

THE NORWEGIAN MARKET FOR NATURE BASED TOURISM PRODUCTS - CHARACTERISTICS AND IMPLICATIONS FOR SEGMENTATION AND PRODUCT DEVELOPMENT

DET NORSKE MARKEDET FOR AKTIVITETSBASERT NATURTURISMEPRODUKT
– KJENNETEGN OG IMPLIKASJONER FOR MARKEDSSEGMENTERING OG
PRODUKTUTVIKLING

TORVALD TANGELAND

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Det norske markedet for aktivitetsbasert naturturismeprodukt – Kjennetegn og implikasjoner for markedssegmentering og produktutvikling

Philosophiae Doctor (PhD) Thesis

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Preface and acknowledgements

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Torvald Tangeland

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Summary

Nature based tourism is often considered as an important area for rural municipalities when traditional industries such as agriculture, forestry and manufacturing has been downgraded and rationalised because they are no longer profitable. The main objective of this PhD thesis has been to investigate the opportunities within the Norwegian holiday and leisure market for various nature based tourism products. Furthermore, it has been the goal of this study to identify professionally valid criteria for commercial segmentation of these markets. The thesis consist of four papers based on three quantitative surveys: (1) a national survey among a representative sample of the Norwegian population between 16 and 79 years (N = 1904), (2) a survey among members of the two largest outdoor organizations in Norway (DNT and NJFF) (N = 763), and (3) a survey of second-homeowners in a mountainous municipality in southern Norway, Ål municipality (N = 1128).

The findings from the four studies deliver collectively a good insight into the Norwegian market for nature based tourism activity products. The typical buyers are young men with a high education and high income, who are a member of an outdoor organization and have access to a second-home. They are often motivated by a desire to learn something new or learn more about an activity that they are already performing. They are motivated by risk-taking and being socialise. Furthermore, it is clear that life situation (age, family relationships, children) affects the type of products purchased. However, not everyone who chooses to purchase nature based tourism activity products has the same socio-demographic characteristics and they may have different motives for purchasing. The fact that nature based tourism activity products is a collective term for a range of products that only have a commonality because they are based on activities that are dependent on or are enhanced by nature, implies that this is a group of products that appeal to different segments of tourists with very different needs, desires and preferences. Therefore, it has been argued that there is a need for more precise segmentation techniques to identify the various tourists.

The study shows that the members of outdoor recreation organization and second-homeowners are two strategically important segments to target for nature based tourism businesses. Both these segments are very large in a Norwegian frame of reference, and it is therefore necessary to further divide these segments into more homogeneous groups. This can be done based on both the purchase motivation (Paper II) and household composition (Paper

III). Based on the four purchase motivation factors identified: *new activities, social, skill development and quality improvement*, it was possible to identify five market segments: *Want-it-all, Social, Try new activity, Performer and Unexplained*. These five segments were different from each other not only with regard to motives for purchasing nature based tourism products, but also regarding their socio-demographic characteristics and travel behaviour. The composition of households affected which experience dimensions tourists sought when they purchased the nature based tourism products. Five household types were defined: *Nuclear family, Single parent, Couples without children, Single and Adults live together*.

Four key experience dimensions were identified: *Risk/challenge, Facilitation, Learning, and Family/children friendly*. The *risk/challenge* dimension was most popular among households without children. Members of nuclear families emphasized to a lesser extent on the *facilitation* dimension than the other household types did. The *learning* dimension was most important to the single parents. Unsurprisingly, the *family/children-friendly* dimension was most important to members of the nuclear family.

In Paper IV a combination of recreation experience preference (REP), motivation to have a second-home at a specific location and demographic variables was used to explain the variation in intention to purchase nature based tourism activity products. The study suggests that the second-home market can be segmented in a useful way on the basis of these variables.

The results are useful for nature based tourism actors since they provide insight into some important market segments, and the differences in the preferences of unique market segments in the Norwegian domestic market. This is knowledge that companies can find useful in the development of products that are more suitable to the segments on which they focus. In the long-term, this could also be a part of increasing the profitability for this part of the tourism industry in that they may appear more attractive to the growing groups of customers. The findings will also be interesting to politicians and management authorities who wish to lay the groundwork for the development of rural areas into successful tourism destinations. The results from the study are also interesting from an academic standpoint because the findings from the study contribute new knowledge that may help to explain the emergence of nature-based tourism in recent decades, and to a more nuanced understanding of the purchase motivations in nature-based tourism.

Sammendrag

Naturbasert turisme blir ofte ansett som et satsningsområde for rurale kommuner når tradisjonell næringsvirksomhet som jordbruk, skogbruk og industri blir lagt ned som en konsekvens av at de ikke lenger er lønnsomme. Hovedmålsettingen for denne doktorgradsavhandlingen har vært å kartlegge nærmere hvilket potensial det norske ferie- og fritidsmarkedet for ulike naturbaserte reiselivsprodukter har. Videre har det vært et mål å identifisere faglig holdbare kriterier for kommersiell segmentering av disse markedene.

Avhandlingen består av fire artikler som er basert på tre kvantitative spørreundersøkelser: (1) en nasjonal undersøkelse blant et representativt utvalg av Norges befolkning mellom 16 og 79 år (N = 1904), (2) en undersøkelse blant medlemmene av de to største friluftslivsorganisasjonene i Norge (DNT og NJFF) (N = 763), og (3) en undersøkelse blant fritidsboligeiere i en fjellkommune i Sør-Norge, Ål kommune i Buskerud (N = 1128).

Funnene fra de fire arbeidene gir samlet et godt innblikk i det norske markedet for aktivitetsbasert naturturisme produkter. Den typiske kjøperen er en ung mann med lang utdanning og høy inntekt, er medlem av en friluftslivsorganisasjon og har tilgang på en fritidsbolig. De er ofte motivert ut fra et ønske om å lære noe nytt eller lære mer om en aktivitet som de allerede driver med. De er risikovillige og de er også motivert ut i fra et ønske om å være sosiale. Videre er det tydelig at livssituasjonen (alder, familieforhold, barn) påvirker hvilke type produkter som kjøpes. Likevel er det ikke slik at alle som velger å kjøpe aktivitetsbasert naturturisme produkter har de samme sosiodemografiske egenskapene og de kan ha ulike beveggrunner for å kjøpe. Det faktum at aktivitetsbasert naturturisme produkter er en samlebetegnelse for et spekter av produkter, som kun har til felles at de tar utgangspunkt i aktiviteter som er avhengig av eller blir beriket av natur, medfører at dette er en gruppe produkter som appellerer til ulike segmenter med turister med svært ulike behov, ønsker og preferanser. Det har derfor blitt hevdet at det er behov for mer presise segmenteringsteknikker for å identifisere ulike turister som er interessert i å kjøpe denne typen reiselivsprodukter.

Studien viser at medlemmene av friluftslivsorganisasjoner og eiere av fritidsbolig er to strategisk viktige satsingsområder for naturbaserte reiselivsbedrifter. Begge segmentene er svært store i en norsk sammenheng og det er derfor behov for å ytterligere dele disse

segmentene inn i mer homogene grupper. Dette kan gjøres med utgangspunkt i både kjøpsmotiver (Artikkel II) og husholdingssammensetting (Artikkel III). Basert på de fire kjøpsmotiver som ble avdekket; *ny aktivitet, sosial, ferdighetsutvikling og kvalitetssikring*, var det mulig å identifisere fem markedssegmenter; *Sosial, Vil ha alt, Prøve en ny aktivitet, Utøver og Uforklart*. Disse fem segmentene skilte seg fra hverandre ikke bare med hensyn på motiver for å kjøpe naturbaserte reiselivsprodukter, men også med hensyn på sosiodemografiske egenskaper og reiseatferd.

