tables, which were about adaptation plans of skiers to climate change and opinions about the role of indoor ski facilities in the future, were conducted. Each cell of this contingency table shows the percentage of respondents that gave a specific combination of responses. Cross-tabulation was done in order to find out whether it was possible to find differences between types and themes. Partly, this method was used to support the groupings into types; in other words to highlight the differences between the types. On other hand, this method was used to describe the findings of the thematising, because the cross-tabulations illustrate the differences between the types and the themes. Therefore, the purpose for doing cross-tabulations was to find out if more important relationship with cross-country skiing indicates either more optimistic viewpoint about indoor ski facilities or greater willingness to seek skiing conditions in the future.

The answers to nine statements were fed into SPSS-programme. These statements were in forms of claim and skier had to choose either to agree or disagree with this statement. Skiers were asked to choose their answers from five possibilities: 1 = totally agree, 2 = somewhat agree, 3= no opinion, 4 = somewhat disagree and 5=totally disagree. This reminds of a likert item. Likert item means a statement, which the respondent is asked to evaluate according to any kind of subjective or objective criteria. Generally, the level of agreement or disagreement is measured and this was also purpose in these statements. (Vehkalahti 2008,35-38) In this study, each item was analyzed separately. The answers of these statements were coded into SPSS in order to find out the distribution. The distribution was illustrated by forming charts in which the results of both facilities were introduced separately. The chart describes the amount of answers to

different statements. The role of these statements is to support the main findings from the theme interviews and the open questions of the questionnaires.

In addition, the answers of the background questions were fed into SPSS statistical programme. The descriptive statistics of each background question were analyzed with help of this programme. Descriptive statistics summarize the data by describing what was observed in the sample numerically or graphically. This meant that it was calculated the numerical descriptors, such as mean value, for continuous data types, and frequency and percentage was calculated in terms of describing categorical data. Therefore, it was calculated mean value and range for age and skiing kilometers whereas frequency and percentage was measured for other background questions. (Vehkalahti 2008, 54-58) Some of these findings were formed in forms of figures and tables. The main results of this descriptive analysis are possible to read next.

2.5 Description of data

Overall, 96 questionnaires for skiers were completed. 77 percent of the respondents (74 skiers) were male. Respondents came from all over Finland and also six foreign skiers answered to the questionnaire. Figure five shows all the different places of residence that Finnish skiers mention in their answers. The average age of respondents was 45,3. The youngest respondents were two 17-year- old boys whereas the oldest one was 82-year-old man. The average skiing kilometres per season was 1091, and the variation was from zero kilometre to 5000 kilometres. (Table 1)

Table 1. The descriptive statistics of respondents

The number of completed questionnaires	96
The number of male respondents	74
The average age of respondents	45,3
The average skiing kilometres per season	1091
The most common educational background	Masters' degree

Most of skiers were highly educated. Every third skier had Masters' degree whereas 30 percent of skiers had Bachelors' degree. Every fifth skier had a degree from vocational school. Six percent of respondents had comprehensive school and nine percent had upper secondary school as their highest level of education. Occupations of respondents varied from students to business executives. It could be conclude that the typical skier was a 45-year-old, highly educated man, who skied nearly 1100 kilometres per season. (Table 1)



Figure 5. Skiers' places of residence

46 of these questionnaires were completed in Ski Tunnel of Vuokatti. Skiers had travelled from all over Finland to Vuokatti, because the respondents mentioned Pello, Loviisa, Vantaa, Jyväskylä and Oulu among others as their place of residence (figure five). In addition, six respondents answered to the questionnaire in English, and they came from Russia, Canada and the United States of America. The youngest respondents were two 17-year-old boys and the oldest respondent was an 82-year-old man. This illustrates the wide variety of skiers in Ski Tunnel of Vuokatti. 39,1 percent of the respondents were skiing with their spouse or family in Vuokatti. About one fifth of the

respondents were skiing alone, whereas more than one in four skiers was with their ski club or team in Vuokatti, which illustrates the competitive nature of the skiers in Ski Tunnel of Vuokatti. (figure six) 32 percent of skiers had a vocational degree as their highest level of education. 24 percent had a Bachelors' degree whereas 28 percent had a Masters' degree. Six percent had a degree from upper secondary school and eight percent had comprehensive school as their highest level of education.

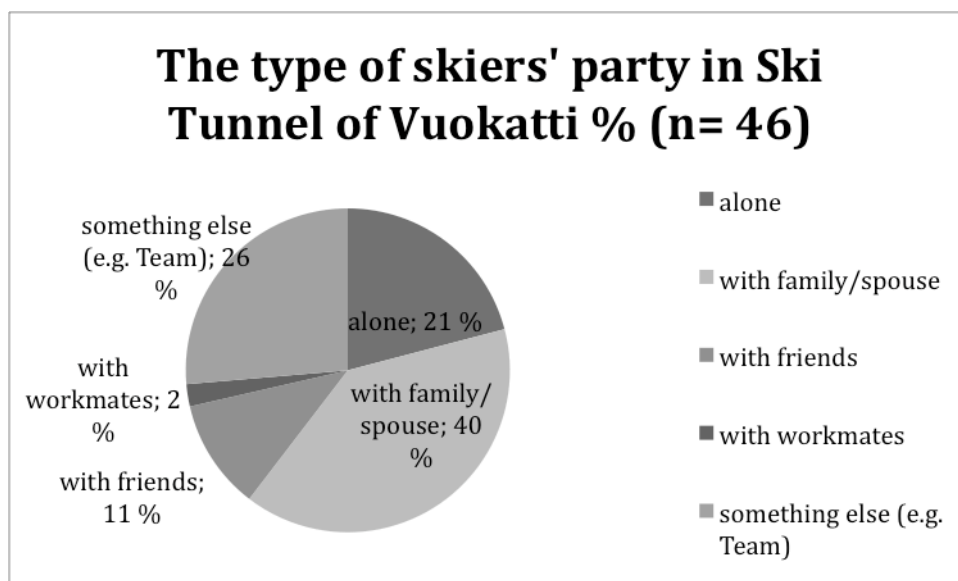


Figure 6. The type of skiers' party in Ski tunnel of Vuokatti. % (n=46)

50 questionnaires were completed in Ylläs-halli. In Ylläs-halli most of the skiers lived mainly in the capital city area, and the rest of the skiers were from somewhere else in Southern Finland. The youngest skier was a 19-year-old man, whereas two 70-year-old skiers were the oldest ones. 50 percent of the skiers belonged to the age group of 35-50-year-olds. 39 percent of skiers had a Masters' degree and 37 percent had a Bachelor's degree. 12 percent had a degree from upper secondary school. Eight percent of skiers had a vocational degree and four percent had a comprehensive school as their highest level of education. Half of the respondents (26 skiers) were skiing alone in Ylläs-halli, whereas 28 percent of skiers were with their friends. Rest of the respondents were either with their family or with their co-workers. No teams were practising in the hall during conducting the questionnaires. (figure seven)

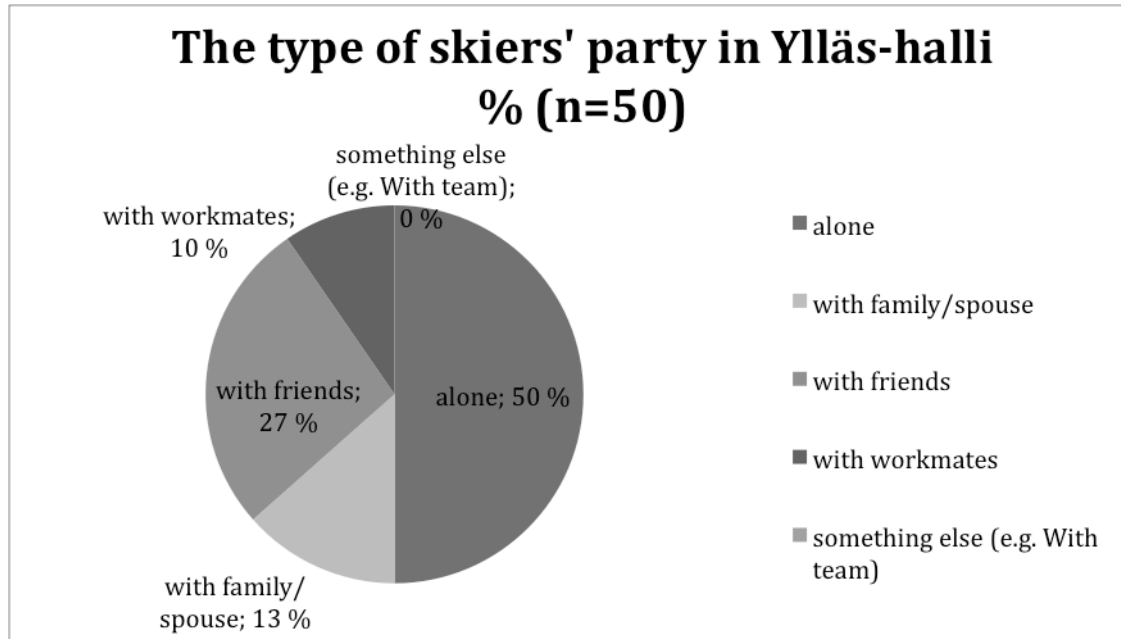


Figure 7. The type of skiers' party in Ylläs-halli. % (n=50)

In Ylläs-halli, almost half (46 percent) of the respondents mentioned being an active skier, whereas only four skiers mentioned being an active competitor. About one third of the respondents (30 percents) categorised themselves into the group 'if the conditions are good, I ski regularly'. In Vuokatti, 46 percent of skiers considered themselves active skiers and 28 percent competitive skiers. However, this answer is based on the respondents' own evaluation of their activity and depends on definition of an active skier. These definitions varied between the respondents. This variation can be seen when comparing the estimated skiing kilometres per winter to these categorisations. Overall in Vuokatti, the skiing kilometres varied between 50 kilometres and 5000 kilometres. The most common skiing kilometres were about 2000 kilometres (20 respondents). Competitive skiers skied also the most, but of those who considered themselves active hobby skiers skied between 150 kilometres and 2500 kilometres. Overall, skiers in Ylläs-halli did not ski as much as the skiers in Ski Tunnel of Vuokatti. This illustrates partly the fact that the profile of skiers was different between these two premises. Skiers in Vuokatti were more concentrated on high-level competitions and training than the skiers in Ylläs-halli. In Ylläs-halli, the typical skiing kilometres per season were about 500 kilometres (22 respondents of 50) and the variation was between 0 kilometre and 2000 kilometres. Six skiers mentioned skiing 2000 kilometres a year.

3 THE ROLE OF CROSS-COUNTRY SKIING IN THE FRAGMENTED SPORTS CULTURE

This chapter examines the current situation of cross-country skiing in Finland. Answering this sub-task also aims at understanding the context in which indoor ski facilities exist. Technologised, year-round and indoor-based ski facilities exemplify the modern sports culture in which commercially-based and privately owned businesses have gained markets from traditional public sports services. Although the development of sports culture has fragmented the spectrum of sports, the role of cross-country skiing is still important. About a million Finns mention that they are active in cross-country skiing.

Changes in sports culture are not solely a consequence of individual choices: the choices are conditioned by large-scale societal, cultural and structural changes (Heikkala 2009,7; Itkonen 1996, 191-192). That is why this chapter explores first briefly the development of Finnish society and its influences on physical activity before discussing the changes in sports culture. The aspects of modern sports culture are described in detail, and the role of indoor ski facilities in modern sports culture is illustrated in this chapter as well. Attention is also paid to cross-country skiing and its variable position in the Finnish way of living.

3.1 The development of society and sports culture

Finland is in several ways a different kind of society nowadays compared to the situation over a hundred years ago. Finland has developed from an agricultural society to a modern country embracing information technology. It has also been one of the world's top countries in economic competitiveness, education and democracy. In the past, skis were an important transportation method for farmers and forest workers, and have nowadays been replaced by other forms of transport such as cars and other motor vehicles. Finland has also become an internationalised country, and the membership of the European Union has allowed broader movement of individuals, services and materials, and immigration to Finland has increased in the 1990s. This internationalisation has brought along some multicultural aspects into the Finns' way of

life. The development of society has also meant several structural changes in population, education, living environment and professions. All Finns have access to high quality primary, secondary, and tertiary education. Most Finnish people live in an urban environment, and their working environment has moved from fields and forests to indoors. Work has become more flexible, meaning that Finns can work at home or at a distance nowadays. Shortened working hours allows more time for leisure. (Karisto, Takala & Haapola 1984, Jokinen & Saaristo, 2006; Mäntylä, Pyykkönen, Juppi and Sneck 1990, 27 – 49; Karvonen, Moisio & Simpura 2009, 21-30)

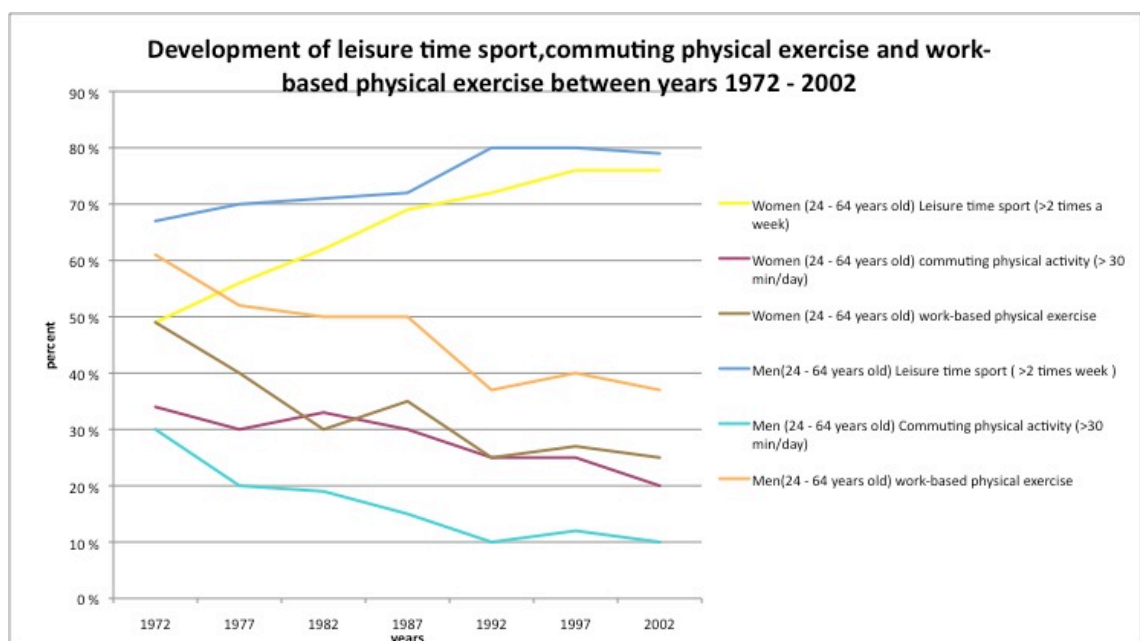


Figure 8. The development of leisure time sports, commuting physical activity and work-based physical activity between years 1972 -2002 (Fogelholm, Paronen & Miettinen 2007)

As figure eight illustrates, Finns have increased their participation in leisure time sports from year 1972 to 2002. This chart is based on national Finriski-study that is conducted every five years and measures health-related behaviours of the Finnish population. The increase in physical activity is explained partly by the structural changes in Finnish society. Among other things, the increased leisure time has allowed more time for physical activity. Particularly, participation of women in physical activity has increased notably during this period. One explanation is that women do not spend similar amounts of time doing household work as in the 1970s. During the same period, commuting

physical activity has decreased. This change is partly explained by the increased numbers of cars and development of road connections, but also by the fact that work places are situated further from homes nowadays than in 1970s. The third example of structural changes in Finnish society is the decrease in work-based physical exercise. This concept means that work itself is physically demanding or requires plenty of lifting and walking. Work has increasingly shifted from physically demanding work to sedentary work during this period. (Fogelholm & al 2007) Structural changes in society will have an impact on leisure time activity also in the future. Ageing of the population, increased income and changes in the recreation environment, for example, will change the importance of outdoor activity in Finland in the future. (Karisto & al 1984, Jokinen & Saaristo, 2006; Mäntylä & al 1990, 27 – 49)

Heikkala (2009, 7-8) mentions that sports culture developed side-by-side with Finnish welfare society. This development of sports culture could be described through roads. In the 1970s, the physical exercise road became increasingly more important alongside with the sports competition road. Sports culture was understood previously only as a competitive sports that emphasised the success of athletics in international competitions. During the 1970s, sports culture was expanded to encompass everyone's physical exercise. Sports became a part of the development of welfare society. Attention was paid to physically active Finns, and therefore the conditions for sports were developed. For instance, indoor sports facilities such as swimming halls were built in municipalities around Finland. Many sports spread throughout the country because of the urbanisation of Finland and the development of mass culture.

The 1980s has been described as a golden age for sports culture: new sports became popular, more individuals became interested in sports and the financing of sports increased. The fragmentation of sports, which began in the 1980s, increased in the 1990s. Variety of sports and sport facilities increased. The third road of sports culture, which was named the well-being road, was emphasised during that time. Physical activity was seen to play an important part in increasing social activity and averting social problems, such as preventing social exclusion and advancing employment. This meant that sports were seen important for society as well as for the individual. Because of these three variable roads, the contemporary sports culture could be described as a

widespread, multidimensional mosaic that includes several values, several stories and several realities. (Heikkala 2009, 5-8; Itkonen 1996, 228-229; Heikkala & Koski 1999, 5, 14-17)

These three roads mean that sports and physical activity have become an important part of Finns' way of life. Finns participate in competitions and are active members in sports clubs. Volunteering and following sports competitions are leisure activities for many Finns. It can be said that sports culture is somehow a part of every Finns' life. The demand for sports and physical exercise services has increased in recent decades, and it seems to continue its increase in the future. It is also predicted that the fragmentation and increase in the variety of sports will continue and boundaries will become blurred. (Heikkala 2009, 3-4)

This change in sports culture has also had its influence on the meaning of sports for the individual. Sports have become a question of lifestyles and of identities, particularly for the so-called consumption generations. Modern society is a society of consumption, where there is a continuous need to reproduce one's own identity. Individuals' self-actualisation is important, and therefore different entertainment and recreation possibilities are sought widely. Happiness is emerged from non-material values, such self-fulfilment, psychological values and finding a satisfactory way of life. New trends arise, and these trends have an impact on the supply of sports services. This demand and need opens new possibilities for entrepreneurs in this sector. The disposable income of most Finns is on such a level that it allows trying new experiences and leisure activities. However, everyone does not have possibility to follow the trends in lifestyle. Polarisation of lifestyles between socioeconomic groups has increased. (Heikkala 2009, 6-8; Heikkala & Koski 1999, 53-55; Mäntylä et al 1990, 82)

3.2. Modern and technologised sports culture

Sports activities have increasingly shifted from the natural environment to structured environments and indoor facilities. These facilities are either attractive multi-activity recreation centres or premises for a specific sport. (Vasara 2004, 374-376; Mäntylä et al 1990, 84; Itkonen 1996, 184-185) Zacheus (2008, 29-30) defined that technical sports culture means all the sports that need a built sports environment for practising. Indoor ice-skating rinks, golf courses, indoor ski halls and spas are good examples of these kinds of facilities. To exercise in these facilities, individuals usually travel there using a vehicle of some sort. Natural physical exercise is the opposite of technical physical exercise meaning that natural sports does not necessarily need buildings for practising, and everyone can participate without paying an entrance fee. Individuals can do outdoor physical sports right in front of their home doors. Walking, running, and skiing outdoors or swimming in natural waters are forms of outdoor physical exercise. Sports activities have increasingly shifted from natural sports culture to a technical one. Urbanisation and technological development in society are reasons for this shift. The technological innovations have helped in building indoor facilities with reliable and well-kept conditions. Sports facilities should situate near residential areas. When most of the Finns live in cities, indoor sports facilities are more easily accessible than natural outdoor conditions. (Vasara 2004, 374-376; Mäntylä et al 1990, 84)

Winter sports are kept as a seasonal sport that has a certain high-season for their exercise. Indoor ski facilities break this rule by offering conditions for year-round training. Indoor ski halls are therefore a good example of a technologised facility that releases sports from their seasonal constrains. (Hinch & Higman 2003, 169) As the service providers mentioned in the interviews, snow-guarantee and constant conditions are their strengths. Facilities secure constant snow conditions and mild temperatures for training. Constant conditions for skiing without fear of rain or wind attract users to ski indoors. Similarly, skiers felt that year-round training possibilities and the lengthened skiing season were the reasons behind the existence of indoor ski facilities. These halls secure conditions regardless of weather conditions outside, and this certainty eventually helps competitive skiers and active skiers in preparing for the competition season. These facilities were seen as extremely important particularly for active skiers in Southern

Finland for their training, because of the poor natural snow-conditions. Skiers also pointed out that other traditional sports such as skating and swimming have become year-round activities a long time ago. Why should not skiers have their own halls?

The economic recession in the 1990s diminished the public funding of sports facilities and increased the private and commercial support for sports funding. The field of physical exercise became productised and commercialised in order to be able to answer to the demands set by lifestyles and interests. (Ministry of Education 2007, 46-50, 53; Heikkala & Koski 1999, 15; Itkonen 1996, 61) The privately financed big multisport halls and indoor sports facilities were built in densely-populated areas of Finland, and likewise, the artificial environments for practicing sports, such as artificial downhill ski tracks, golf courses, swimming halls, ice halls and indoor ski halls were created. (Zacheus 2008, 263) Indoor ski facilities can be described as a developmental step of practising cross-country skiing. Skiing has shifted from ice and forest environment to easily accessible indoor facilities, where all the services are nearby. Skiers mentioned also that the reason for building indoor ski halls is the overall development of society that has also forced society to develop new well-being facilities for Finns. Finns expect comfort and easiness, meaning that skiing in forests is too demanding a task because of the travelling from cities to nature and the changing weather conditions in nature. Skiing is expected to happen easily in a comfortable environment without worrying of weather conditions.

Because of the privatisation in the sports sector, paying capacity has become a distinctive factor in participation in physical exercise. Many sports services are provided through commercial fees based services instead of public right of access. The private owners need to gain profit, and this profit is gained, for instance, with the help of user fees. (Heikkala & Koski 1999, 42) This alteration creates inequality. Everyone who can pay a certain amount of money can practise in modern and exclusive environments. Others need to find cheaper ways to exercise. According to the national sports survey (2010), practising sports in privately owned companies has increased between 2001 and 2010 in each age group of Finns. When only four percent of Finns practised sports in privately owned companies in 2001, the percent is 15 in 2010. Particularly women and 25-35-year-old Finns have increased their participation in privately owned companies. (FSF 2010)

This development of privatisation has also created new possibilities for the business sector. Some indoor facilities have created so-called club societies meaning that by paying a share, a person becomes a member. The membership in this society is eligible. This club joins together all of those who are keen on the same hobby and creates feelings of unity. The golf clubs are the most common example of these sorts of clubs, but these societies have become more common in other sports as well. (Mäntylä et al 1990, 54, 84) Indoor ski halls exemplify this change: skiing is chargeable indoors, whereas outdoor skiing is still free of charge for skiers. In addition, Ylläs-halli provides the skiers a possibility to buy a share. This membership is meant to attract customers by allowing owners to have privileges to certain benefits.

3.3 Individual lifestyle and changing trends

Lifestyle of Finns has changed alongside sports culture, and structural changes in society have taken place. Koski (1998, 6-7) illustrates this change of lifestyle by comparing traditional Finnish films and rock videos. Finnish films create an image of a harmonic, idyllic and nature-respecting society like the traditional lifestyle in Finland was. Rock videos are fast in their rhythm, aggressive, dynamic and temporary like modern individual lifestyle is. This change means that rationality, institutionalism and traditions have loosened. When traditions are not guiding individuals' life as previously, the fields of social life have become fragmented. New activities are invented, and new differentiations of lifestyles are presented. The differences in lifestyles have become more important at the same time as the old social differences have diminished. The societal status is emphasized with the help of personal style, consumption and other details of private life. This has meant that importance of superficial matters such as trends, style and fashion has increased, and that marketing and sales have become more important. Individuals themselves are self-responsible for creating own projects in life. This has lead that individuals need to re-define their lifestyles and choices in everyday life. (Karisto 1988, 43; Koski 2000, 136-140)

Sports is a field of social life that creates and maintains differences in lifestyle. At the same time, sports make distinctions between people and unite them. It allows individuals to be unique as well as followers of the masses. By their choice of a sport,

individuals can illustrate their dynamics, their trendiness and their modernity, or on the other hand, individuals can use this choice to express their traditionalism and conservatism. Marathon runners, among others, participate in different city marathons to express their individuality, and skiers use fancy clothes to separate themselves from traditional 'Sunday skiers'. The aim of this separation is to strengthen and to emphasise one's own individuality. (Karisto 1988, 70-72) A sport becomes a way of creating a social world that has its shared traditions, behavioral expectations, status, symbols and hierarchies. Individuals feel at home in this social world. Authorities, power structures or ceremonial memberships do not exist, and therefore members are not bound in this social world in the same way as they are in traditional groups. Individuals may also belong to several social worlds at the same time, and shuttle between these worlds. (Koski 2000)

When considering the role of cross-country skiing in contemporary sports culture, its position needs to be reflected historically at first. Zacheus (2008,137-190) has studied the changes in Finnish sports culture by finding out the most popular sports for different generations. In his study, Zacheus asked respondents, born between 1923 and 1988, to recall their physical activities during different period of their lives. When Finnish generations were compared only in terms of their responses to question concerning cross-country skiing, a significant change was observed. The conclusion was that the older the generation, the more important cross-country skiing as a leisure activity was. Only 11 percent of Finns who were born in the 1980s mentioned that they had cross-country skiing as their early-life hobby. In contrast, over half of Finns who were born in the 1920s – 1940s mentioned cross-country skiing as their leisure activity in childhood and adolescence. Cross-country skiing was still interesting for younger generations of Finns, but the percentage had diminished significantly.

It is possible to find several reasons for this difference. Firstly, Koski (1998, 6-7) explains that agricultural lifestyle and cross-country skiing are similar in characters. These both share the same values and meanings. Cross-country skiing requires strength and persistence as does farm work. A personal relationship with nature and appreciation of hard work are underlined. Farmers and cross-country skiers are also similarly lonely workers. Karisto (1988) defined cross-country skiing as traditional and national in its

nature, when he formed 12 lifestyle groups of Finnish physical exercise. Cross-country skiing was the most popular sport for those Finns, who were described as traditional and conservative. Therefore, cross-country skiing might not reply for the needs of modern individuals that expect participation in vivid, fast and aggressive disciplines (Koski 1998, 6-7).

Secondly, sports culture transformed from outdoor sports towards indoor sports facilities in the 1960s. The numbers of disciplines increased, allowing Finns to find their own interests from a broader scale of possibilities. Team sports and equipment sports became more popular, and this influenced the interest towards traditional sports. Those Finns who were born in the 1970s and later had a broader choice of sports to choose from, but those Finns who were born before the 1960s cross-country skiing was one of the rare choices to be physically active. (Zacheus 2008,3) Besides these reasons, Koski (1998, 6-7) named several winters with minimal snow cover in the 1970s and the 1980s, and the development of plastic skis as reasons for people losing interest in cross-country skiing. Plastic skis required waxing and prepared ski tracks, but it was possible to use wooden skis everywhere, also without ski tracks. If Finns wanted to ski, they needed to find suitable ski tracks and also to know how to wax their skis. This challenge of right waxing for right snow conditions was also a reason for the bad memories of skiing lessons in school that many adults have. It should also be mentioned that poor winters in Southern Finland in the 21st century and the doping case of Lahti in 2001 have also had a negative influence on cross-country skiing activity during the recent decade.

The changes in cross-country skiing activity are described in figure nine that illustrates the numbers of actives in cross-country skiing between years 1994 and 2010. It also separates the numbers of actives in different generations of Finns. The number of adults actively practicing skiing has decreased in recent years after continuous increase from year 1994 to 2005. This decrease might be partly explained by the poor snow conditions of recent years. The latest national sports survey was conducted between year 2009 and at the beginning of the year 2010. Therefore, the influence of the snowy winter 2010 might not be possible to see in this survey. However, cross-country skiing is still one of the most important physical activities for Finnish adults. Older generations of Finns have become more interested in cross-country skiing during the last decade. For these

Finns, cross-country skiing was an important leisure activity already as a child. Finns under the age of 18 seem to have decreased their participation in skiing after several years of increase. The drop in the last five years has been about 43 000 children in total.