Sammensettingen på husholdingen påvirket hvilke opplevelsesdimensjoner turister søkte når de kjøpte naturbaserte reiselivsprodukter. Fem husholdingstyper ble definert: *Kjernefamilien, Aleneforeldre, Par uten barn, Single og Voksne som bor sammen* (eks. i kollektiv). Fire opplevelsesdimensjoner ble identifisert; *Spennning, Tilrettelagt, Læring og Familie- og barnevennlig*. Spenningsdimensjonen var mest populær blant husholdinger uten barn. Medlemmer av kjernefamilier vektla i mindre grad tilretteleggingsdimensjonen enn de andre husholdingstypene. Læringsdimensjonen var viktigst for aleneforeldrene. Ikke overraskende var familie- og barnevennligdimensjonen mest viktig for medlemmer av kjernefamilien.

I artikkel IV ble en kombinasjon av rekerasjonspreferanser, stedsmotiver og demografiske variabler benyttet for å forklare variasjonene i intensjonen om å kjøpe naturbaserte aktivitetsprodukter. Studien tyder på at fritidsboligmarkedet kan segmenteres på en fruktbar måte med utgangspunkt i disse variablene.

Resultatene er nyttige for naturbaserte reiselivsaktører siden den gir innsikt i noen viktige markedssegmenter, og til ulikhetene i preferansene til ulike markedssegmenter i det norske hjemmemarkedet. Dette er kunnskap som bedriftene kan ta med seg i utviklingen av produkter som er mer tilpasset de segmentene de satser på. På sikt vil dette også kunne være med på øke profitabiliteten til denne delen av reiselivsnæringen ved at de i større grad vil fremstå som attraktive for økende grupper av kunder. Funnene vil også være av interesse for politikere og forvaltingsmyndigheter som ønsker å legge til rette for å utvikle rurale områder til suksessfulle reiselivsdestinasjoner. Resultatene fra studien er også av interesse fra et akademisk ståsted i og med at funnene fra undersøkelsen bidrar med ny kunnskap som kan bidra til å forklare fremveksten av naturbasert turisme de siste tiårene, og til en mer nyansert forståelse av kjøpsmotiver i naturbasert turisme.

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Appended papers I – IV

The present thesis is based on the following papers, which will be referred to by their Roman numerals:

- I. Tangeland, T., Aas, Ø. & Odden, A. (Manuscript). *Socio-demographic differences between participants in four outdoor recreation activities – Implications for the Norwegian domestic market for nature based tourism.*
- II. Tangeland, T. (2011). *Why Do People Purchase Nature Based Tourism Activity Products? A Norwegian Case Study of Outdoor Recreation.* Scandinavian Journal of Hospitality and Tourism, 11(4), 435-456.
- III. Tangeland, T., & Aas, Ø. (2011). *Household composition and the importance of experience attributes of nature based tourism activity products – A Norwegian case study of outdoor recreationists.* Tourism Management, 32(4), 822-832.
- IV. Tangeland, T., Vennesland, B. & Nybakk, E. (Manuscript). *Motivation and the intention to purchase nature based tourism activity products: An empirical study among second-home owners in Norway.* Submitted to Tourism Management

Appendix 1 – 3: Survey instruments

- Appendix 1. Questionnaire used in the national survey performed by Statistic Norway (Translated to English) (Empirical base for Paper I)
- Appendix 2. Questionnaire used among outdoor recreationists (Translated to English) (Empirical base for Paper II and III)
- Appendix 3. Questionnaire used among second-home owners (Translated to English) (Empirical base for Paper IV)

1 Introduction

1.1 Background

Norwegian authorities have formulated clear political goals to maintain settlements and to increase value creation in rural parts of Norway. Historically, rural areas have been places of food and fibre production (Burton & Wilson, 2006) where the majority of the population in rural areas had their incomes from these businesses. However, during the last century traditional rural business activities have been downgraded and rationalised. For instance, in the period from 1902 to 2010, the number of people that work in the agriculture and forestry sector in Norway dropped by 81.7%, from 311,000 to 56,900 (Berg, Julsrud, & Kristiansen, 2003; SSB, 2011a). To succeed in maintaining settlements and increasing value creation in rural parts of Norway it is necessary to develop the competitive advantages of the rural areas. Nature based tourism is a type of business activity that can utilise the large area resource that rural areas have. At the same time, tourism is also known for being a labour-intensive sector that offers the people in rural areas both work and income.

Rural areas have been an important part of the Norwegian tourism product since the development of modern tourism started in the 1800s (Svalastog, 2008). Thus, it has been claimed that rural areas are gradually transforming from a place of primarily food and fibre production to a place for the production of experiences – tourism products (Briedenhann & Wickens, 2004; Nybakk, Crespell, Hansen, & Lunnan, 2009; Nybakk & Hansen, 2008; Place, 1991; Tervo, 2008). This transformation of the agricultural and forestry sector into tourism is not a uniquely Norwegian phenomenon. Across Europe, many farmers and foresters have transformed all or part their business activity from farming and timber production into experience production (Brandth & Haugen, 2011). For instance in 2006, 40% of all Norwegian farmers received income from business activities other than agricultural production. Accommodation was offered by 5% of the farmers and they had 267 million NOK in gross income from this activity, while 10% had income from selling hunting and angling licenses, which gave them 87 million NOK in gross income (Auno & Sørensen, 2009). In 2007, 25% of the forestry owners had income from the forest that was not connected directly to timber production. Sale of hunting and angling licenses provided 219 million NOK in gross income and there was 335 million NOK from accommodation (SSB, 2011d).

Tourism is an integral part of our society and therefore changes in society, regardless of whether these are economic, social, cultural or lifestyle changes, will have an impact on the tourism sector. The late twentieth century and the new millennium have witnessed continuing growth of the leisure society and the tourism sector. Greater numbers of people from post-industrialist societies value the significance of leisure time where holidays and travelling are an important ingredient (Page & Dowling, 2002). Today, the tourism sector is regarded as one of the three most significant business sectors in the world (Mehmetoglu, 2005). In 2010 it supported more than 258 million jobs worldwide and generated some 9% of global gross domestic product (GDP) (WTTC, 2011). In 2010 there was 940 million international tourist arrivals, which is an increase of 40% compared to the year 2000 (UNWTO, 2011). During the last century, the tourism sector in Norway has grown to be an important business sector and the number of those employed at hotels and restaurants in Norway increased by 875% in the period from 1902 to 2010 (Berg, et al., 2003; SSB, 2011a). In 2009, the total number of full-time job equivalents calculated in the Norwegian tourism sector were 139,000 and the total production was calculated to be almost 182 NOK billion, which is 6.3% of total employment and 3.3% of the GDP (SSB, 2010).

Stakeholders, authorities and scientists have argued that there is a large untapped potential for nature based tourism products, and it is believed that it can help to maintain, or even increase, the value creation in rural parts of Norway by utilizing nature and the landscape in new ways (LMD, 2010; NSF, 2010). Many of the reasons for the strong positive belief about the future of the nature based tourism sector are to be found in international trends within the tourism market. Nature based tourism is often referred to as one of the fastest growing markets internationally within the tourism sector (Fredman & Tyrväinen, 2010; Higgings, 1996; T. H. Lee, 2009; Marques, Reis, & Menezes, 2010; Pennington-Gray & Kerstetter, 2002; Rinne & Saastamoinen, 2005), even if this view is challenged by others (Balmford et al., 2009). Both the size of this niche in tourism and the development trends depend on how nature based tourism is defined (Fredman, Wall Reinius, & Lundberg, 2009).

In the 1800s and the beginning of the 1900s, the majority of the tourists in Norway were foreign (Berg, et al., 2003; Hoemsnes, Berntzen, Gunnarson, Iglum, & Sjømoen, 1999; Jacobsen, 1990). As tourism develops from an activity of the upper class to a general activity for larger parts of the population across Europe during the 19th century, the Norwegian

domestic market becomes more important for the tourism sector in Norway (Berg, et al., 2003; Jacobsen, 1990). Today, Norwegian households contribute half of the total tourism consumption in Norway, while foreign tourists and corporate travel accounted for 30% and 20%, respectively (Auno & Sørensen, 2009; SSB, 2011d). Clearly the domestic leisure market can be recognised as the backbone of the Norwegian tourism sector.

To succeed in developing the tourism sector in rural areas, business and policymakers depend on knowledge about existing and potential customers. Such knowledge is needed to secure a more sustainable economic development. Unfortunately, the nature based tourism sector in Norway mostly consists of small enterprises with limited resources to perform marketing research (Dervo, Aas, Kaltenborn, & Andersen, 2003). In smaller businesses like these, marketing tends to be unplanned and is often given a low priority relative to other business operations (Roberts & Hall, 2004). There is a need for better general knowledge about the Norwegian market for nature based tourism products and for market segmentation methods that are easy to implement for small-scale businesses with limited resources.

1.2 Objectives of the thesis

Tourism in rural and nature areas has been extensively studied from the supply viewpoint, but it has been argued that relatively few studies have been performed from a consumer perspective (Frochot, 2005; Park & Yoon, 2009). When studying development trends in a market, Ritchie (1998) argued that a demand side perspective is necessary to secure a sustainable development of the tourism sector. Hudson and Ritchie claimed that “domestic tourism is one of the most neglected and under-researched categories in tourism analysis” (2002, p. 263). The main objective of the thesis is to analyse the potential in the Norwegian domestic leisure market for different types of nature based tourism activity products, and to develop market segmentation approaches relevant to the small-scale businesses operating in this sector by analysing the demand side. Further, it seeks to investigate how nature based tourism activity products are developed. The overall research question for this thesis was:

What opportunities exist in the Norwegian domestic market for nature based tourism activity products?

To shed light on the overall research question, the following questions are raised in the four papers on which this thesis is built:

Paper I: *What influence do socio-demographic variables have on people's likelihood of participating in outdoor recreation activities?*

Paper II: *Why do people purchase nature based tourism activity products, and who are they?*

Paper III: *Does household composition influence on the experiences tourists seek when they purchase nature based tourism activity products?*

Paper IV: *How do second-homeowners' leisure motivations and socio-demographic variables influence their intention to purchase nature based tourism activity products?*

The empirical research is based on three questionnaire surveys. Paper I is based on a national representative survey among the Norwegian population conducted by Statistic Norway (SSB). Papers II and III are based on a survey among members of the two largest outdoor NGOs in Norway. Paper IV is based on a survey among second-homeowners in a typical second-home municipality in rural Norway.

2 Theoretical framework

This chapter presents the theoretical background for the work and aims to position the four research questions with respect to the previous literature and existing theory.

2.1 *What is tourism?*

Tourism is a complex phenomenon to describe. It is not an industry, but more like a system of different industries that together form a system that offers all the different products and services that comprise the tourism product that the traveller purchases (Mill & Morrison, 2009). It is a sector that is defined by where those who purchase and consume the product live rather than by those who produce the products (Auno & Sørensen, 2009; Kamfjord, 2001). Mill and Morrison (2009) pointed out that during the last four decades a number of attempts have been made to define tourism. Still, there is no single definition that is universally accepted and there is a fuzzy link between leisure, recreation and tourism. *Leisure* is usually defined as the time available to an individual when work, sleep and other basic needs have been met (Page & Dowling, 2002). *Recreation* is activities that are preformed during leisure time (Mill & Morrison, 2009). World Tourism Organization (WTO) defines tourism based on the tourists – that are people "travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes" (1995: 1). It has been argued that there is a strong relationship between daily recreation and vacation activities and that tourism is just a special form of recreation activities (Brey & Lehto, 2007). In a post-industrial society, the division between work and leisure has become blurred for many groups. Therefore, it is increasingly difficult to totally separate the leisure and business markets from each other when analyzing tourism.

Tourism products are defined as all products that are consumed in connection with travelling outside one's usual environment for business or pleasure (Auno & Sørensen, 2009; Kamfjord, 2001; WTO, 1995). These products can be physical (e.g. food and shelter) as well as nonmaterial (e.g. knowledge transfer about a destination). Traditionally, tourism products have been conceptualised as having four parts: the provision of activities/experiences, eating/drinking, accommodation and transportation (e.g. in Mill & Morrison, 2009; Seaton & Bennett, 1996). A paradox within the tourism sector is that it is often the activity part of the tourism experience that motivates people to travel somewhere. However, regarding the economic behaviour of the tourist and value creation, the activity part of the tourism product

often creates little or no income for local tourism businesses. Tourists usually pay for transportation, food and accommodation. The activity part of the tourism product is often available for free or for a low price. This phenomenon is sometime referred to as the “paradox of tourism” (Kamfjord, 2001). One of the challenges for rural destinations is to increase the share of tourists that purchase commercial products so that the value creation from the sector is strengthened. The main focus of this thesis has been on the activity part of the tourism product. These products differ from other product categories regarding production since the tourists more actively participate in the production of the tourism experience (Boswijk, Thijssen, Peelen, & Johnston, 2007; Pine & Gilmore, 1999; Vespestad, 2010). Consequently, the tourists that participate in the same activity may have conflicting desires, needs, tastes and dislikes which will influence the experience they co-produce.

2.2 Nature based tourism

As with tourism, there is an ongoing debate among researchers on how to define nature based tourism, and it has proven to be difficult to establish an indisputable definition and a term upon which the research community can agree (Fennell, 2000; Higgings, 1996; Mehmetoglu, 2007; Rønningen, 2010). Among the first academics to attempt to specifically define the concept of nature based tourism were Laarman and Durst, who suggested that this is a form of tourism where the “traveller is drawn to a destination because of his or her interest in one or more features of that destination’s natural history” (1987: 5). Valentine – in one of the best known definitions of nature based tourism – stated that such tourism is “primarily concerned with the direct enjoyment of some relatively undisturbed phenomenon of nature” (1992: 108). Laarman and Gregersen defined nature based tourism as “travel motivated totally or in part by interests in the natural history of a place, where visits combine education, recreation and often adventure” (1996, p. 247). To complicate the picture further, the term nature based tourism is frequently used as a collective term, and sometimes as a synonym, for: sustainable (Garrod & Fyall, 1998), green (Hong, Kim, & Kim, 2003), eco (Fennell, 2001), rural (Frochot, 2005), adventure (Weber, 2001) and responsible tourism (Krippendorf, 1987). This thesis does not aim to distinguish between these terms since they are all types of tourism that depend to some degree on the use of natural resources in relatively pristine natural areas such as scenery, waterfalls and rivers, forests, mountains, fish and/or wildlife, and protected areas (Fennell, 2000). However, the importance of the nature element in the tourism product varies greatly. Valentine & Cassells (1991) argued that nature based tourism experiences can be

classified into three distinct types: experiences (activities) dependent on nature, experiences (activities) enhanced by nature, and experiences (activities) for which the natural settings are supplementary.

This thesis has focused on activity products that are enhanced and/or dependent on nature elements in the production of the tourism experience such as: white water rafting, angling, hunting, rafting, kiting, backcountry hiking and climbing. Many of these activities can be categorised as special interest outdoor recreation activities (Trauer, 2006). These activities often require the use of specialised equipment, and that the participants have the necessary skills to perform the activity in a safe way (Buckley, 2007). The required skills can take years to acquire through practice in the field. However, in post-industrialised economies, such outdoor recreation activities are to a greater extent treated more as a purchasable short-term holiday experience than a gradually acquired lifetime skill (Kane & Zink, 2004). It has also been argued that lack of experience and knowledge might result in recreationists that give up some of their independence and purchase a nature based tourism activity product (Pomfret, 2011). Other researchers have argued that there is a close relationship between free recreation and commercial tourism outdoor recreation activities since they often share the same resources, the same facilities and compete for the same money and time (Carr, 2002; McKercher, 1996; Moore, Cushman, & Simmons, 1995; Pomfret, 2006). There is a growing recognition that “free” and unorganised outdoor activities and well-organised commercial tourism products are endpoints on a continuous leisure scale. At the same time, these activities can be performed near home or away from daily living, which adds a second dimension. Clearly it is difficult to totally separate tourism and recreation activities from each other in nature areas (Fredman & Tyrväinen, 2010), since transitions between them are fluid (Beedie & Hudson, 2003).