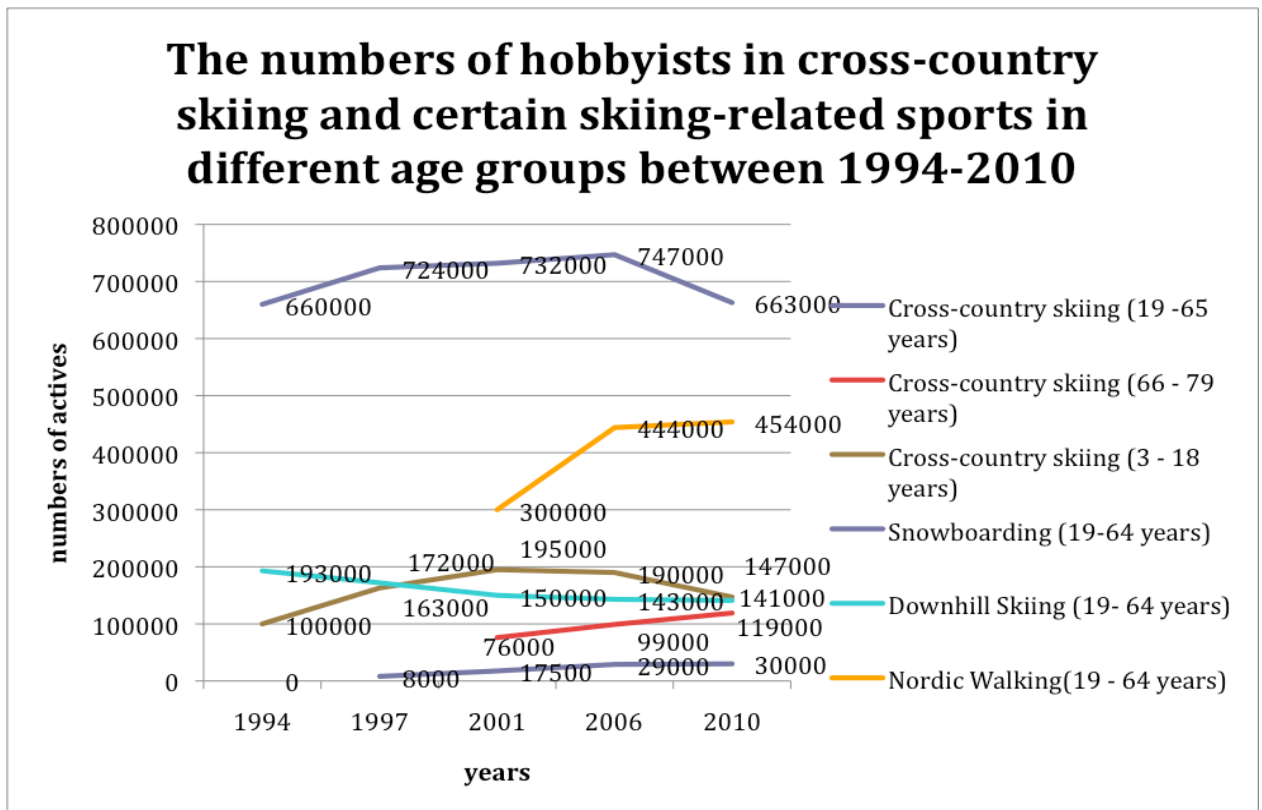


Figure 9. The numbers of hobbyists in cross-country skiing and certain skiing-related sports in different age groups between 1994-2010 (FSF 2010)

Figure nine also includes the actives in downhill skiing, snowboarding and Nordic walking. All these disciplines illustrate the modernization and fragmentation of sports. Downhill skiing was considered as an elite sport in Finland because of the costs of participation. Disposable income of Finns may allow increased numbers of Finns to participate in downhill skiing. Snowboarding was not an answer option in the first sports surveys, but has increased its appeal among adults significantly in the last ten years. Nordic walking has developed into a separate sport during the last decade. The number of active Nordic walkers seems to have balanced after the boom in the first years. According to the study of national forest institute (2010), downhill skiing, snowboarding and telemark skiing are seen as fascinating among young Finns, but middle-aged Finns are keen on cross-country skiing. The interest in downhill skiing has

dropped down somewhat, whereas other alpine sports have maintained their appeal on same level. (Finnish forest research institute 2010)

Cross-country skiing could be described as a trendy sport at the moment. Due to the snowy winter of 2010, skis and other skiing equipment were sold out in factories and Finns eagerly participated in skiing schools to learn the basic techniques of skiing. Finns, also in Southern Finland, found their way to ski tracks: some of them were skiing for the first time after school years, and others enjoyed good conditions after several years of limited snow. (Pohjola 2010; Ahtiainen & Lyytiäinen 2010; Saavalainen 2010) Skiers in indoor ski facilities described skiing as an interesting sport. Skiing was seen as popular, good hobby for everyone that maintained physical condition. The service providers also wanted to increase the numbers of skiers and offer excellent conditions for skiers by maintaining indoor ski facilities. Service-providers had observed that skiers in indoor facilities vary from traditional Sunday-skiers to trendy businessmen. Families, active competitors as well as elderly people were mentioned using facilities.

There are several reasons why cross-country skiing has improved its image. One reason is the versatility of cross-country skiing as a form of exercise and its good impact on health. Risks for injuries in cross-country skiing are also limited. (Pohjola 2010, Ahtiainen & Lyytiäinen 2010; Saavalainen 2010) Improving physical condition, maintaining health and enjoyableness of skiing were mentioned as the most important factors for participation in skiing among skiers in Ski Tunnel of Vuokatti in 2008 (Leinonen & Virta 2009). The health aspects of skiing might be seen as more important than memorising the regrettable memories of school- and army-time skiing. Furthermore, modern skiing equipment has made skiing easier compared to the time a few decades ago. It has been invented better bindings, skis and waxing methods, which are also easy-to-use. Skiing experience might therefore be more enjoyable than in the past. (Pohjola 2010, Ahtiainen & Lyytiäinen 2010; Saavalainen 2010)

Finns may also have longed for skiing after several poor, snowless winters and it is tapped the situation when the possibility for skiing existed. Finns will ski if the weather conditions are excellent. In addition, the successful national team of cross-country skiing has attracted Finns to participate in skiing. National team has been a good, interesting model to follow on television and competitions, and eventually Finns might

have wanted to follow them on the ski tracks, too. (Pohjola 2010, Ahtiainen & Lyytiäinen 2010; Saavalainen 2010) Media has also played a role in marketing cross-country skiing: there have been articles on testing indoor ski facilities in several magazines and newspapers (among others HS 19.09.2009, Apu 23.10.2009, HBL 18.08.2009). Sport and lifestyle programs (such as Elixir) on television teach skiing techniques, which eventually have encouraged some Finns to try skiing. Media has therefore created illusions of reachable and fashionable needs. It has affected the overall opinion by maintaining the image of uniqueness, trendiness and superiority to be involved in certain lifestyle. (Itkonen 1996,415) It could be asked if the snowy winter of 2010 will increase the activity and trendiness of cross-country skiing in the coming years.

4 INDOOR CROSS-COUNTRY SKIERS

This chapter illustrates the types of skiers in indoor ski facilities. Indoor ski facilities were originally built for competitive skiers, but nowadays there are different kinds of skiers indoors as the types in this study indicate. Three types of skiers were created in this study: serious skiers, pleasure skiers and experimenters. These types of skiers help to understand skiing behaviour and importance of cross-country skiing for Finns.

4.1 The importance of types

The idea of constructing types emerged when I wanted to understand and identify more profoundly who the skiers indoors were. This led me to search the motives and reasons of skiers for travelling and skiing in indoor ski facilities. These motives should also partly illustrate the contemporary role of cross-country skiing for skiers. When the answers of questionnaires were read through several times, skiers seemed to have differences in their orientation to cross-country skiing. Therefore, I decided to group skiers who had similar kind of dimension about skiing into the same group. For serious skiers, this dimension was practising for competitions whereas leisure skiers were motivated to ski because of enjoyment and spending quality leisure time. Experimenters emphasised the experimental nature of skiing in their answers. This dimension was expressed in their answers for open questions, in their skiing kilometres and in their answers for background questions.

As in other parts of this study, abductive reasoning was used when conducting this grouping. Especially the Stebbins' concepts of serious and casual leisure helped to understand the importance of leisure time activities for individuals in contemporary society, and eventually these concepts were reflected with the groupings. On the other hand, these groupings revealed new viewpoints to be considered in this study. For example, experimenter type of skiers highlighted trying out of cross-country skiing. These types can be considered as theoretical constructs that might not exist in reality, but have helped me to categorise the data and understand more profoundly who the users of indoor ski facilities were. These types are therefore based on the combination of theoretical concepts and my interpretation of the data.

The aim of these types is to illustrate the fact that there are different types of skiers in indoors ski facilities nowadays, not only competitive skiers. Each of these three types also has a different kind of relationship with cross-country skiing, which creates variable needs. Recognising these needs may be useful for service providers in ski industry. They could adjust their own services to suit the needs of different types of skiers. These types also show how important leisure time activities are for individuals in contemporary society. Skiing and belonging to a certain social group may be an important part of one's identity. Belonging to a group, with its own independent distinctive culture, emphasises individuality. In addition, individuals are willing to travel to find conditions for skiing, or they are interested in trying new sports facilities or new trends.

Landauer, Sievänen and Neuvonen (2009) formed also three skier groups based on their motives for participation in skiing. Their grouping is based on a web questionnaire for Finnish skiers, and it was available on the ski areas of Southern Finland and on the websites of ski associations. This classification into types and the types of indoor skiers in this study highlights the fact that skiers have different kinds of motives and interests for participation in cross-country skiing. Landauer et al (2009) named their groups social type, outdoor type and technical type. Skiers belonged mainly to the outdoor and technical groups.

The technical type of skiers emphasised skiing as a way of keeping fit and developing skills. The outdoor type underlined the quality of the skiing environment, such as nature, landscape and winter. The outdoor and technical types of skiers were most likely to adapt to the changes in the environment by being ready to travel longer distances and to accept substitute activities. Outdoor type of skiers also accepted technical adaptation methods, such as skiing on artificial snow and in indoor ski facilities. The social type of skiers valued traditions. This group considered skiing a good leisure time activity and a way to spend time with family and friends. The members in social type group were older than in other two groups. The social type would be likely to stop skiing under changing conditions and find other leisure activities. Similarly, the social group was mainly against the technical adaptation methods, but technical group were willing to accept artificial tracks and indoor ski facilities and pay for using them. Types had also

differences in their willingness to finance the ski services. Outdoor and technical type groups suggested that artificial tracks and ski tunnels could be financed with a combination of taxes and track fees. Social type considered that additional finance is not needed. (Landauer et al 2009)

4.2 Serious skiers

Serious Skiers group includes all the competitors and active skiers that were practising for the coming season and competitions. These skiers had certain competition-related objectives in skiing such as preparing for long-distance ski competitions. Because of this aim, they needed to practise constantly. These skiers were usually with a team in Vuokatti. They were skiers, coaches or adults participating with their children on a skiing camp. In Ylläs-halli, the serious skiers were usually alone which was partly explained by the fact that teams had their practises on certain days of week in the hall. These people skied the most from all the interviewees, even several thousands of kilometres per season. Indoor skiing offered good training possibilities for them, and they had the possibility to improve their skiing techniques well before the actual natural snow season started. These skiers had a deep and meaningful relationship with skiing. This sport was an important and serious issue for them, and for some it was even as profession.

Stebbins (2005) has defined the concept of serious leisure to illustrate the importance of sport for certain individuals. This concept describes the type of serious skiers. Sport might become such an important part of life for individuals that they create a career, a certain leisure role, in it. Sport, such as skiing, is significant and interesting in its nature, and therefore individuals want to acquire and express special skills, knowledge and experience by practising this sport keenly. Significant effort is therefore required to obtain these talents. Furthermore, participants want to achieve an even more appealing and desirable outcome than their current condition. This sport becomes an important part of their identity. They speak proudly, frequently and excitedly about their interest to others. Participants also share the ideals, values and guiding beliefs with other members of this social world. This social world is such an important issue for individuals that they are willing to travel to be involved in it. For these serious skiers,

skiing was the primary purpose for the travelling to indoor ski facilities (Hinch & Higman, 2003, 34 - 37). Travelling to indoor ski facilities was motivated by the importance of this sport. This sport environment offered a context through which skiers could construct and confirm their leisure identity. Sports environment provided the time and the place to interact with others sharing the same social world. (Green and Jones, 2005)

Vehmas (2010) has formed distinctive types of sport travellers in Finland. One of her types is a dutiful performer, which has several similar characteristics to serious skiers. Vehmas defines dutiful performers as those sport travellers, whose leisure choices were related to the Protestant work ethics and mentality. Sport was practiced several times a week and participation in sports also included competitions. Dutiful performers were keen on active, intensive and demanding participation with goals in competitions and career development. Their leisure time was full of challenges, goals and the rationales of the doer sentiment. The doer sentiment of leisure was important in fulfilling the duties in life. Resting and idleness were allowed only after physical activities. Sense of duty was attached to the compliance of healthy ways of living, where recommendations about nutrition, physical activities, weigh control and bodily measures regulated the life of this type. (Vehmas 2010)

4.3 Pleasure Skiers

Pleasure skiers are the second type of users. These skiers like skiing, but they do not have detailed competitive objectives for skiing. Cross-country skiing is, however, important to them. They practised it quite often every year. Some of these skiers skied almost as much as serious skiers, although the typical kilometres varied between 500 and 1000. Social and psychological factors, such as enjoying the company of one's family and spending some quality leisure time, were more important. Sport was practised together with the family or with friends. These pleasure skiers underlined the values of togetherness, participation, relaxation and health. The representatives of this category mentioned that they liked skiing, because it was a good fitness sport for

maintaining their physical condition and health. These skiers could also be called Sunday skiers: they liked skiing, but might not take it as seriously as serious skiers.

Stebbins (1997) has created the concept of casual leisure. Casual leisure is defined as immediately, intrinsically rewarding and relatively short-lived pleasurable activity that requires little or no special training to enjoy it. Individual practises this leisure activity naturally. This leisure activity produces a significant level of pure pleasure or enjoyment for those participating in it. Compared to the concept of serious leisure, terms of pleasure and enjoyment are the more important rewards of casual leisure rather than satisfaction and rewarding in serious pleasure. Relaxation, social interaction and self-enrichment are motivating factors in casual leisure. However, casual leisure can enhance self-confidence and help foster positive self-image, but it is too superficial and transient to generate a special identity. (Stebbins 2001; Stebbins 1997) This concept of casual leisure describes well the pleasure skiers that seek enjoyment and pleasure experiences from participation in cross-country skiing.

The increased income and flexible working patterns have allowed Finns to spend more time on travelling, which has also meant the growth of tourism. Holidays are usually spent with families or with leisure activities. Sport-related travelling is a form of leisure in which the participant is involved in sporting activities as an observer, a visitor or a competitor. Sport is a significant activity during this trip, lasting a limited time only, outside the participants' home-community. (Kurtzman, 2005; Hinch and Higham 2003, 19-20) Skiing was the secondary motivation for these pleasure skiers to travel to the indoor ski facilities. For these pleasure skiers, the decision to travel to an indoor ski facility depended on a combination of sporting and non-sporting activities in the region. Sport was the secondary component of the tourist experience. (Hinch and Higman, 2003, 34-37) Several Finnish households spent their autumn holidays in Vuokatti when the data for this study was collected, and skiing in the ski tunnel was one of the activities during their holidays. Some mentioned that this autumn break, with good exercise in the good conditions of the ski tunnel, had become a tradition for the family. In Ylläs-halli, similar kinds of holidaymakers were not included in the study, but quite a number of skiers mentioned being there because they had a day-off. During the weekends, skiers came to Ylläs-halli also from a broader region and their main purpose for visiting was

skiing. The service provider in Ylläs-halli considered developing the transportation and accommodation services for these skiers, who travelled there from outside the capital region.

4.4 Experimenters

Experimenters are the third type of users. These skiers were first-timers in indoor ski facilities and curious of testing these facilities. They explained that they were excited to try something unique. These experimenters were trying indoor skiing usually alone or with their co-workers. Some of them had previously been to indoor ski facilities, but skiing was occasional for them. They did not give any other reasons such as training or holidays for their visit to indoor ski facilities. They also mentioned that skiing in a hall was a good alternation for swimming or for going to the gym. For these skiers, the skiing kilometres per season were limited, and some of these skiers were skiing for the first time in many years. Based on observations, it was easy to recognise the experimenters indoors, because they had difficulties in using the ticket machine and finding a way to the ski track. This group's skiing behaviour could be described coincidental, meaning that they had ended up testing some sporting opportunities although it was not originally planned (Hinch and Higman, 2003, 34-37). They did not have a similarly meaningful relationship with skiing as the two previous groups. Some of these skiers, who had not skied for many years, might have had a negative relationship with skiing because of bad experiences in school and during their military service. It could be asked what their motives for coming to ski now were. This group also forms the group with potential for increasing the numbers of skiers in the future.

Contemporary society can be called society of consumption, in which new needs are created all the time. Individuals have a need for new hobbies, equipment, style or materials. These new needs also regulate the interest in sports and indicate the form of sport that is trendy at certain times. (Heikkala & Koski 1999, 53-54) Skiing indoors is a good example of the possibility to have a new experience. This experience fulfils the need of trying something unique. Indoor ski facilities are unique and therefore an attractive experiment to try. Curiosity may be a motivator to test the facilities. It was also possible to witness this tendency at the facilities. Inside the facility, several people visited the indoor ski facilities to take a peek of the tracks, and some of them took

photos. These people wondered what it was like to ski indoors. The need for new experiences is raised within the peer group to which the individual belongs. A new trend spreads fast in this peer group and emphasises the sense of belonging to this group, and therefore the individual needs to participate in the trend, too. (Heikkala & Koski 1999, 53) Based on the observations made during the study, several groups in Ylläs-halli had a leader, who taught the others to use the facility and find their way in the track. It might be possible that this leader had persuaded the others to test the facilities.

A new trend usually becomes popular first in a certain small group and then spreads fast to larger groups. Nordic walking is a good recent example of a leisure activity that spread throughout the population despite their socio-economical backgrounds. (Jokinen & Saaristo 2006, 173; Karisto, 1988, 70-72) The trendiness of cross-country skiing was possible to notice when the skiers in Ylläs-halli were observed. Several skiers were men, who came to ski before or after their workday. These skiers seemed to have invested in the activity, because they had brand new equipment and wore modern outfits. This group of men might therefore become the first ones interested in these facilities and eventually this interest would spread to their circle of acquaintances. The disposable income of this group of experimenters allows trying new experiences, and through these experiences they satisfy their needs of self-fulfilment and self-actualisation.

Overall, these experimenters are a good example of post-modern individuals in sports culture. They follow trends and try to re-confirm their identity. When a new trend arises, they may change their interest easily. On the other hand, the two previous types of skiers have already such an important relationship with skiing that they may not quit skiing so easily. Cross-country skiing was an important part of their leisure time, especially in winters.

5 INFLUENCE OF CLIMATE CHANGE ON CROSS-COUNTRY SKIING

This chapter concentrates on the influence of climate change on cross-country skiing. Cross-country skiing is actually one of the most climate-sensitive activities because of its dependence on wide snow-covered areas and cold temperatures. Firstly, the previous studies related to the influence of climate change on cross-country skiing are summarised. The theoretical assumptions acquired from the previous studies were the starting point for planning the questionnaires and the structure of the theme interviews. Then, the results of this study are dealt with in more detail. Adaptation plans of skiers are described and the role of indoor ski facilities in case of changing climate will be discussed. One of the aspects that were underlined by sceptical skiers was nature and its importance in the skiing experience. Therefore, the last part concentrates on the role of nature in skiing.

5.1 The predicted behavioural changes of skiers

The choice of participating in certain sports is a sum of many factors. Besides the inner personal will to exercise, individuals need to have the right equipment, enough time for practising and money to finance their participation. Situational factors such as weather and distance of the sports facility are sometimes relevant when participation is considered. Obstacles may be too difficult to overcome. (Telama 1986, 151-155) It is predicted that climate change may be a huge obstacle for practising cross-country skiing in the future. Winters are forecast to be mild and rainy. Snow season will shorten, and some parts of Finland will not have any snow cover during the year at all. Pouta et al (2009) have studied cross-country skiing participation in circumstances of changed climate. They found out that female gender, a lower socioeconomic status and an urban living environment are factors that can be associated with lower participation in cross-country skiing. Therefore, Pouta et al (2009) conclude that Finns will face two different inequalities, geographic and economic, in the case of frequency and participation in cross-country skiing. These inequalities and their consequences on cross-country skiing are discussed now in detail.

Firstly, Finns, who belong to the lower socioeconomic group will cross-country ski less in the future. The main reason for this decrease is the increased costs of finding suitable conditions. Participation decreases both at the higher and the lower end of the socioeconomic continuum, but the decrease is approximately three times stronger at the lower end. (Pouta et al 2009). Similarly, the national sports survey from year 2006 indicates that Finns with a high level of education and those with a higher socioeconomic status are more eager skiers than others (FSF 2006). Participation in cross-country skiing becomes more expensive in the future, if you need to invest in travelling to find conditions. Every household cannot afford the increased costs of practising skiing, and therefore some Finns may participate in cross-country skiing only when there are suitable conditions to be found close to their home. Furthermore, those skiers, who have the possibility to cover the increased costs of skiing, need to adapt their participation in skiing within the constraints of their leisure time. They may continue skiing, but make only a few trips of longer duration to snow-guaranteed areas. (Sievänen et al 2005)

Secondly, Finns living in an urban environment ski less in the future than Finns living in the countryside. For Finns living in cities it will be easier to participate in different activities in indoor sports facilities nearby the residential areas. In addition, the snow conditions close to the largest cities in Finland have been variable recently. Every municipality might not have provided ski tracks due to these conditions. The uncertainty in snow conditions can eventually encourage skiers to find replacing non-snow-dependant leisure activities. If the ski centre near cities cannot continue their operations due to lack of snow, the possibilities to familiarize oneself with skiing will diminish. Facilities near home are mentioned as a great motivator for participating in the sport. (Pouta et al 2009) The national sports survey from 2006 partly supports this prediction: Finns, who live in the capital region, ski less than people living in other regions. In other regions, every fifth or third Finn mentions being a skier: particularly Finns living in Northern and Eastern Finland are more enthusiastic than Finns on average. (FSF 2006) Comparing the popularity of cross-country skiing activity in 2009 in different parts of Finland, it can be concluded that Finns living in Northern and Eastern Finland ski more than people living in other parts of the country. 45 percent of Finns in Northern Finland and 43 percent of Finns in Eastern Finland mention to ski.

The corresponding percentage in Southern Finland was 34 and in Western Finland 37. Overall, more than third of the whole population is keen on cross-country skiing in Finland. The geographical difference is partly explained by the fact that Finns living in Northern Finland have better conditions for skiing and a longer skiing season. These figures may be different in years when the snow conditions are good in southern Finland as well. (Finnish Forest institute 2010)

Changing weather conditions create therefore a challenge for skiers. It is reasonable to ask what the skiers plan to do in case of winters with minimal snow cover. The next chapter deals with the adaptation plans of skiers to the changing winter conditions.

5.2 Adaptation plans of skiers

Condition-seeking was the most common answer of skiers in indoor ski facilities when the skiers' adaptation methods to winters with minimal snow cover was asked. Over a half of the respondents were thematised into this group of respondents. These condition-seekers were either ready to travel to snow-guaranteed Northern Finland or to seek a suitable indoor ski facility. Quite a number of them were ready to adjust by using both adaptation methods. Skiers mentioned making longer trips further north within Finland and staying in the snowy conditions for a longer period of time. These skiers were also ready to increase skiing in indoor ski facilities or adjust their training during non-snow times, but skiing would remain as a hobby for them. If skiers had the possibility to ski indoors, winters with minimal snow-cover would not have any kind of impact for cross-country skiing activity. These skiers also considered that indoor skiing would become more popular for everyone in the future. Skiers were therefore ready to invest in finding conditions for skiing in one way or another. This willingness for travelling and seeking conditions could offer new opportunities for ski industry.

The second group of skiers thought that their skiing would remain on the same level as it was at the time of the questionnaire. These skiers felt that winters with minimal snow cover would not have any kind of impact on their activity. Quite many of these skiers did not explain better why this prediction did not have any kind of impact on their

activity. Some skiers mentioned living in Northern Finland and therefore, the conditions for skiing would remain good in the future as well. Some skiers mentioned that they would anyhow continue cross-country skiing similarly in the future. This answer could be interpreted to mean that these skiers would not allow conditions to have a negative effect on their skiing. They would continue skiing similarly regardless of changing conditions.

Although most skiers in both facilities were ready to seek conditions in the case of winters with minimal snow cover or did not think that climate change has any impact on their cross-country skiing activity, a minor group of skiers considered that their skiing would decrease in case of winters with minimal snow cover. A slight majority of these skiers were found in Ylläs-halli. This decline also meant that fewer skiing experiences became more valuable and these skiers were not ready to invest in new equipment. These skiers also thought that overall interest in skiing would decline in the future because of poor conditions.

Skiers in indoor ski facilities were also asked to express their opinion on the following statement: “If winters with minimal snow cover increase, I’m ready to change my hobbies from skiing to other hobbies.” In Vuokatti, as figure ten illustrates, over half of the respondents disagreed with the statement either totally or to some degree, whereas in Ylläs-halli the respondents were divided. “Somewhat agree” and “totally disagree” were almost equally common answers in Ylläs-halli. Obviously, quite many skiers in Ylläs-halli were willing to change their hobbies from cross-country skiing to another one. This difference could be interpreted to indicate that skiers in Ski Tunnel of Vuokatti were more involved with skiing by being serious or pleasure skiers, whereas the experimenters formed a larger group in Ylläs-halli. Half of the experimenter-type skiers in Ylläs-halli were willing to change their hobby from cross-country skiing to another one.

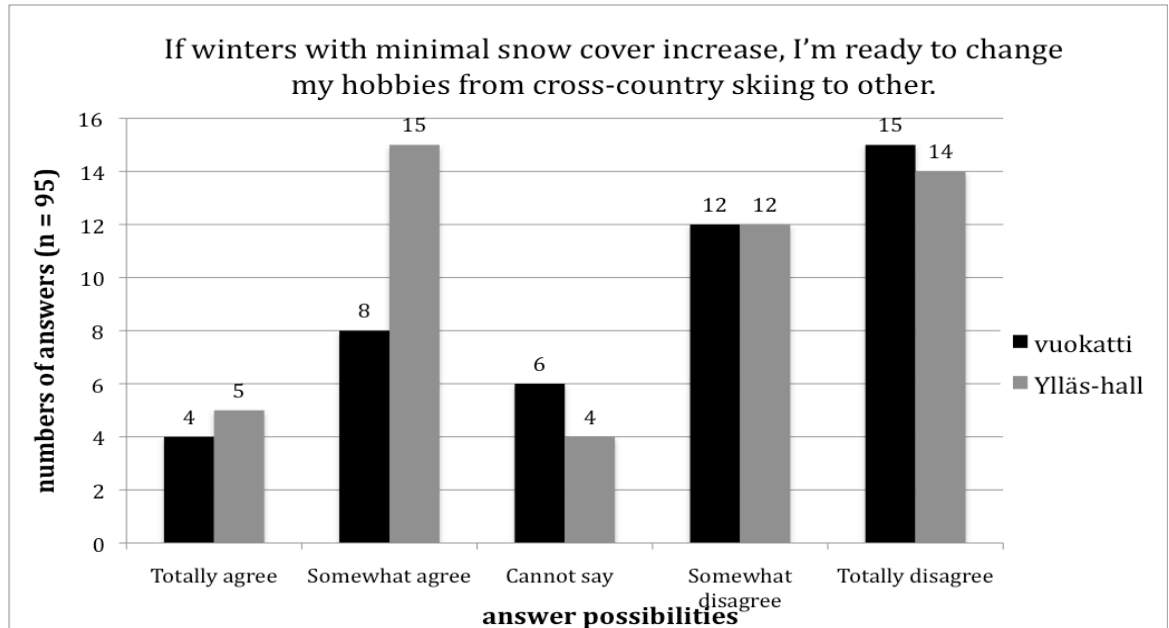


Figure 10. Readiness to replace cross-country skiing with an alternative hobby.

In the second part of the analysis, the formed themes of adaptation plans were compared with the types of skiers. As it seems, experimenters were most willing to decrease participation in skiing, whereas serious and pleasure skiers were ready to seek conditions. (Table 2) This difference is partly possible to explain by the importance of cross-country skiing to serious and pleasure skiers. Those experimenters, who were ready to seek conditions, mentioned that they would mainly increase skiing indoors, whereas pleasure skiers especially were willing to travel to Northern Finland. Serious skiers usually mentioned both conditions-seeking methods, i.e. travelling to Northern Finland and skiing in indoor facilities.

Table 2. Adaptation plans of skier types (%) (n=92)

	Seeking conditions % (n= 47)	Maintaining at the same level % (n=25)	Declining participation % (n=20)
Experimenters (n=18)	27	33	38
Pleasure skiers (n=36)	64	20	17
Serious skiers (n=38)	50	32	18

As a conclusion, skiers regardless of their socio-economic and geographical differences were ready to seek conditions in the future if the numbers of winters with minimal snow cover increase. This condition-seeking meant either travelling to northern Finland or finding a suitable indoor ski facility. This willingness increased in the groups of skiers who had a very strong relationship with cross-country skiing. Serious and pleasure skiers were ready to seek conditions. Experimenter-type skiers were most willing to change their hobbies from skiing to another or to decrease participation in cross-country skiing.

5.3 The importance of indoor ski facilities

Indoor ski facilities were invented to answer the challenge posed by variable weather conditions and to provide quality training opportunities for active skiers. These facilities could hindrance the predicted behavioural changes by providing the possibilities for all the skiers in case of varying natural conditions. Over half of the skiers justified the existence of indoor ski facilities by mentioning climate change and the uncertain snow conditions in Southern Finland. Some skiers were quite pessimistic by saying that halls might be the only possibility for skiing during the winter. Skiers in Southern Finland and particularly in the capital region needed facilities for skiing, and as a result indoor ski halls were constructed. Halls therefore replied to the demand. Skiers also thought that indoor ski halls responded well to the demand nowadays. 76 percents of respondents in Vuokatti agreed totally or to some degree with the statement “Indoor ski halls respond well to the demand nowadays”. In Ylläs-halli, half of the skiers answered “somewhat agree” to the statement. Quite a number of skiers mentioned that more indoor ski facilities were needed in Finland and therefore, the demand was not completely satisfied.

Stebbins (2005) has defined concepts of serious and casual leisure to illustrate the leisure time for postmodern individuals. These concepts are also reflected to serious and pleasure skiers. For serious skiers and pleasure skiers, cross-country skiing is described to be an important part of their lifestyle. However, each lifestyle is associated with some costs and benefits. Costs may be disappointments, dislikes and interpersonal tensions, whereas outcomes can be self-actualisation, enhanced self-image, sense of group

attraction or financial return. Sometimes individuals progress in this so-called leisure career or face challenges, and consequently the participation might decline or even strengthen. Participants may also confront obstacles at times, such as freezing cold, embarrassment or injury, which they need to persevere. Nevertheless, the benefits outweigh the costs of taking part. The development, achievements and other rewards are examples of benefits for participant. The need to persevere deepens the commitment to the activity. (Stebbins 2005)

Snowless winters have been an obstacle for skiers in recent years. When there have not been natural conditions, artificial conditions have been prepared to make cross-country skiing possible. The service providers have tapped the situation by making a business out of the skiers' distress. The service providers argue that skiers are ready to search for suitable conditions for skiing. If the outdoor conditions are limited, skiers are ready to ski indoors. High-quality places for skiing are searched for because the skiers are keen on lengthening the skiing season. Cross-country skiing is an important hobby for many of the skiers. Winters have been poor recently, and the halls make business by offering winter for those who desperately need it. Ylläs-halli aims to be a winter sports centre in the future by developing winter conditions for different niche sports, such as curling and ice-skating. The enthusiasts in these sports are ready to invest in their activity because the sport in question is important for them. The aim is therefore to make business and to take advantage of serious leisure's hobbyists that are dependant on certain conditions. These hobbyists also seem to be ready to invest in their hobby in order to be able practise year-round.