In this thesis I argue that outdoor activities can be performed in four different contexts defined by these two dimensions: *distance from home* and *level of commercialization*, Figure 1. *Nature activities near home* are outdoor recreation activities performed for free in nature areas near where the people live. *Nature based activity products* are activity products that are based on outdoor recreation activities and local participants have to pay a third party to participate in the given activity. *Non-commercial tourism outdoor activities* are outdoor recreation activities that tourists perform for free while they are travelling. *Nature based tourism activity products* are activity products that are based on outdoor recreation activities

and the tourist has to pay a third party (e.g. a tour operator) to participate in the given activity. The transitions between these four categories are fluid. Yet the illustration is useful because it helps to clarify the relationship between the four interrelated categories. In this thesis, all activities that the performers have to pay a third party to perform are defined as commercial activity products. Based on WTOs definition of tourism, outdoor recreation activities performed away from daily living can be defined as nature based tourism activities.

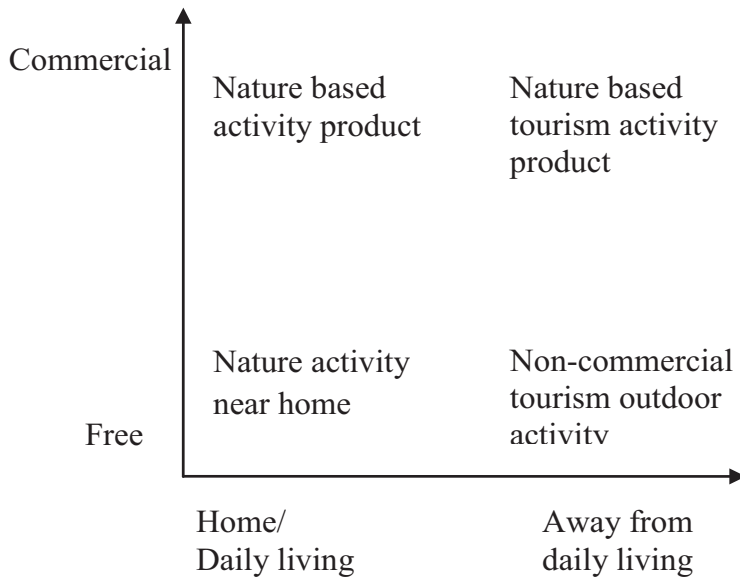


Figure 1: Defining outdoor activities according to the context in which they are performed

Both *non-commercial tourism outdoor activities* and *nature based tourism activity products* can contribute to the value creation in rural areas since the nature based tourist independent of context often will purchase transportation, food and/or accommodation while they are travelling. However, those tourists that also purchase outdoor activity products during their trip will contribute more to the local value creation in rural areas. For nature based tourism businesses and policy makers it is important to have knowledge about: who are the most likely performers of outdoor recreation activities (Paper I), why tourists sometime choose to purchase *nature based tourism activity products*, and who they are (Paper II, III and IV). It is also highly interesting to obtain more insight into what can change behaviour and trigger the purchase of more commercial products.

2.3 Understanding tourist behaviour and the role of marketing

One of the most fundamental assumptions within the field of consumer behaviour is that people usually consume products to satisfy unmet needs (Solomon, 2004). In a tourism context, these needs can range from a search for deeper human meaning to pleasure-oriented relaxation (Chhetri, Arrowsmith, & Jackson, 2004). Further, these needs can be both functional (e.g. transportation from A to B) and psychological (e.g. feeling safe during the transportation) and they are not necessarily linked to a physical product (Solomon, 2004). Wants are linked to products or services that fulfill different needs. People with the same need (e.g. transportation) might have different wants since the need can be satisfied in different ways (e.g. by car, train, bus or plane) (Troye, 1999). Further, it has been argued that tourists purchase products for two reasons; either to remove a lack (e.g. eating to reduce the feeling of hunger) or to add something to their life (e.g. new knowledge) (Oliver, 2010). Common to both approaches is that there is a discrepancy between a person's ideal state and actual state. The cause of this discrepancy is influenced by both the internal (psychological factors such as: cultural background, personality, values, and consumer self-perception) and external (situational factors such as advertising and household composition) reality in which he/she finds themselves (Iso-Ahola, 1982). This discrepancy creates an uncomfortable level of tension in individuals' minds (Fodness, 1994). When this tension becomes great enough, this will lead to behaviour designed to release this tension by satisfying the unmet need so that the ideal state and actual state are again more or less equal. It is important to bear in mind that a behaviour will only happen when the tension becomes significant enough and the individual decides to try to satisfy the unmet need (Fodness, 1994; Goossens, 2000).

Motivation is something that arises as a consequence of a unmet need and it is usually defined as a driving force that initiates and directs behaviour (Crompton, 1979; Iso-Ahola, 1982). It can be viewed as a kind of internal force that drives a person to do something in order to achieve an outcome or benefit that will satisfy an unmet need. When formulating and testing motivation (Snepenger, King, Marshall, & Uysal, 2006) in tourism research, it is common to split motivation factors into two groups, push and pull (Crompton, 1979; Dann, 1977). Push motivations are those that motivate a person to take a holiday or travel away from their daily living area, explaining why people move from left to right in figure 1. Pull motivations are those which motivate a person to travel to a specific destination or purchase a

specific product at a particular time, explaining why people move from the lower row to the upper row in figure 1.

It is important to keep in mind that motivation to travel somewhere and purchase a specific tourism product will never arise unless the tourist is aware of the place and the product that he or she believes will, wholly or partly, meet their needs. Then, and only then, will the tourist be motivated to buy (Goossens, 2000). Through marketing, businesses can create awareness about unsatisfied needs, which may result in that the tourist develops wants. When the tourist has become aware the problem, the next stage in a successful marketing strategy is to present the solution to the problem (Belch & Belch, 2004). By presenting a product that has the benefits to satisfy the unmet needs, businesses can motivate consumers to purchase the product (Haley, 1968), Figure 2. Through product development, businesses can develop new products that the consumers experience as significantly better than the one they have today, which results in that the consumer’s ideal condition shifts so that the current situation is experienced as unsatisfactory (Bruner II & Pomazal, 1988). In a tourism context, this means that people experience staying at home as less satisfying than travelling away from home. In a nature based tourism activity product context, this means that the tourist believes that she will have a better experience if she purchases the activity product that is offered.

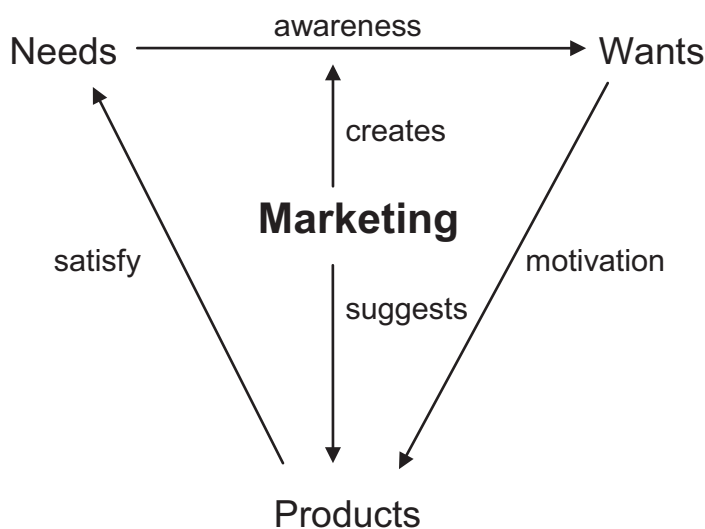


Figure 2: The role of marketing (Mill & Morrison, 2009)

Clearly there exists a dynamic relationship in terms of influence between tourists and the providers of tourism products. However, it starts and ends with the needs of the tourists, Figure 2. To succeed in the long-term, businesses have to be able to identify which are the

needs that tourists want to satisfy and to develop products tailored to meet their needs (Greengrove, 2002). However, all markets consist of consumers with different needs, wants and preferences, which make this challenging. It has been argued that consumption today is now more closely related to social identity and status than function or form (Blindheim, Jensen, Nyeng, & Tangen, 2004; Roberts & Hall, 2004; Solomon, 2004). This development has complicated the understanding of markets and products, and there is a need for further research to identify the key factors driving tourism demand (Roberts & Hall, 2004).