Table 3. The future role of indoor ski facilities (%) (n=86)

	Optimistic viewpoint % (n= 59)	Sceptical viewpoint % (n = 27)
Experimenters (n=16)	50	50
Pleasure skiers (n= 35)	71	29
Serious skiers (n=35)	74	26

Skiers were also asked to evaluate the impact of indoor ski facilities on the general cross-country skiing activity in Finland. These answers varied between two categories. Although skiers mainly regarded indoor ski facilities as a positive thing, some sceptics were also found. 10 percent of skiers did not either answer or have any opinion about the role of indoor ski facilities. Experimenters, as table three points out, were divided into optimistic and sceptical groups. The experimenter-type was also more sceptical than other groups. Pleasure and serious skiers saw the role of indoor ski facilities for cross-country skiing in the future optimistically if the numbers of winters with minimal snow cover increase. The percentages of serious and pleasure skiers, who regarded indoor ski facilities positively, were over 70.

Skiers in the optimistic group thought that indoor ski halls would have a positive impact on cross-country skiing activity. These optimistic skiers felt that indoor ski halls could offer new possibilities and have a potential to create greater benefits for skiing. Indoor ski facilities provide close-home conditions for skiing also in Southern Finland, where the natural conditions in the future might be rare. Indoor ski facilities might therefore equalise the conditions for skiing inside the country. Ylläs-halli was seen to have great potential in the capital region for increasing the numbers of skiers, because it has good quality conditions for practising and for learning how to ski.

The optimistic group also mentioned that these halls might help to maintain skiing skills among children, and therefore, their impact might be significant in the future. Some skiers had noticed that plenty of children, especially girls, were seen skiing in facilities. These growing numbers may have a positive impact on cross-country skiing in the future. Skiers considered cross-country skiing as a good fitness sport and a useful skill for children to learn. Similarly the service providers saw indoor ski facilities as a good addition that would help to lengthen the season. The service providers mentioned that these facilities were especially important for actives, who need constant training conditions during autumn, and for Finns living in Southern Finland, who might not have constant natural conditions for skiing during winters. They mentioned as well that these facilities would offer winter experiences for tourists and children and might help them to become interested in skiing.

Rest of the skiers were sceptical in two ways. They felt that indoor ski facilities would maintain the interest in skiing at the current level or would not have any kind of impact on cross-country skiing. The skiers who thought that interest in cross-country skiing would remain on the same level, mentioned that skiing would remain as a good hobby for the same old group of skiers, which would continue skiing as long as they can. They did not see any change in the numbers of skiers because of indoor ski halls, neither decline or increase. They thought that the actives and competitors would ski in the future as well, but would have to ski more on artificial conditions. According to these sceptical skiers, indoor ski facilities would maintain interest in cross-country skiing at the same level.

Second group of these sceptical mentioned that skiing would be considered an outdoor sport and therefore the indoor facilities would not increase numbers of skiers. Only active skiers would use indoor ski facilities. Halls were meant for supporting the winter skiing and making skiing a year-round hobby, but no one would ski only indoors. If training days in indoor ski halls increased enormously from this point, they would loose their interest in skiing. It was also mentioned that it would not be possible to learn how to ski indoors, and that indoor ski halls were meant for trying out skiing and having a new experience. These indoor halls would therefore rather delay the loss of skiers than increase it. They felt that skiing was not trendy and would not become a mass sport anymore.

To conclude, it could be argued that the skiers felt that the role of indoor ski facilities for cross-country skiing is positive. Those skiers who had a strong personal relationship with skiing considered the role of the facilities in a more positive. These facilities could offer close-to-home conditions for cross-country skiing, which was mentioned as one of the challenges of skiing, if winters with minimal snow cover increases. It was also pointed out that these facilities attract new experimenters to become interested in skiing. Service providers also saw the possibility to offer skiing conditions year-round as a strength of these facilities. These halls satisfy skiers' needs, which the uncertain conditions in winter have raised, by lengthening and assuring the reliable snow-secured conditions.

5.4 The role of nature in cross-country skiing

Sceptical skiers pointed out the importance of nature in cross-country skiing. The aspect of nature and enjoying the time in nature were mentioned as the most important motives for participation in cross-country skiing. The aspect of nature was also more important in skiing than in any other sport, especially for women. (Telama 1986, 168-169) Landauer and Pröbstl (2008) studied the opinions of Austrian skiers about climate change and their possible adaptation plans. Their results showed that Austrian cross-country skiers preferred natural winter landscape experiences rather than man-made, artificial conditions. Nature and winter experience were such important motives for Austrian cross-country skiers and winter holidaymakers that indoor ski facilities as an adaptation method was not even considered; only about 3 percent of skiers mentioned indoor ski facilities as an adaptation strategy.

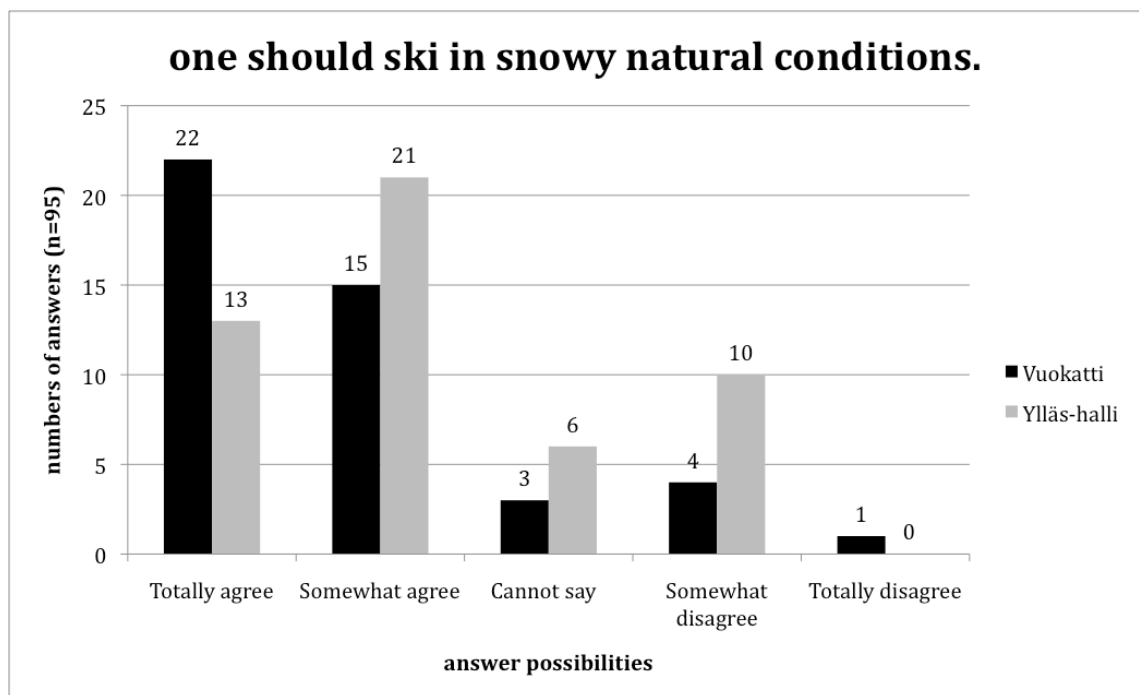


Figure 11. Willingness to ski in snowy natural conditions.

Skiers in both facilities were also asked to express their opinion about skiing in snowy natural conditions. (Figure 11) 80 percent of respondents in Ski Tunnel of Vuokatti agreed that one should ski in snowy natural conditions. The variation in Ylläs-halli for the same statement was divergent. “Somewhat agree” was the most common answer (42 percent of respondents) for the statement in Ylläs-halli. Although almost half of the skiers in Ylläs-halli supported the statement, a relatively large proportion, every fifth,

answered “somewhat disagree” to the question. This difference could be explained by the fact that skiers in Southern Finland might have noticed that snowy natural conditions would be rare to have. The second reason might be that the experience of indoor skiing is similar to outdoors. These skiers might have other more important reasons for their cross-country skiing activity than experiencing nature, such as competitions or maintaining their own health.

There are several differences between natural and artificial landscapes. Snow-covered ski tracks in natural winter landscape offers a different sort of experience for skiers than a man-made, constructed environment indoors. Skiing in the middle of nature creates a feeling of peacefulness and privacy. (Sievänen et al 2005) Recreation and stimulation as well as relaxing and a restful mind are mentioned to be important motives to participate in cross-country skiing (Telama 1986, 168-169). If the amount of snow decreases in the future, snow will only cover on the track. The resulting wet, bald and dark-coloured landscape is not similarly attractive for skiers. Substituting skiing with indoor activities can also have an impact on mental health. Nature is considered to be more relaxing and to offer better restorative effects compared to other environments. (Sievänen et al 2005)

Wide snow-covered ski tracks outdoors allow skiers enjoy a moment in nature alone, whereas in indoor ski facilities and man-made first-snow ski tracks skiers often need to share tracks with several other skiers. A very limited number of tracks, often short ones, with several people skiing on them at the same time causes lines. (Sievänen et al 2005) Skiing might not be interesting and attractive anymore if too many people are skiing together. Indoor ski facilities are similarly on the edge during their peak period. During those times, too many skiers are using the same short ski track, which creates frustration to the skiers. The over-crowdedness also has a negative influence on the quality of snow which becomes soft and slushy.

However, it seemed that the experience indoors had been enjoyable for skiers. Based on the answers to the question whether skiers would return skiing in the indoor ski facility, only two skiers, one in each place, mentioned not coming back to ski. The skier in Vuokatti had an obvious reason: he lived abroad. The skier in Ylläs-halli did not give a better reason for not returning to the facility. Otherwise, skiers said they would return

skiing in Ski Tunnel of Vuokatti because to do some pre-season training, because they had their own apartment in Vuokatti or because they thought skiing was fun. Some of the respondents in Ylläs-halli mentioned a multiple-use ticket or owning a share as the reasons for returning. Quite a many mentioned that if conditions outside continued being snowless, Ylläs-halli was the only possibility for skiing for a long time. Several respondents also mentioned the love for skiing being the reason to return in Ylläs-halli. Skiers were also pleased with indoor cross-country skiing services in Vuokatti and Ylläs-halli. The vast majority of skiers in both places answered that they were happy with the services in the facilities.

The discussion about the role of nature shows that the skiers might have different reasons for participation in skiing. Skiers seek variable benefits from it. For some, nature and the outdoor experience might be the most important reasons, and for others the relaxation and practising of a skill are more important than nature. It could be questioned how attractive skiing actually is if only artificial conditions are available.

6 FINANCIAL POTENTIALS AND CHALLENGES OF INDOOR SKI FACILITIES

This chapter discusses the financial potentials and challenges faced by indoor ski facilities. It seems that having a financially sustainable facility is a challenge because of several variable factors. One factor that has a direct influence on the facilities' financial success is skiers. Users and the fees they pay plays a large role in financing the maintaining costs of indoor ski facilities, but it could be asked if there will be enough skiers also in the future.

However, it seems that skiing is still a very important hobby for many Finns, who are ready to invest in practising skiing. Their willingness to invest also creates a huge potential for the region in which the indoor skiing facility is situated in the form of tourism. The potentials and challenges are described in detail in this chapter, which is mainly based on analysis of theme interviews and questionnaires.

6.1 Financial position

Achieving financial profit is a challenge for indoor ski facilities. All the indoor ski facilities in Finland are financed privately, meaning that Ministry of Education that is the biggest financier of Finnish sports facilities has not provided state subsidies for any of the existing or upcoming facilities. Other private companies have sponsored the facilities and also the cooperation with municipalities has been important in constructing the facilities and their environment. One of the major expenditures is energy costs. Energy consumption per facility for maintaining the conditions are quite high, because the facility needs to be cold enough throughout year. This creates the dilemma of whether indoor ski facilities, which were a reaction to climate change, actually accelerate it. Facilities need to consider possible energy saving methods, such as redirecting some of the waste heat produced in the cooling process to warming other facilities. (Joensuu 2000, Hakala 2010, Siukonen 2010)

A financial profit is difficult to achieve in the first years, because the building costs of the facility are quite expensive. In addition, service providers need to conquer their own place in recreation markets. Ylläs-halli as a newcomer can be described to be still searching for its possibilities and position in the recreation markets, whereas Ski Tunnel

in Vuokatti has found its market niche. This market niche is the dark autumn season when the ski tunnel in Vuokatti can provide constant and high-quality training conditions for competitors and actives. The second market niche is the predicted snow-poor winters, when these facilities will provide skiing conditions for frustrated skiers. This year-round possibility also opens significant opportunities for sports tourism development (Hinch & Higman 2003, 169). This theme will be discussed in more detail in the next chapter. The certainty in conditions also helps in marketing and promoting the indoor ski facilities. Facilities can promise having snow conditions already in the autumn, which helps skiers and tourists to plan their practices and holidays.

Indoor ski facilities seem to have their high season in autumns. According to Leinonen's and Virta (2009) study, autumn is the most popular time for using the ski tunnel in Vuokatti. 84 percent of skiers mention that they ski there mostly in September, October or November. Only nine percent mention skiing the most in winter and six percent mention that they ski the most in summer time. (Leinonen and Virta 2009) It also seems that Finns are not interested in skiing during summers although there are skiing possibilities indoors (Hakola 2010). Furthermore, skiers might not ski indoors during winters with good natural snow conditions as in winter 2010. It might still be more interesting to ski in natural conditions. This creates an unbalanced situation. During the crowded months of autumn, the tracks might be slushy, and too many skiers on the tracks cause lines, which might create dissatisfaction. In the summers, the tracks are in good condition and only few skiers per day visit in the facilities. It could be asked if having balanced numbers of skiers year-round would have a positive influence on the financial position.

The uniqueness of indoor ski facilities is a double-edged sword, which has influence on financial profit. It creates challenges for financial side, because researched and proved answers do not exist. The right methods of maintaining the quality of snow, attracting skiers to ski indoors and constructing variable tracks is learnt through testing and trying. Uniqueness is also a positive factor for facilities, because people are interested to test indoor ski facilities. There are six indoor cross-country ski facilities in Finland at the moment. However, several regions have planned and discussed about the possibility of

building an indoor ski facility. If new facilities are built, will there be enough skiers for each facility?