2.4 Market segments within the nature based tourism market

Market segmentation is the process of categorising customers into smaller and more homogeneous segments with characteristics that are likely to exhibit similar behaviours (Solomon, 2004). There are two fundamentally different approaches to segment a market: *a priori* and *a posterior*. *A priori* segmentation methods have predefined segments (e.g. household composition and nationality) for analysing a market, while *a posterior* segmentation methods identify segments through statistical analyses such as factor-cluster analysis (Troye, 1999). Within applied tourism research, the *a priori* segmentation methods have traditionally been the most employed since they are easier to use, less expensive and give information about possible development trends within a market (Mill & Morrison, 2009). The disadvantage with these methods is that they are less precise and the segments identified are often more general. Within contemporary tourism studies, the *a posterior* segmentation methods are the most used since these identify more precise market segments. Further, the *a posterior* segmentation methods provide insight into more fundamental reasons for tourist behaviour and the findings can be used to develop new theoretical knowledge. Independent of which of these two approaches are followed, one will have a better understanding of the structure of the market when segments within it are identified (Bloom, 2004). Subsequently, the marketing mix: products and services, prices, distribution channels, and promotions, can be adjusted to fit the needs and wants of the market segments that have been targeted (Kotler, 1991).

Several attempts have been made to segment the nature based tourism market. A large majority of these studies have been performed by consultants and government agencies and there have been a tendency to categorise the tourist as either a *nature based tourist* or a *non nature based tourist* (Weaver & Lawton, 2007). It has been claimed that nature based tourists

can be distinguished from other groups of tourists since they are individuals who are interested in experiencing wilderness and pristine nature by viewing mountains, fjords and lakes, by being physically active and engaged in outdoor activities (Pennington-Gray & Kerstetter, 2002). However, this is not a very homogenous group of tourists and it is clear that there is a need for segmentation methods that are able to identify different groups of tourists within the nature based tourism market to a larger extent.

Within the academic literature, a considerable body of research has emerged that has divided nature based tourists into distinct sub-groups. Laarman and Durst (1987) used interest levels and the degree of physical rigour to distinguish between soft and hard-core nature tourists. Lindberg (1991) moved from the binary segmentation to a fourfold classification based on amount of time spent in nature, the type of nature experience and the means of travel to a destination: *Hard-core nature tourists* (people that travel to a destination for educational purpose, remove litter or similar purposes), *Dedicated nature tourists* (people that travel to specific destinations to see protected areas and to learn more about nature and cultural history), *Mainstream nature tourists* (people who visit a destination primarily to take an unusual trip) and *Casual nature-tourists* (tourist that visit a nature area as part of a broader trip). The *Hard-core* and *Dedicated nature tourists* were believed to be willing to travel great distances than the *Mainstream* and the *Casual nature-tourists* were. In a similar categorization, Mehmetoglu (2005) argued that tourists that visit a nature destination can be categorised as either *specialist* or *generalist*. Specialists require little infrastructure and management facilities, their presence is absorbed by the existing support system, and they visit in low numbers, while generalists are less ambitious, have little special interest in a site's attractions, depend on the infrastructure and they visit in high numbers. Further, he showed that these two groups differ on importance of six motivation factors for visiting a nature based destination in Norway: *Nature*, *Physical activity*, *Novelty/learning*, *Mundane/everyday*, *Social contact* and *Ego/status*. In a later paper based on the same survey, Mehmetoglu (2007) argued that nature based tourists can be categorised based on the activities in which they participate. He identified three activity segments: *Culture and pleasure activity oriented*, *Nature activity oriented* and *Low-activity oriented*, which can be differentiated by four of these six motivations for visiting the nature based destination: *Physical activity*, *Novelty/learning*, *Mundane/everyday* and *Social contact*.

Swarbrooke and Horner (2007) concluded that the socio-demographic (e.g. in Le Serre, 2008) and geographic (e.g. in Charters & Ali-Knight, 2002) categorizations have been most widely used to segment tourists in general, including the nature based tourism market. Such segmentation methods are useful when the goal is to describe the market – who are the tourists and where do they live. Additional results from socio-demographic segment analysis can be used to analyse the effects of changes in the demographic structure of societies. Although socio-demographic variables are one of the most used segmentation variables within tourism research (Swarbrooke & Horner, 2007) there are few published studies that have used the lifecycle concept to segment tourists (Oppermann, 1995).

One of the significant changes in post-industrialised societies is connected to the transformation of household structures. In Norway, for example, the number of nuclear families decreased from 31.8% in 1980 to 21.5% of all private households in 2011. During this period, other household types increased: single-parent households, for instance, rose from 3.6% to 5.6%; people living alone from 27.9% to 39.7%; and couples without children from 20.1% to 21.2% (SSB, 2008, 2011c). Similar trends can be observed in other post-industrialised societies (Kapinus & Johnson, 2003). However, there are also other significant socio-demographic changes that may affect the market for nature based tourism such as: an ageing population, increased educational level, further urbanisation and strengthened environmental awareness (SSB, 2011b; Williams & Shaw, 2009). It is therefore crucial to gain a better understanding of how these socio-demographic variables influence participation in outdoor recreation activities and the demand for nature based tourism activity products.

The lifecycle concept has been proven to be a powerful theoretical and empirical approach in consumer behaviour research (Solomon, 2004) and can be used to analyse the effect of the changes in the household structure. Household type can be viewed as a stage in both the individual lifecycle and family lifecycle at a given point in time. This concept is a multi-factorial construct and utilises a combination of demographic variables, such as: age, the presence and age of children, the presence of a partner (Wells & Gubar, 1966), as well as social identity (Solomon, 2004). The concept of household type describes the composition of a household at a given point of time (Solomon, 2004) with a household unit consisting of both family members and non-family members living together (Zimmerman, 1982). It has been showed that household composition influences the needs, wants and preferences of

people, which again influences the products they purchase when they are travelling (Bojanic, 1992; Fodness, 1992; Lawson, 1991; Zimmerman, 1982).

A weakness with socio-demographical variables when segmenting tourists and predicting their behaviour is that the variables do not have a direct effect on behaviour and cannot be used to explain why tourists behave the way they do. Motivation is believed to have a direct effect on behaviour and therefore has a higher predictive power than socio-demographic variables. Among researchers there is consensus that motivation is a critical variable for explaining tourist behaviour, and it has therefore been used to explain: decision-making and planning processes in tourism (Bansal & Eiselt, 2004; Kim & Prideaux, 2005), destination choice (Beh & Bruyere, 2007; Goossens, 2000), destination loyalty (Yoon & Uysal, 2005), and choice of activities and products (Meric & Hunt, 1998; Qu & Ping, 1998). During the last decade, several studies have been published that have used motivation as the core segmentation criteria to categorize nature based tourists (e.g. Galloway, 2002; Haukeland, Grue, & Veisten, 2010; Kibicho, 2005; Kim, Lee, & Klenosky, 2003). In a study among visitors to parks in Ontario, Canada, Galloway (2002) identified three main motivation factors for visiting and their related segments: *Sensation seeking*, *Escape stress* and *Active enjoyment of nature*. In a similar study, Kibicho (2005) identified four motivation factors for visiting the Amboseli National park in Kenya: *Environment protection*, *Man firs*, *Local culture and history* and *Relaxation*. Based on these motivation factors, he identified three segments among the visitors: *Environmentalists*, *Want-it-all tourists* and *Independent tourists*. In a study of visitors to national parks in Norway Haukeland, et al. (2010) identified four segments based on four pull motivation factors; *Tracks & signposts*, *Infrastructure & service*, *Food and accommodation* and *Tours & interpretation*. These motivation factors were identified through benefit analysis of the facilities that the tourist requested within the national park. Among visitors to national parks, these three studies have focused on the pull motivation dimensions and their findings clearly show that nature based tourist can be segmented based on their motivation for visiting a specific nature area. In the same direction, Kim, Lee and Klenosky (2003) identified both push and pull motivation factors among visitors to six national parks in South Korea. They identified four push motives: *Family togetherness and study*, *Appreciating natural resources and health*, *Escaping from everyday routine*, and *Adventure and building friendship*, and three pull motives: *Key tourist resources*, *Information and convenience of facilities*, and *Accessibility and transportation*.

The review indicates that the nature based tourism market consists of several segments with different needs and wants. Further, these segments can be identified by using both socio-demographic and motivation variables as segmentation criteria. However, a weakness with the existing motivational studies are that they often is conducted at a general level, and there is a need for studies that more specifically investigate why some choose to purchase activity products and others do not. For tourism businesses in rural areas, a combination of these two approaches will provide knowledge about the characteristics of the performers of outdoor activities and what motivates them to travel and to purchase nature based tourism products. Such knowledge can be use to develop products that satisfy the needs and wants in targeted segments.

2.5 Introduction of the papers in this thesis

For nature based tourism businesses and policy makers it is important to have knowledge about when and why people choose to purchase *nature based tourism activity products*. In this thesis, Paper I addresses outdoor activities independent of context, while the three other papers focus on outdoor activities performed within the *nature based tourism activity product* context. To succeed in developing the tourism sector in rural areas in Norway, it is crucial that these businesses are able to understand the needs and wants that the tourists wish to satisfy, as well as understanding consumer preferences within different and changing market segments.

Paper I aims to gain insight into the share of the Norwegian population that performs different outdoor recreation activity categories that can be transformed into nature based tourism activity products, and to reveal how socio-demographic variables influence the likelihood of participating in four different activity categories. This paper seeks to identify market segments in the Norwegian population with a higher likelihood for participating in outdoor recreation activities. Papers II and III aims to get a better understanding of why recreationists choose to purchase nature based tourism products. Paper II uses benefit segmentation to identify concrete purchase motives among consumers and uses cluster analysis to identify market segments. Paper III seeks to reveal how outdoor recreation activities are transformed into *nature based tourism activity products* by analysing the key attributes tourists connect to *nature based tourism activity products*. In Paper III, household composition is used as the segmentation criteria, since the composition of households is

known to have an influence on people's needs, wants and preferences (Bojanic, 1992; Fodness, 1992; Lawson, 1991; Zimmerman, 1982). Further, this paper seeks to reveal which key attributes different household types seek when they purchase nature based tourism activity products. Paper IV addresses the second-home market, which is believed to be an important market for nature based tourism businesses. In 2010, there were nearly 400,000 second-homes in Norway, and approximately 25% of the Norwegian population have access to at least one second-home (Statistiknett, 2010). The aim of paper IV is to investigate how motivation factors and socio-demographic variables influence the second-homeowner's intention to purchase nature based tourism activity products when they are at their second-home. The different theoretical perspectives, the context in which the four studies were performed, and the research questions are presented in Table 1.

Table 1: Theoretical perspectives, context and research questions

Paper	Thematic theoretical key words	Context	Research questions
I	Outdoor recreation behaviour Nature based tourism Activity products Segmentation Socio-demographic variables	National survey among the Norwegian population	<i>What influence do socio-demographic variables have on people's likelihood of participating in outdoor recreation activities?</i>
II	Benefit segmentation Motivation Nature based tourism Activity products Marketing research	Norwegian outdoor recreationists	<i>Why do people purchase nature based tourism activity products, and who are they?</i>
III	Household composition Segmentation Consumer behaviour Key experience attributes Nature based tourism activity products	Norwegian outdoor recreationists	<i>Does household composition influence on the experiences tourists seek when they purchase nature based tourism activity products?</i>
IV	Nature based tourism Motivation Behaviour models Recreation experience preference (REP) Purchase intention Marked segmentation	Norwegian second-home owners	<i>How do second-homeowners' leisure motivations and socio-demographic variables influence their intention to purchase nature based tourism activity products?</i>

3 Method

During 2007 and 2008, data were collected through three quantitative surveys in three different samples: (1) national representative survey of the Norwegian population, (2) among members of the two largest outdoor recreation organisations in Norway, and (3) among second-homeowners in a rural municipality in Norway. In this chapter sampling, data collection, questionnaire development and statistical analyses are presented.

3.1 Sample and data collection

The sample population and framework for Paper I was the Norwegian population. Data were collected during the autumn of 2007 and the winter of 2008 from a representative sample of residents from Norway between 16 and 79 years, and was executed by Statistics Norway (SSB). Data was collected through a combination of telephone and mail based interviews. The sampling was conducted in a three-stage process. In the first stage, a total of 5000 people were randomly selected from the National Register. A total of 160 of these were either dead or had moved abroad, resulting in a gross sample of 4840. The second stage was to contact the respondents by telephone and ask them the first part of the questionnaire. During this stage of the data collection, contact was established with 3212 (66.4%). The third stage was to mail the second part of the questionnaire to those that were reached via telephone. A total of 2002 completed questionnaires (a 62.3% response rate) were returned. Of those who completed the survey, 1904 had responded on all dependent and independent variables required for the data analysis.

The sample population for Papers II and III was defined as active outdoor recreationist. Unfortunately, a complete register of outdoor recreationists in Norway does not exist. However, there are several large nongovernmental organisations (NGO) that organise outdoor recreationists and these organisations have member registers. The sample framework was selected to be the two significantly largest outdoor recreation organisations in Norway, the Norwegian Trekking Association (Den Norske Turistforening, DNT) with more than 240,000 members and the Norwegian Association of Hunters and Anglers (Norges jeger- og fiskeforbund, NJFF) with more than 121,000 members. Through their work, these two organisations have had a large impact on how Norwegians define and perform outdoor recreation. Today, DNT holds a strong position in the urban areas, and NJFF in the rural parts of Norway. Together, the member lists of the DNT and the NJFF have the most complete list

of outdoor recreationists in Norway that was available. Another aspect with these two organisations that makes them of particular interest when examining nature based tourism in Norway is the fact that DNT and NJFF are two of the largest suppliers of activity products in the Norwegian nature based tourism market. Data from the recreationist sample was collated during September 2007. The sampling was conducted in a two-stage process. In the first stage, a total of 8,000 members from DNT and NJFF were randomly selected from their membership databases. During the second stage, the members sampled were contacted by telephone in order to obtain their consent to participate in the survey. During a two-week period, contact was made with 4,920 (61.5%) of the sampled members. Of these, 4,524 (92.0%) agreed to participate in the survey and provided us with an email address, which was then used for the distribution of a web-based questionnaire (Dillman, 2000). During the first week of the survey, error reports for 354 email addresses were received. The questionnaire successfully reached 4,170 email addresses in total. A total of 2,685 completed questionnaires (a 64.4% response rate) were returned. Of those who completed the survey, the study population was restricted further to respondents who had purchased a nature based tourism activity product between the 1st of May and the 31st of August 2007, a period that corresponds to the Norwegian summer holiday season. A total of 763 (27.4%) of the respondents who completed the questionnaire had used a nature based tourism activity product. These respondents were included in the survey analysis in Papers II and III.

Second-homeowners in Norway were defined as the study population for Paper IV. The sample framework was selected to be second-home owners in an average Norwegian second-home municipality in a rural area, Ål municipality in Buskerud. Data from the second-homeowner sample was collected during the summer of 2007. All the private second-homeowners who had registered in the Ål renovation register (2,058) were sent questionnaires via post. This procedure ensured that we contacted the individuals who had the most knowledge about the use and user of the second-home. A total of 1128 owners responded (54.8%).

3.2 Measures

The questionnaire used in the national survey was developed by Statistics Norway (SSB). During the telephone interview, the respondents were asked a series of questions mapping their background: gender, age, marital status, children in household, age of children in

household, educational level, member of outdoor recreation organisation, member of environmental organisation, if they owned or had the use of a second-home, and size of residence. In the questionnaire that was mailed to the respondents, they were asked if they had participated on eighteen types of outdoor activities during the last twelve months. The response options were: yes or no, Appendix 1.