Service providers seem to have faith for their successfulness. Ylläs-halli trusts on their location in the capital region, where there are about one million inhabitants. This number of people creates a potential to attract users in the facility. Although Ylläs-halli provides other services as well, cross-country skiing seems to be the main business for the company. Ylläs-halli aims at attracting 70 000–80 000 skiers per year with good marketing. (Hakola 2010) The target user group for Ylläs-halli is large population of the capital region, whereas the target groups for Vuokatti are the active skiers, who practised previously in the Alps during the autumn time, and the tourists, who spend autumn holidays in the area. Vuokatti is a well-known recreation centre that has a good image in Finland. Tourists travel to Vuokatti for recreation purposes, and the ski tunnel is one recreation possibility for these tourists. It might be financially reasonable to build indoor ski facilities close to other services. Then these facilities would bring additional value to increase the interest towards the region. This economic impact for a region is discussed next.

6.2 Economic impact of indoor ski facilities

Sports attract individuals to travel. Sports might be a primary, a secondary or incidental motivation for travelling. (Hinch and Higham 2003,19-20) These motivators can be described with the help of different types of skiers in indoor ski facilities: for serious skiers, skiing is a primary motivation for travelling, whereas for experimenters, it could be described being an incidental reason. Skiing was not part of these experimenters' original plans when they travelled to the region, but they decided to participate incidentally. For pleasure skiers, indoor ski facilities were a secondary motivation, meaning that they also had other important reasons for travelling into the region. Next, the concept of economic impact is defined more profoundly and the process of economic impact is dealt with in relation to indoor ski facilities.

The economic impact of indoor ski facilities on a region is defined as total amount of additional spending in a region that can be directly or indirectly attributed to having an

indoor ski facility. When parties that are related to indoor ski facility purchase local products and services, additional economic impulses are created. Economic impulses also include the impact on the employment rate of the region. Economic impact is only related to new money which is injected into the local economy by visitors of the indoor ski facility (Daniels & Norman 2003; Gratton, Nobson & Shibli 2000) Therefore, those visitors who come from outside the local area and whose primary motivation for visiting is skiing in the indoor ski facility produce the economic impact. The region's permanent residents and their spending do not contribute to the economic impact because this spending represent recycling of money that already exists in the region. Residents would spend the money now or later in any case by purchasing goods and services in the region. (Gratton, Nobson & Shibli 2000)

The above-mentioned impulses have direct, indirect and induced impacts on the local economy. *Direct impacts* refer to the visitors' expenditures to the different industry sectors and consumption of the owners of the facility. The first round effect includes additional salaries, wages and profits to the local citizens who work in the sectors receiving the additional visitor expenditures. The indirect and induced impacts are the secondary impacts. The *indirect impact* means that the companies and individuals that are affected by the visitors' expenditure purchase goods and services from other businesses. These local suppliers, restaurants or hotels were not the direct recipients of visitor expenditures. *Induced impacts* arise when employees in the companies spend their increased wages and salaries on goods and services in the region. Induced income is the income resulting from the re-spending of additional income earned directly or indirectly. (Gratton et al 2000)

In this study, 87 percent of respondents in the Vuokatti Ski Tunnel had travelled from outside Vuokatti into the region. (Table 4) Similarly, 88 percent of skiers were outside of Kainuu region, which is the district of Vuokatti, in a study conducted a year before this study. (Leinonen & Virta 2009). Particularly for serious skiers the ski tunnel was the reason for their visit to Vuokatti then. These skiers could therefore be defined to creating an economic impact to the region because of the ski tunnel. They were in Vuokatti at that time only because of the ski tunnel. Similarly, 42 percent of skiers in Ylläs-halli, mentioned travelling there from outside the capital region. These skiers

visited mainly on the second day of collecting questionnaires in Ylläs-halli. For these skiers, the primary purpose for visiting Helsinki was, therefore, skiing. Ylläs-halli aims to increase this economic impact by planning to build accommodation services within the hall. The economic impact indicates the difference between the facilities: Ski Tunnel of Vuokatti has been in operation several years and they have already found their place, whereas Ylläs-halli is still searching for it. Besides these skiers who were creating the actual economic impact, the number of tourists in Vuokatti with incidental or secondary reasons for skiing should also be taken into account. They also used a wide variety of services in Vuokatti, and therefore caused greater benefits to the region. In some cases, it might be that the ski tunnel was an important additional and attractive factor when the holiday destination was chosen.

Table 4. Local and nonlocal skiers at indoor ski facilities % (n=96)

	Ski Tunnel of Vuokatti % (n = 46)	Ylläs-halli % (n=50)
Local resident	13	56
Outside Sotkamo/ capital region	87	42

Most skiers in this study mentioned that they are ready to travel and find conditions for skiing in the future as well. Landauer et al (2009) support this finding by mentioning that more than 70 percent of the respondents in their study would travel to ski in areas with secured snow conditions in Finland rather than travelling abroad. This willingness is a great potential for indoor ski facilities and other winter sports service providers. For example, several regions in Northern Finland have constructed first-snow ski tracks to increase the numbers of tourists during the weeks that are considered the quietest weeks of the year (Ketola 2009). The skiers who use indoor ski facilities or first-snow ski tracks are usually Finns, although foreign national teams have their training camps during autumns in Northern Finland. The amount of foreign cross-country skiers could also be increased. Landauer and Pröbstl (2008) mention that about 20 percent of Austrian skiers were ready to consider travelling to Scandinavia in the future if the conditions in Austria are poor. Ski Tunnel of Vuokatti has already attracted international skiers to visit in the tunnel, whereas Ylläs-halli aims at promoting the

facility for international tourists in summers. They hope to offer international tourists a unique experience of winter in the middle of summer. Having winter conditions in the middle of summer in the capital region reinforces the image of Finland as country with a real winter.

6.3 User fee

Skiing mostly takes place on the prepared ski tracks that municipalities construct and maintain and which are free of charge for skiers. Sports law obligates municipalities to offer sports services for citizens by local and regional cooperation. (Sports Act 18.12.1998/1054) This legal paragraph has allowed everyone to learn ski despite of their socioeconomic background or place of residence if the natural snow conditions have made it possible to prepare ski tracks. Conversely, man-made conditions are usually only available for a fee. The number of these artificial skiing conditions is predicted to increase in the future, because natural conditions will become scarcer (Sievänen et al, 2005).

The chargeability increases the overall costs of skiing, which might result in inequality in practising skiing. The paying capacity of an individual therefore becomes the deciding factor for participation in skiing. A solution that several municipalities and local entrepreneurs have established is the cooperative organization (*latupooli*) to cover the costs of maintaining prepared ski tracks. A similar idea is under consideration in Vuokatti. The aim is to create a cooperative organisation that maintains the costs of natural ski tracks, first snow ski tracks and ski tunnel in the Vuokatti region. This cooperation means that the costs for the user will be minimum and are included as part of the accommodation. Sievänen et al (2005) introduced results of a study, which was done for Finnish tourism entrepreneurs about adaptation to climate change. The entrepreneurs in this study hoped for more links with local communities, cities and educational institutes. This cooperation could include financial issues, snowmaking and similar installations as well as product development.

Skiers were asked opinions about three statements related to fees. These statements were: a) All kinds of outdoor sports such as cross-country skiing should be free for users, b) If the number of winters with minimal snow cover increases, I'm ready to pay user fee for constructing the natural snow ski tracks and c) the fee in the indoor ski facility is reasonable. The answers for these statements are analysed next. Figure 12 illustrates the answers to the statement "all kinds of outdoor sports should be free of charge for users". Most of the skiers totally agreed or somewhat agreed to the statement in both places. However, over 30 percent of skiers (16 skiers) in Ski Tunnel of Vuokatti disagreed with the statement. Most of these skiers, who disagreed with the statement in Vuokatti, were male skiers, who had an academic degree. They were also in well-paid professions and were either serious or pleasure-type skiers. About 24 percent of respondents (12 skiers) disagreed with statement in Ylläs-halli. Most of these skiers in Ylläs-halli, who disagreed with the statement, were middle-aged men, who had an academic degree. It could mean that those skiers, who disagreed with statement in both places, had a personal capability to pay for their participation for outdoor sports.

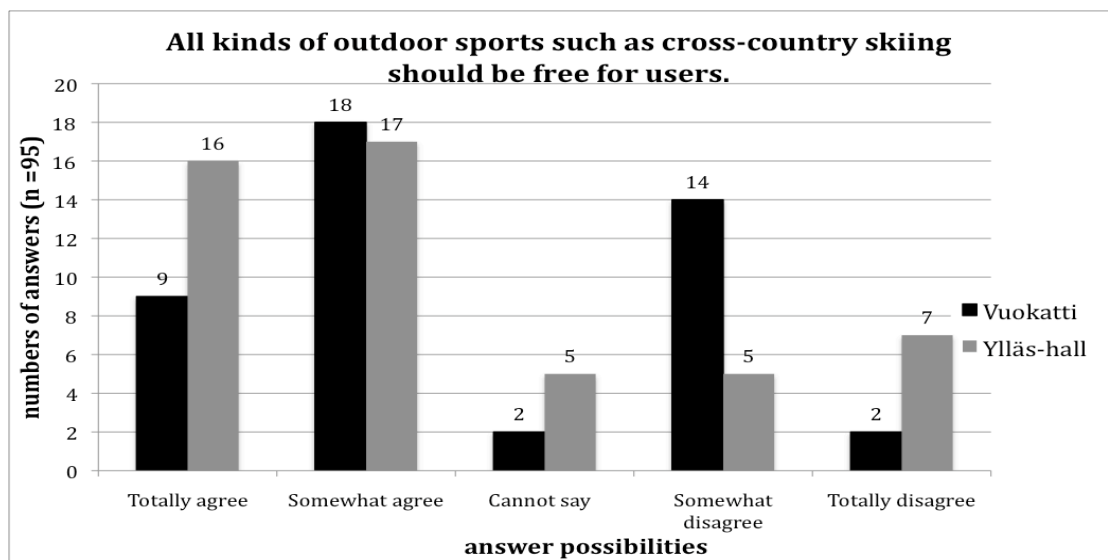


Figure 12. The cost-free outdoor sports for users.

Secondly, skiers were asked if they were willing to pay for constructing natural snow ski tracks if the number of winters with minimal snow cover increased. As figure 13 shows, skiers particularly in Ylläs-halli mainly agreed with the statement. They were willing to pay a user fee for using the natural snow ski tracks. This willingness partly indicates the importance of cross-country skiing as hobby for these skiers. However, skiers in Ski Tunnel of Vuokatti had variable opinions to the statement. About 22

percent of skiers in Vuokatti (10 skiers) somewhat disagreed with the statement and 15 percents of skiers totally disagreed with statement. These respondents were mainly women or young men. In addition, quite a many senior citizens, who responded to the questionnaire, disagreed with the statement. It could mean that they did not have the personal capability to invest in paying for a user fee.

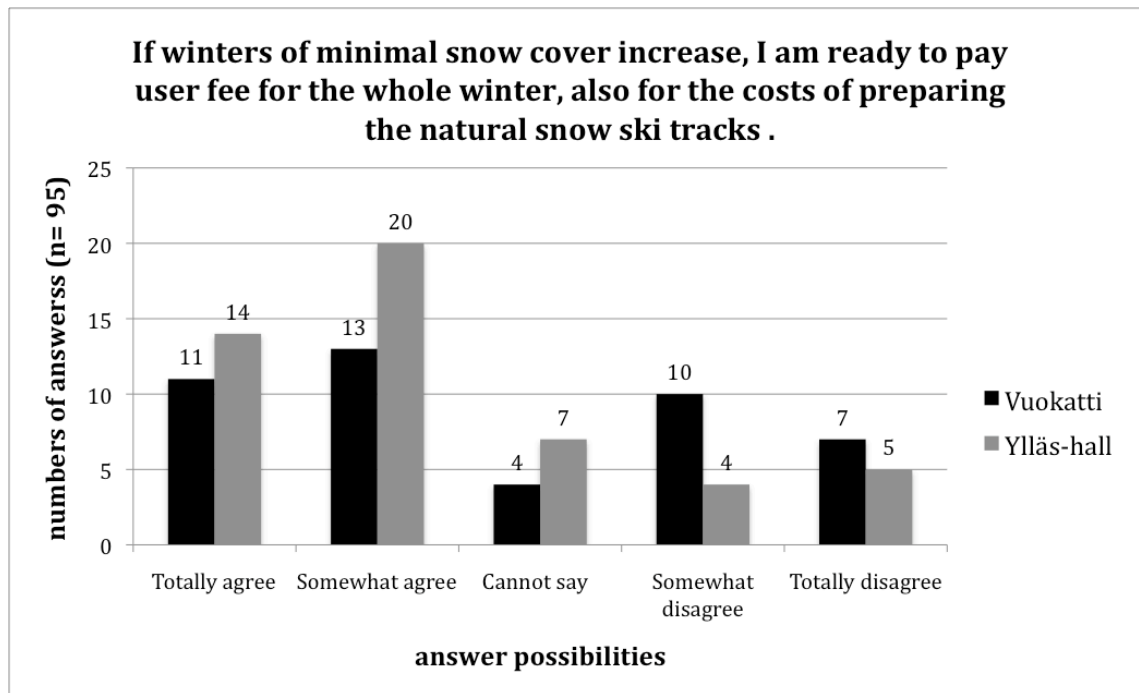


Figure 13. Readiness to pay user fee for constructing the natural snow ski tracks in the future.

How about the user fee in indoor ski facilities, then? As figure 14 illustrates, the fee in Ski Tunnel in Vuokatti received diverse feedback. Skiers either somewhat agreed or somewhat disagreed with the statement. Particularly, the younger respondents in Vuokatti disagreed with the statement. Furthermore, quite many skiers, whose educational background was vocational school, disagreed with the statement. A similar question was asked from skiers in Ski Tunnel of Vuokatti in 2008. Then, most skiers found the price level at the ski tunnel satisfactory (Leinonen & Virta 2009) In Ylläs-hall, as figure 14 shows, skiers were more agreeable with the fee. 70 percent of skiers (35 skiers) supported totally or somewhat with the fee. Those skiers, who owned share, did not have any opinion about the user fee. If the user fee is viewed from the viewpoint of the service providers, the reason for charging a fee is understandable. Service

providers themselves has not required sums of money to cover the costs of constructing and maintaining indoor ski facilities. The role of user fee is for covering partly the operating costs.