The questionnaire used among the recreationist group (Papers II and III) was developed during the spring of 2007. To ensure concept validity, Malhotra (1999) recommended pre-testing the questionnaire before use. It was pre-tested on three different groups from the same population to which this survey was addressed. A total of 200 respondents, members of DNT and NJFF, participated in the pre-testing phase. Minor adjustments were made to improve the questionnaire after the two first pre-tests. The final questionnaire is shown in Appendix 2.

The second-home questionnaire was also developed during the spring of 2007 in cooperation with the Ål municipality and the tourism businesses in that area. The questionnaire was pre-tested in a two stage process. First, a draft was read and commented on by 12 representatives from various forums (two from the municipality, six students at UMB, two local business persons and two second-homeowners). After constructive feedback, the questionnaire was refined. Second, the questionnaire was sent out to 15 second-homeowners, of which ten responded. A few minor changes were implemented after feedback from the ten second-homeowners. The final questionnaire is shown in Appendix 3.

3.3 Statistical analyses

Paper I. A binary logistic regression analysis was used to test how socio-demographic variables (*gender, age, marital status, presence of children and their age, educational level, membership in outdoor recreation organisations and environmental organisations, access to a second-home, and size of residence*) influenced the likelihood of participating in the four activity categories: *freshwater angling* (including all types of angling in freshwater, e.g. brown trout, arctic char and atlantic salmon), *hunting* (small game and big game), *backcountry hiking and skiing* (longer ski and hiking trips, more than one day) and *adventure activities* (activities that can be linked with thrill and action such as rock climbing, glacier trekking, white water rafting, snow kiting, and off-piste skiing). To fine-tune the four models stepwise backward analyses (Wald test) were applied.

Paper II. The data analyses consisted of three steps. The first, an explorative factor analysis using a principal component factoring procedure with varimax rotation, was used to identify the underlying motivation structure of the 24 benefit sought items. Varimax was used as rotation since it minimizes the number of variables that have high loadings on each factor, which simplifies the interpretation of the factors (Hair, Anderson, Tatham, & Black, 1998). Factors with an eigenvalue greater than 1 were kept. Items with extraction communalities below .35 and or that had a high ($> .4$) loading on more than one factor were excluded from the factor analysis. The mean score of the items belonging to the factors was saved as new variables. Second, a cluster analysis was employed to classify the recreationists into mutually exclusive groups, on the basis of the Ward method using a K-means clustering procedure (Hair, et al., 1998). The mean score of the items belonging to the factors was used as the input variable in the cluster analysis. Scheffe multiple-range tests were then employed to examine any differences between the clusters with respect to their motivation for purchasing nature based tourism activity products. The third and final analytical step was to run a series of one-way ANOVA (on *age, number of children, age of youngest child, education level, income, activities purchased, price for the activity, included in the price, number of days of the activity, and travelling companion*) and χ^2 -tests (on *gender, marital status, and employment status*) to identify some other unique characteristics of the segments identified in terms of socio-demographic, purchased activities and trip attributes.

Paper III. The data analysis in the study was undertaken in two stages. The first, an explorative factor analysis using a principal-axis factoring procedure with varimax rotation, identified the underlying structure of the 18 descriptive statements related to nature based tourism activity experiences. Factors with an eigenvalue greater than 1 were kept. Statements with extraction communalities below .35 and/or with a high loading ($>.4$) on more than one factor were excluded from the factor analysis (Hair, et al., 1998). The purpose of factor analysis was to reveal underlying dimensions connected to how the respondents experienced the activities in which they had participated (Hair, et al., 1998), and these are referred to as *key experience attributes* in this thesis. Summated scales were constructed by combining the items belonging to each factor. The mean score for these four summated scales was saved and used as dependent variables in a one-way between-groups analysis of variance (ANOVA) (Hair, et al., 1998). In the second and final stage of data treatment, a series of ANOVA was conducted to explore the influence of household composition on the emphasis that

respondents placed on the key experience attributes connected to nature based tourism activities. Where the ANOVA results indicated significant differences between the household types, the Tukey HSD test was then conducted to reveal between in which household types there were significant differences (Hair, et al., 1998). If no significant differences were found between the two household types with children (*nuclear-families* and *single-parents*), these household types were then merged before analysing the effect of the age of the youngest child. The same procedure was conducted on the three household types without children (*couples without children*, *singles* and *adults living together*). Where no significant differences were apparent between the household types, they were merged before analysing the impact of the age of the respondents. This was done in order to minimise statistical problems related to the under-representation of particular household types.

Paper IV. The data analysis in the study was undertaken in two stages. First, Cronbach's alpha analyses were used to test the reliability of the predefined construct, three product categories (*learning products*, *adventure products*, and *hunting and angling products*), six push motives (*risk taking*, *contemplation*, *physical fitness*, *enjoyment of nature*, *skill development*, and *social interaction*) and three pull motives (*hiking opportunities and surroundings*, *closeness to ski resorts*, and *hunting and angling opportunities*). A good alpha score is considered to be between 0.7 and 0.8 (Bryman & Cramer, 2001). We did not accept scores lower than 0.6, which indicate a weak consistency. In addition, we deleted all items with an "alpha if item deleted" that were higher than the overall Cronbach's alpha. Following the reliability analyses, composite variables were constructed using the mean of all the extracted items in each factor (construct). Second, OLS regression analyses were used to test how push and pull motives influenced n second-homeowners intention to purchase three types of nature based tourism activity products, three socio-demographic variables (*age*, *income*, and *education*) were used as control variables.

4 Results

This chapter briefly summarises the main findings in the four papers before discussing the findings in the next chapter.

Paper I. The majority national representatives had participated in at least one outdoor recreation activity during the last twelve months (88%). Among the four activity categories that were investigated in this paper, freshwater angling was the most popular activity (28%) followed by backcountry hiking and skiing with a duration of more than one day (17%). In third and fourth place came hunting (9%) and adventure activities (7%). The likelihood of participating in these four activities was clearly influenced by socio-demographic variables. Two of the nine variables that were investigated in this study are easy to apply in marketing and use as segmentation variables, *member of outdoor recreation organisation* and *access to a second-home*. These were among the variables that had the strongest positive effect on the likelihood of participating in all four activity categories. A third variable that had a strong effect on the likelihood of participating in all four activity categories was gender. Indicating that, males had a higher likelihood for participating in all four activity categories. Age had a negative effect on the likelihood of participating in all four activity categories. However, the strength of the negative effect varied some between the four activity categories. The strongest effect was found on the likelihood of participating in adventure activities, while the weakest was found to be freshwater fishing. Another variable that had a negative effect on the likelihood of participating in hunting, backcountry hiking and skiing and adventure activities was presence of children in the household. Educational level had a positive effect on participation in hunting, backcountry hiking and skiing and adventure activities. People living in rural areas had a higher likelihood of participating in hunting and angling than people living in large cities. Membership in environmental organisations had a negative effect on hunting and a positive on backcountry hiking and skiing. Being married had a positive effect on the likelihood of participating in angling. Findings from this paper show that the members of outdoor recreation organisations and people with access to the second-home market are two important general segments for Norwegian nature based tourism businesses. However, these two segments can hardly be described as homogenous and they make up numerically large groups. In 2011 there were 680,000 Norwegians that where member of outdoor recreation organisations (Kaasa, 2011) and 1.2 million Norwegians had access to at least one second-home in the year 2010 (Statistikknett, 2010). The next three papers seek to identify

sub-segments and reveal motivations and needs within these two general segments, which are useful in marketing and product development.