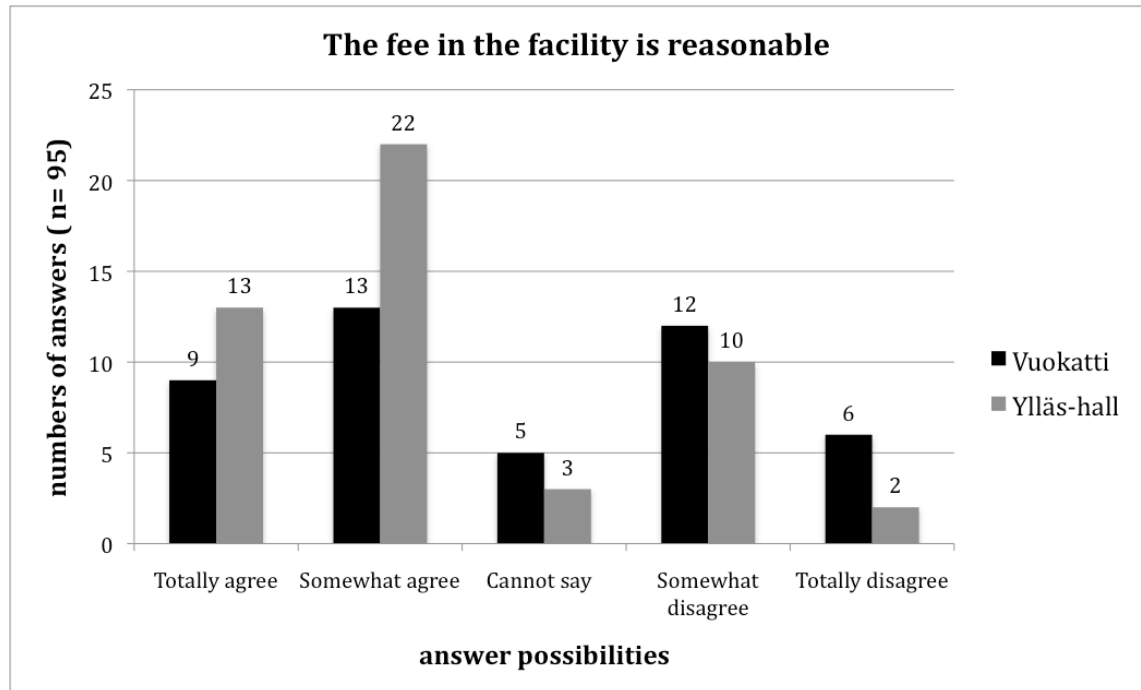


Figure 14. The reasonability of the user fee.

Huhtala (2004) asked general opinions about outdoor recreation and its chargeability. In this study, 64 percent of the respondents were not willing to pay for skiing and only four percent of respondents would definitely pay for using tracks in the nature. Furthermore, Landauer et al (2009) concluded that skiers were not willing to pay for skiing in general. Skiers also mostly expected some support from society to the skiing services. Some skiers also supported the idea of a combination of taxes and track fees forming the solution for financing ski services. There were significant differences among skiers in their attitudes towards paying for artificial tracks and ski tunnels: some skiers were willing to pay for using the artificial ski tracks and ski tunnels, whereas some supported taxes or were not ready to pay for skiing. When comparing these studies with this study, skiers in Ylläs-halli and Ski Tunnel of Vuokatti were more agreeable towards user fees. One of the explanations for this difference might be that skier had already crossed a certain border as they paid for skiing indoors. Secondly, skiing was an important hobby for many of these skiers. They were not ready to abandon skiing rather they were ready to invest in it.

6.4 Who skis in the future?

Cross-country skiing is a traditional Finnish leisure time activity that has attracted Finns for centuries. Cross-country skiing is still an attractive sport for Finns. Reasons for this interest are the health-related influences of cross-country skiing as well as the interesting, successful skiers of our national team that have reasserted its image. In addition, the snowy winter of 2010 has strengthened the popularity of skiing. (Pohjola 2010; Ahtiainen & Lyytiäinen 2010; Saavalainen 2010) The vast majority of skiers in both places agreed that cross-country skiing will remain as a national sport in Finland also in the future. 45 percent of skiers agreed totally with statement and 40 percent of skiers somewhat agreed. (Figure 15)

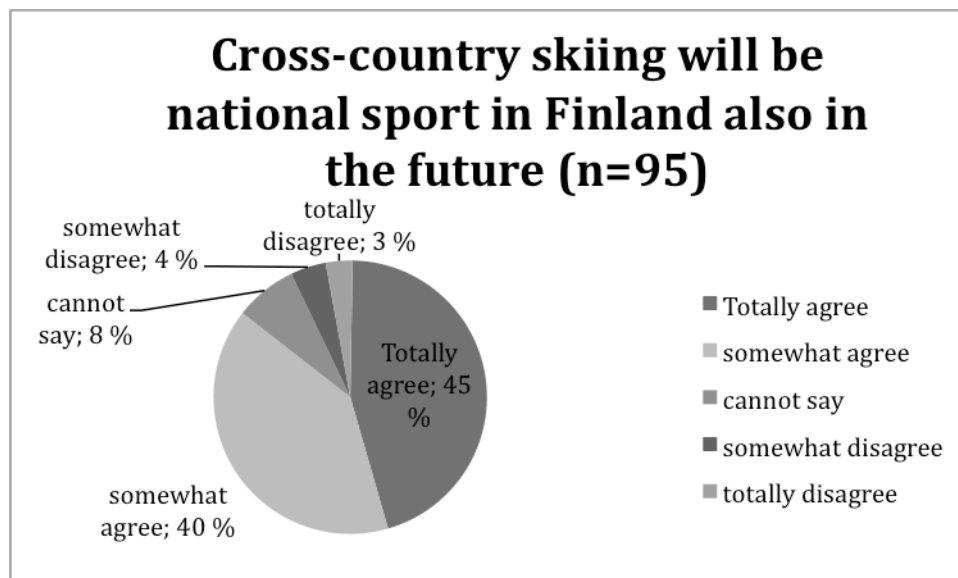


Figure 15. Cross-country skiing as Finnish national sport in the future % (n=95)

This good image can be described as a potential for service providers. If Finns are interested in skiing, they are also ready to invest in it. If people are motivated to ski, they are also ready to find conditions for it. As long as the weather conditions continue to be variable and as long as motivation for cross-country skiing exists in Finland, there is demand for artificial conditions. These statements are also supported by this study. Serious skiers and pleasure skiers are ready to seek the suitable conditions for skiing. The questionnaires of this study were conducted in October and at the beginning of November. During this time of year, normal snowy conditions are rare all over the country, but still skiers want to invest in finding conditions for skiing. This illustrates

their dedication to skiing. If there was no snow in the nature, skiers would be ready to ski indoors. Skiers in this study were also ready to increase skiing indoors or travelling to Northern Finland if the number of winters with minimal snow cover increased.

An interesting observation was the domination of men in indoor ski facilities. 77 percent of respondents in this study were men. Leinonen and Virta (2009) argue that middle-age men were the most common user group of the ski tunnel in Vuokatti. Furthermore, Landauer et al (2009) mention that respondents in their study were mainly male skiers. Pouta et al (2009) found out in their study that female gender is one factor that most likely decreases participation in skiing in the future. According to the national sports survey (FSF 2006), significant differences between women and men were not found in activity in cross-country skiing, but these more recent studies indicated differences between genders. Some explanations for this difference can be stated. Firstly, nature and its importance were mentioned as a strong motive especially for women in skiing participation (Telama 1986, 150-155, 174). This experience is not possible indoors to the same extent as it is outdoors. The second explanation could be that it was men who became first interested in skiing indoors. New trends tend to become popular first in a certain small group and spread fast to larger groups. In this case, male skiers are the early adopters of indoor cross-country skiing. Related to this, it could also be asked if women are ready to invest in skiing indoors. This observation reveals the potential that lies in attracting female skiers to ski indoors. If mothers became interested in skiing indoors, children might follow their parents on ski tracks more easily.

However, there is some concern about the popularity of cross-country skiing: it might not attract as many people as it used to. It is predicted that Finns are divided into two groups in the future: those, who know how to ski and enjoy it, and those, who do not know how to ski (Rautava 2009). It is also mentioned that children and younger generations of Finns nowadays are not similarly interested in cross-country skiing than these groups were some decades ago (Koski 1998, 6-7). This change is possible to notice in the national sports survey from 2006. Older people are more dedicated to skiing than younger generations of Finns. Only nine percent of Finns under the age of 25 cross-country ski, whereas over 31 percent of over 50-year-old Finns have skiing as

a hobby. National sports survey also indicates the geographical differences among children. Only 15 percent of children in the capital region mention skiing as a hobby, but almost one quarter of children in Northern Finland cross-country ski. (FSF 2006) Several reasons for this loss of interest amongst younger generations can be named. Other sports such as snowboarding are more interesting than traditional cross-country skiing. These modern sports emphasise the creation of a person's own postmodern individuality and togetherness better than traditional skiing (Vuori et al 2004, 9). The second reason is the bad memories of compulsory skiing in school. Compulsoriness of learning to ski with poor equipment is not a fascinating experience, and several Finns forget skiing after their school years.

The third explanation is that younger Finnish generations do not even know how to cross-country ski. Children usually learn skiing at the latest when they go to school. Because of the poor snow conditions in recent years, not all schools, particularly in Southern Finland, have been able to teach their pupils how to ski. Skiers in indoor ski facilities and the service providers expressed this worry as well. Skiers had noticed the lack of children in the ski tracks, and the worry that cross-country skiing was not a part of the physical education at schools was expressed. They commented that children could not learn to miss the fun of skiing if they have not been raised to 'play' with snow as a child. Skiers also thought that the challenge is to involve children and young people in skiing in the future. They mentioned that every Finn should be able to ski. The importance of involving children in skiing can also be justified by the study showing that having cross-country skiing as a hobby as a child, the tendency is that it will remain as a hobby also in adulthood. Cross-country skiing is a hobby that maintains its attractiveness from childhood until adulthood the best. This study, however, points out that the amount of quitters in cross-country skiing has increased in the last decades. (Nupponen 2009)

The decline in interest has also influences on several other fields. As Sievänen et al (2005) suggest, in the long run, behavioural changes of cross-country skiers have impacts on the whole country. Firstly, the regional economy in the case of winter tourism suffers from this decrease. The industry and the regional economy in Northern Finland gain benefits at first, because skiers travel to snow-guaranteed areas. In the long

term, the demand diminishes as the numbers of skiers decrease. The decreased amount of skiers in Southern Finland eventually affects the amount of tourists travelling to northern ski centres. Skiers are seldom ready to travel to further destinations, if they have not practiced their skills at suitable destinations close to home at first. This might have an influence on overall interest in winter sports as well. If children do not learn and understand the enjoyableness of winter activities, it is not interesting for them to try any other winter sports such as downhill skiing and snowboarding.

Secondly, appreciation of competitive cross-country skiing declines in the future, because people follow more closely sports that they themselves are interested in (Sievänen et al, 2005; Pouta et al, 2009). Children tend to have their own idols in the fields that are appreciated in their culture and some children might practise skiing for competitive purposes as well. If children do not become interested in cross-country skiing, success in international cross-country competitions might decline in the future. Nowadays, competitive cross-country skiing is still widely appreciated in Finland. Faith in cross-country skiing also on a competitive level has become backwards step-by-step after the doping case in Lahti in 2001, as six Finnish skiers were caught of using forbidden substances in the world championships. The doping case was the discussion topic in each work place and home as well as on each newspaper during those days in February 2001. This extensive mourning and discussion about doping after the incidence in Lahti also illustrate the importance of skiing as national sport. (Lösönen 2001, 128-175; Kopra 2004, 67-69) According to national sports survey in 2006, Finns hope for the international success of their athletes in cross-country skiing more than in any other sport. About a half of the women and about 40 percent of men expect skiers to gain success in international competitions. When considering the professions of the respondents, farmers and senior citizens support the success of the skiers the most. When comparing the different regions, it was found out that Finns living in Eastern and Northern Finland hope for the success of the national team more eagerly than people in other parts of Finland. This result can partly be explained by the fact that these areas have better skiing conditions of their own. (FSF 2006)

All of these previously described, predicted changes eventually influence the role of cross-country skiing. Cross-country skiing cannot be called a national sport anymore

without the widespread general interest, international competitive success and good conditions. The service providers expressed their concern on this issue as well. They felt that cross-country skiing is an excellent form of outdoor recreation and its conditions need to be secured. They underlined the fact that the outdoor conditions in addition to indoor ski facilities should also be secured. Skiers gave their support to the service providers by mostly agreeing with the statement ‘cross-country skiing is an important hobby for me and therefore its conditions need to be secured also in the future’. 87 percent of skiers in Ski Tunnel of Vuokatti and 86 percent of skiers in Ylläs-halli totally agreed or somewhat agreed with the statement.

There is still potential to increase the success of cross-country skiing. Nupponen (2009) mentions that many adults become interested in cross-country skiing during their adulthood. In the adults’ national sports survey in 2010, respondents were asked to mention a sport that they were interested in, but did not have possibilities for practising it at the moment. They were not asked to specify why they were not able to practise it, but these hindrances could be of any kind from personal reasons to the lack of facilities. 192 000 Finns mentioned that they would ski if it was possible. This figure had increased compared to the previous study. (FSF 2010) This increase might partly be explained by weather conditions, because there were several winters with minimal snow cover between years 2006 and 2010.

Table 5. First-timers and experienced skiers at indoor ski facilities % (n=96)

	Ski Tunnel of Vuokatti % (n=46)	Ylläs-halli % (n=50)
First time ever in indoor ski facility	15	42
Has been previously	83	54
Has been previously, but not in this facility	2	4

Nevertheless, a relatively large portion of Finns would like to ski. This number illustrates that there is a potential. How to attract more Finns to ski and to minimise the obstacles they face? Indoor ski halls could be a solution in attracting more Finns to become interested in skiing. Previously, the experimenters were categorised as one user group in indoor ski facilities. These experimenters were found in Ylläs-halli in particular. For 42 percent of respondents in Ylläs-halli, they were skiing in an indoor ski facility for the first time at the time of the questionnaire. (Table 5) If these figures are compared with Vuokatti, there is a notable difference. In Vuokatti, 85 percent of skiers had skied before in ski tunnels and almost every one of them also in Vuokatti. This experience was new for only for 15 percent of skiers (7 skiers). These figures illustrate that Ylläs-halli has been able to attract new skiers to try skiing indoors. Indoor ski facilities could be a place for beginners or experimenters to learn the basic techniques of cross-country skiing. The ski resorts and ski areas close to home are said to be the most important motivators for people to learn ski, because these are easily accessible, and usually these tracks are also suitable in their level of challenge. These new skiers might find the interest in cross-country skiing, when they have done some good exercises in constant conditions. Eventually, the skier is ready to move on to more demanding tracks in the nature.

It can be concluded that cross-country skiing is still an interesting activity for many Finns, but the interviewees expressed some concerns over the challenges of attracting more children on to the ski tracks. The number of skiers in Finland also has an influence on the indoor ski facilities and their financial position. If there are no skiers in the future, it will be difficult to maintain the indoor ski facilities.

7 CONCLUSIONS

7.1 The role of indoor ski facilities

Indoor cross-country ski facilities were called an absurd idea at the beginning. Skiing indoors was questioned, as people saw skiing as an outdoor activity and there was a variety of natural ski tracks in each municipality. During these first years, the irrational idea has developed to become a potential sports service. Six indoor cross-country skiing facilities have been built in Finland, and a few others are under consideration. This study examined how the indoor ski facilities see the challenges and the present state of cross-country skiing in Finland. The current conditions and future challenges of cross-country skiing were also discussed. The aim was to form a multifaceted picture of indoor ski facilities and cross-country skiing. When working towards this aim, understanding the context of indoor ski facilities and describing the users of the facilities were paid attention to. In addition, the aim was to point out the role of indoor ski facilities for cross-country skiing and present the financial challenges and potentials of these facilities.

Indoor ski facilities exemplify the modern, technologised and indoor-based sports facilities that are usually situated nearby residential areas. The privately owned indoor ski facilities allow practising skiing year-round in constant and snowy conditions. The skier has also paid a certain amount of money to enjoy his or her pleasure time. This study also discussed the financial challenges and potentials of indoor ski facilities. Ministry of Education has not given any state subsidies for indoor ski facilities, so alternative methods of the financing the facilities have had to be found. Achieving financial profit has brought several challenges for the service providers. The facilities seem to have a high season during autumns, but the facility needs to stay open throughout the year. This creates an unbalanced situation. Energy consumption and construction costs of the facilities are quite high. In addition, the uniqueness of these facilities has created challenges for their financial situation. However, skiers are willing to find conditions and to invest in skiing. This willingness creates a huge potential for a region with an indoor ski facility in the form of sports tourism. Skiers were also mainly

content with the user fees in indoor ski facilities and in constructing natural snow ski tracks.

Finnish society has been described as cohesive society that has had shared common values, beliefs and experiences. In the past, every Finn identified to the same life stories and cultural habits. However, the contemporary Finnish society is mosaic, separated and internationalised. Not all Finns necessarily share the same background and cultural concepts anymore. This has also changed the position of cross-country skiing, which was a shared part of Finnish agricultural culture. Every Finn skied and supported their national team in international competitions. Cross-country skiing was considered a part of everyday life. In contemporary society, Finns have a variety of sports disciplines to practise, and they might be more attractive and dynamic in nature than the traditional cross-country skiing. Particularly younger generations consider the opinions of their own peer group and their attitude carefully. If it is attractive to ski nowadays, the situation may be different tomorrow. Trends in lifestyles are variable. In addition, snowless weather conditions in winters have also led to a situation where skiing has not been possible. Therefore, there are Finns, who have never tried cross-country skiing.

However, cross-country skiing is still an important hobby for many Finns: about a million Finns mention that cross-country skiing is their hobby. The snowy winter of 2010 has strengthened the popularity of skiing. Several other reasons, such as easier waxing methods and better equipment, successful national team and the image of versatile physical exercise, can also be named for this successfulness. This enthusiasm can also be noticed in indoor ski facilities. Skiers also wanted to continue skiing in the future. They were ready to invest in practising skiing in the future if the number of winters with minimal snow cover increase. Most of the skiers were willing to travel to Northern Finland or they were ready to find a suitable indoor cross-country ski facility close to their home. *One conclusion is therefore that skiers are ready to adjust and adapt to the challenges created by climate change. Skiing would remain their hobby despite the changing conditions.*

One of the original ideas for constructing indoor ski facilities was to create training possibilities for active skiers during the dark autumn season. This study revealed that skiers in indoor ski facilities were from a variety of backgrounds nowadays – it is not

only competitive skiers that are enthusiastic users of the facilities. The users were grouped into three different types: serious skiers, pleasure skiers and experimenters. These three types had different relationships with skiing. Serious skiers considered skiing as an important activity and they had certain competitive goals for their practises. Pleasure skiers were enjoying the time with their close ones and they considered skiing as a good hobby for maintaining good health. These pleasure skiers, however, liked skiing a lot every winter. Experimenters were defined as skiers, who were skiing for the first time indoors or had re-found skiing after several years of disliking it. A skiing experience indoors might have been an attractive experiment to try. Their skiing kilometres per winter were minimal. Serious skiers were found in both facilities alike, whereas pleasure-type skiers were found more in Vuokatti. Ylläs-halli had attracted particularly new experimenters to try skiing indoors. These types of skiers also illustrate the fact that cross-country skiing tempts Finns from different backgrounds to participate. *The second conclusion is, therefore, that cross-country skiing is still interesting for several Finns and they also have interest for practicing skiing indoors.*

Although the interest in skiing is on an excellent level at the moment, it is reasonable to ask who will have the ability to ski and the conditions for doing it in the future. One of the biggest challenges for cross-country skiing is climate change that may cause geographical and socio-economic inequalities for practising cross-country skiing in Finland. Mild and snowless conditions, which will increase particularly in Southern Finland, are not ideal for practising skiing. In addition, modern and vivid sports might be more attractive than traditional cross-country skiing. Together these challenges might influence the activity in cross-country skiing. It is estimated that Finns will divide into two groups: those, who can and like skiing and those, who cannot ski. The sceptical skiers considered that indoor ski facilities would not positively influence to this estimation. They pointed out the aspect of nature in the overall cross-country skiing. They thought that skiing would stay an outdoor activity and skiing only indoors would not be attractive. The outdoor experience in nature was seen as an important part of the overall cross-country skiing experience.

However, as this study indicates, the role of indoor ski facilities may be important in attracting Finns to ski and in offering the constant conditions for skiing. The

experimenter-type skiers were beginners and those who had re-found the joys of cross-country skiing. Skiers saw the future role of indoor ski facilities optimistically. They thought that indoor ski facilities help to equalise the conditions by offering constant snow conditions in Southern Finland and help to increase the number of skiers. The service providers also felt that these facilities would create greater benefits for cross-country skiing. *The third conclusion is, therefore, that the role of indoor ski facilities for Finnish cross-country skiers is important.* It is also important for active skiers, who need to have pre-season training sessions on snow in constant conditions. This was also one of the original reasons for constructing the very first indoor ski facility. These facilities might have an important future role for beginners and families, who need constant and comfortable conditions close by residential areas, if natural skiing conditions are rare. Indoor ski facilities might also create greater benefits for the regions. The facilities help regions to gain additional economic impact in the form of tourism in the autumn time, which is usually considered the quietest time of the year in tourism.

7.2 Critical evaluation of the study and suggestions for future studies

This research was a case study. Criticism towards case studies has mainly concentrated on the issue of scientific generalization. The fact is that case studies may not necessarily be generalised to populations or universes, but they can be generalised in terms of theoretical propositions. The aim of this analytic generalisation is to expand and generalise theories. (Yin 1994, 10) This study has viewed the two cases from different perspectives and has combined the collected data with the previous theoretical propositions. Methods, theories, data collection and analysis were triangulated in this study. The aim of creating a manifold picture about indoor ski facilities that included different triangulations is the strength of this study and it also increases the validity and creditability of the present study.

I was motivated to concentrate on this theme, because it was not studied previously. This uniqueness also led to a situation where there were no previous academic studies related to indoor ski facilities. Therefore I had to rely on articles in newspapers and

magazines when familiarising myself with the theme. It is important to conduct more studies on indoor ski facilities and also on cross-country skiing. This study revealed themes such as the different types of indoor skiers that could be considered in more detail in the future. It would be interesting to see whether the experimenter-type skiers continued their skiing hobby after trying it once. This study also created an image of cross-country skiing as a currently trendy and attractive sport. However, it should be remembered that the lack of interest among children poses a threat to cross-country skiing. Skiing is learnt most easily as a child and it is considered a normal Finnish winter activity within Finnish families. If children do not learn to enjoy winter activities, it might not be interesting for them to be involved in skiing during their adulthood. How you can miss something that you have never even tried? The question is, therefore, how to attract children to become interested in skiing.

This study was done in a certain time of the season. The autumn season was actually chosen on purpose, because the facilities are crowded then. There might be different skiers with different backgrounds skiing in the facilities at other times of the year. Leinonen and Virta (2009) had different kinds of user groups in their study, which was conducted in November and December 2008 in Vuokatti. In their study, the recreation skiers form the main category and competitors or so-called serious skiers are in a minimal role, which is in contrast with this study. Together these studies form a broader picture of the users of the ski tunnel in Vuokatti.

In addition, it should also be remembered that at the time of conducting the study, in autumn 2009, there had been several years of minimal snow cover in Southern Finland. These poor winters had already influenced the skiers' attitudes: they felt that that these facilities are only chance to ski during the winter in Southern Finland. Winter 2010 ended up being the snowiest and coldest winter for many years. How has this changed the attitude and adaptation plans of skiers? These facts also emphasise the need for conducting long-term studies for finding out how the differences in users and attitudes develop over time. Eventually this information would help for instance the service providers to adjust their services. This study also underlined the fact that the sports and recreation industry and the public sector agencies should gain extensive understanding of the future leisure behaviour in order to react to these behaviour patterns (Pouta et al

2009). I hope this study also offers practical help for the service providers and the operators in winter tourism to implement better services for skiers.

This study aimed to illustrate the role of indoor ski facilities in the future for skiers and helping to understand the behaviour patterns of skiers. More research should, however, be done on climate change and its influence. Climate change is like a big domino effect that has impact on several fields. The previous studies have mainly concentrated on finding out the consequences of climate change on nature, businesses and the living environment, but understanding the influences of climate change on leisure and recreation is equally important. Outdoor recreation among others is still an important part of the Finnish way of life. Climate change might change the recreation possibilities radically and eventually these changes in recreation possibilities have influence on the well-being of Finns.

I am pleased with conducting the questionnaires and collecting such an extensive number of answers. Although the number of conducted questionnaires is not the main issue in qualitative studies, the contents and the variety of the answers in the 96 questionnaires provided me with valuable material for analysis. Therefore, it is time to thank the skiers, who provided such an extensive variety of answers to work with. In addition, the theme interviews worked out well although I might have done them differently now. It might have been interesting to analyse the questionnaires first and to conduct theme interviews based on their results. It might have raised different themes to be discussed. This study also discussed the financial position of the facilities from a qualitative perspective. Few, if any, numbers were mentioned. It might have been clearer and more informative, if I had added some numbers. On the other hand, this was not the aim of this study, but rather the aim was to present the potentials and challenges. However, it might be relevant to calculate the actual economic impact of these facilities in other studies. This would benefit the service providers, the regions and the tourism sector.

It has been a long road in constructing this study from scratches to this stage. There were several ideas and viewpoints on how to approach this theme. Searching for materials from different sources, collecting the data and analysing the data took their

time, but finally the pieces found their places. Now, when I am about to finish this study, I am pleased with the results. This was a challenge that has thought me a lot. This study has also forced me to ponder and eventually to strengthen my relationship with cross-country skiing.

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IMAGES

Figure 1: Määttä, S. (2010)

Figure 4: Määttä, S. (2010b)

The latest information about facilities:

Ylläs-halli: <http://www.yllas-halli.fi/Etusivu.aspx>

Ski Tunnel of Vuokatti: <http://www.vuokattisport.fi/showpage.php?id=71>

APPENDIX 1

Theme interview

It is October... 2009. Time is...

This interview is about Ski tunnel of Vuokatti/Ylläs-halli and specifically about its importance for Finnish cross-country skiing. Interview is a part of Master's Degree thesis at international Master's degree program in Sport Science and Management at University of Jyväskylä. The topic of the thesis is the changing conditions, potentials and challenges of cross-country skiing. I ask you to consider openly the three introduced themes. The interview is taped for helping in the analysis process. Would you like to ask something in this point of interview?

Background information: name and position in company.

1. Theme: In what different reasons does the Ski tunnel of Vuokatti/Ylläs-halli exist?

- Own motives/the motives of company
- What has been the influence of climate change and winters with minimal snow cover to constructing the facilities?
- Why does cross-country skiing need to be a year-round sport?
- For whom are these facilities meant? Who are the users? How would you describe the users of facilities?
- Has cross-country skiing changed during recent years? And if, how? F.e. skier profiles, trends, importance of skiing..

2. Theme: Is Ski Tunnel of Vuokatti/Ylläs-halli financially profitable business?

- What does it cost to maintain facility? Who finances it? Are there differences in financial figures between the years?
- What is more important - the financial profit or societal significance? Or both?
- What influences on financial situation? How? (early winter, other activities in surrounding areas, price...)

APPENDIX 1 continues

- Weaknesses?
- Strengths?
- Possibilities?
- Threats?
- What is the role of user fee?
- To whom is this facility marketed? How?

3. Theme. Indoor ski facilities secure the conditions of cross-country skiing also in the future.

- The importance and position of cross-country skiing in Finland today and in the future?
- What do you think about climate change and its influence?
- What are the strengths/ weaknesses/opportunities/ threats of Ski Tunnel of Vuokatti/Ylläs-halli? Why?
- It is predicted that cross-country skiing would not maintain its status as widespread leisure time activity because of winters with minimal snow cover. Those ones who can afford pay the increased costs of skiing and Finns living in northern Finland would continue skiing. What do you think about this prediction?
- How to develop facility to become even better? What is the future of these indoor ski facilities?

Would you like to add something at the end?

Thank you! It is.. (time)

APPENDIX 217th of October 2009

Vuokatti

Survey of using ski tunnels

This survey is part of Suvi Määttä's Master's Degree thesis at international Master's degree program in Sport Science and Management at University of Jyväskylä. The topic of the thesis is the changing conditions, potentials and challenges of cross-country skiing. The results and answers of the survey will be analysed in confidence, and an identity of a responder will NOT be revealed at any stage of analysing and reporting the results.

Further information and contact: Suvi Määttä, suvi.t.maatta@juu.fi

Thank you for your participation!

APPENDIX 2 continues

1. Gender: male female
2. Age: _____
3. Town and country of residence _____
4. Educational background, the highest level:
- Comprehensive school Sixth form/upper secondary school
- Vocational school Bachelor's degree Master's degree
5. Profession/occupation: _____
6. How much do you usually cross-country ski during winters? (In kilometres)

7. What does cross-country skiing mean to you?
- I consider myself as an Active skier, skiing as hobby
- I am an Active competitor skier
- Cross-country skiing is a Hobby among others
- if conditions are good, I ski regularly.
- No significance something else, what?

8. I ski in Vuokatti ski tunnel
- First time ever
- I have skied before
- First time in Vuokatti, but I have used other indoor ski tunnels.
9. With whom are you skiing in Vuokatti today?
- Alone With spouse and/or family
- With friends With workmates
- Someone else, who? _____

APPENDIX 2 continues

10. Why do you ski in ski tunnel today?

11. Ski tunnels can be seen as a new phenomenon. Why do you think that these facilities are provided for?

12. The prediction is that winters with minimal snow cover will increase in the future. How do you see that this prediction will have an impact on your activity in cross-country skiing?

13. What kind of impact the increase of “artificial” sport facilities, such as indoor ski tunnels, would have on the future activity and participation in cross-country skiing?

14. Will you come back skiing in ski tunnel in Vuokatti?

Yes, why?

No, why?

APPENDIX 2 continues**15. Choose the best option**

	Totally agree	Somewhat agree	Cannot say	Somewhat disagree	Totally disagree
The fee in Vuokatti is reasonable					
All kinds of outdoor sports, such as cross-country skiing, should be free for users.					
Overall, I am happy with the indoor cross-country skiing services in Vuokatti.					
If winters of minimal snow cover will increase, I am ready to change my hobbies from cross-country skiing to other hobbies.					
Indoor ski tunnels respond well to the demand nowadays.					
Cross-country skiing will be national sport in Finland also in the future.					
If winters of minimal snow cover increase, I am ready to pay user fee for the whole winter, also for the costs of preparing the natural snow ski tracks.					
Cross-country skiing is an important hobby for me and therefore its conditions should be secured also in the future.					
One should ski in snowy natural conditions.					

THANK YOU!