Paper II. Nearly one third of the recreation sample purchased a nature based tourism activity product during the summer of 2007. Four purchase motivation factors were identified: *quality improvement*, *skill development*, *new activity* and *social* and five segments: *Want-it-all*, *Try new activity*, *Social*, *Performer* and *Unexplained*. These segments were not only different in terms of purchase motivation, but also in travelling behaviour and socio-demographic characteristics. *Quality improvement* was among the most important purchase motivation for all five clusters. There were larger variations among the five clusters regarding the importance of the three other purchase motivation factors. The *Want-it-all* cluster had a high score on all four purchase motivations. This cluster consists mostly of females with a high educational level that were single and did not have children. The two most common products to purchase were: *organised mountain hiking* and *organised glacier hiking*. Among the clusters, the *Want-it-all*-cluster paid the most for the activity products, \$360 (1,955 NOK). Usually they had: *equipment*, *course*, *guiding*, *accommodation*, *meals* and *transportation* included in the price. Among the five clusters, this cluster travelled most often alone and least with children. The *Try new activity* cluster was one of the youngest clusters, and at the same time they were the most highly educated cluster. The most important purchase motivations were *new activity* and *quality improvement*. They usually participated in activities that took less than one day such as *organised glacier hiking* and *rafting/white-water*. Among the five clusters, they paid the highest estimated day prices, \$161 (875 NOK), which usually included *hiring of equipment*, *a course in the activity*, and *guiding*. The *Social* cluster was motivated to purchase by the *social* and the *quality improvement* motivation factors. It was dominated by middle-age men with adult children. Among the five clusters, they paid the second highest price for the activity product, \$325 (1,765 NOK), which included *accommodation*, *meals*, and *transportation*. The two most common products purchased were *organised mountain hiking* and *bicycle tour in a nature area*. The *Performer* cluster was dominated by middle-aged men of relatively high educational levels. They were motivated to purchase by *skill development* and *quality improvement*. Among the cluster, they participated in the activities with the longest duration (3.5 days) and paid the lowest estimated day price: \$85 (463 NOK) and in this price *accommodation* and *meals* were usually included. The two most common activity products purchased were: *organised fishing trips in a river or freshwater lake* and *bicycle tour in a nature area*. The smallest cluster indentified was the *Unexplained* and it differed

from the four other clusters since it had a low score on all four motivation categories. Among the identified purchase motivation factors, the most important for this cluster was *quality improvement*. This cluster had many similarities with the *Performer* cluster. The most common activity products purchased were *organised fishing in a river or freshwater lake* and *bicycle tour in a nature area*. Among the five clusters, the *Unexplained* cluster travelled the most frequently with their partner/cohabitant, children, other family and business, and least with friends.

Paper III. Four key experience attributes were identified: *risk/challenge*, *facilitation*, *learning* and *family/children friendly*. The two most important key experience attributes connected to the consumption of the nature based tourism activity product for the sample were *facilitation* and *learning*. Further, it is clear that composition of the household had an influence on which experience attributes recreationists sought when they purchased nature based tourism activity products. The *risk/challenge* experience attributes were most popular among young households without children. In households with children, the *risk/challenge* became more important when children reached school age. The *facilitation* experience attributes were more important for *single parents*, *couples without children* and *singles* than for *nuclear families* and *adults living together*. *Single-parents* placed greater emphasis on the importance of the *learning experience* attribute than *nuclear families* did. Between the other household types there were no significant differences in the importance of the *learning experience* attribute. The *family/children-friendly* experience attributes were most popular among the two household types with children.

Paper IV. One-third of the second-home owners had an intention to purchase *learning products*, and one-sixth had an intention to purchase *adventure products* and/or *hunting and angling products*. Their intention to purchase nature based tourism activity products was influenced by push (Recreation experience preference) and pull (reasons for having a second-home at a specific destination) motives and socio-demographic variables. However, only two of the six push motivations that were investigated had an effect on the intention to purchase nature based tourism activity products: *Risk taking* and *Social interaction*. The *Risk taking* motivation had a positive effect on the intention to purchase *Learning products*, *Adventure products* and *Hunting and angling products* of. *Social interaction* had a positive effect on second-homeowners' intention to purchase *Learning products*. All three pull motivation factors that were investigated influenced at least one of the product categories. Both the

Hiking opportunities and surroundings motivation factor and the *closeness to ski resorts* motivation factor had a positive effect on the intention to purchase *Learning products* and *Adventure products*. The *hunting and angling opportunities* motivation factor had a positive second-homeowner's intention to purchase *Learning products* and *Hunting and angling products*. All three socio-demographic control variables influenced the intention to purchase at least one of the product categories. Age had a negative effect on the intention to purchase *Adventure products* and *Hunting and angling products*. Income had a positive effect on the intention to purchase *Adventure products* and *Hunting and angling products*. Educational level had a negative effect on the intention to purchase *Learning products* and *Hunting and angling products*.

5 Discussion

It has been claimed that nature based tourism is one of the fastest growing markets in the international tourism sector (Fredman & Tyrväinen, 2010; Higgings, 1996; T. H. Lee, 2009; Marques, et al., 2010; Pennington-Gray & Kerstetter, 2002; Rinne & Saastamoinen, 2005). In Norway, both stakeholders and authorities have argued that there is a large untapped potential for nature based tourism activity products (LMD, 2010; NSF, 2010). However, there is little empirical evidence supporting this assertion. Nevertheless, realizing a growth potential must be based on sufficient understanding of the market and a necessary development of products in line with the needs and wants of the potential customers (Ritchie, 1998). The aim of this thesis was to investigate what opportunities exist within the Norwegian domestic market for nature based tourism activity products by analysing the demand side. The findings from this study have both theoretical and practical implications.

5.1 Theoretical implications

Nature based tourism products can be classified in different ways since they comprise a large number of products that to some degree depend on natural elements, resources or landscapes. In this study, I argue that from a business point of view it is useful to categorise the key experience attributes that tourists connect to the products. This study identified four key experience attribute categories that people connect to nature based tourism activity products: *risk/challenge*, *facilitation*, *learning* and *family/children friendly*. These experience attributes can be further categorised into two groups, which I label *inherent* and *supplementary*. *Inherent experience attributes* are implicitly connected to the activity itself or the location it depends on, and are independent of the context in which the activities are undertaken; here *risk/challenge* and *family/children friendly* are regarded as inherent. For instant, climbing will have a tendency to be experienced as a challenging activity with an element of risk independent of the context in which it is performed. On the other hand, *supplementary experience attributes* are those experience attributes that enhance and develop an existing product or that can be added to an activity through the transformation of a free outdoor activity into commercial product; here *facilitation* and *learning* are regarded as supplementary (Paper III).

Several studies have investigated the nature based tourism market and they have shown that tourists purchasing such products are a diverse group (e.g. Galloway, 2002; Haukeland, et al., 2010; Kibicho, 2005; Kim, et al., 2003; Lindberg, 1991; Laarman & Durst, 1987; Mehmetoglu, 2005, 2007). These studies have increased our understanding of why tourists visit nature based tourism destinations, moving from left to right in Figure 1. However, they do not explain well why different groups of tourists decide to purchase activity products, moving upward in Figure 1, which was one of the aims for this study.

Three main reasons for purchasing activity products were identified. It has been argued that in post-industrialised economies most people have limited time and resources to take vacations and travel and therefore try to ensure that the holidays they go on are successful (Swarbrooke & Horner, 2007). The fact that *quality improvement* is identified as one of the most important purchase motivations supports this (Paper II). This finding indicates that the respondents expected that by purchasing a product it would improve and ensure a quality experience compared to what they would have expected if they performed the activity on their own. Therefore this purchase motive can to some extent be seen as part of an uncertainty reduction strategy. Another reason for purchasing nature based tourism activity products are connected to that some of these products are based upon special interest outdoor recreation activities. These activities often require the use of specialised equipment, and that the participants have the necessary skills to perform the activity in a safe, fun and challenging way. The skills required can take years to acquire through practice in the field. Historically, people got the knowledge and the experience that was needed through participating in activities with performers of that activity that were more experienced (Grimeland, 2004). By purchasing a commercial activity, the novice performer can shorten the time needed to learn the needed skills to perform the activity. This finding support Kane and Zink (2004) argumentation that many outdoor recreation activities, such as rafting and glacier hiking, can be purchased as short-term holiday experiences instead of a gradually acquired lifetime skill. This contention was supported by Pomfret (2011) who argued that lack of experience and knowledge might result in recreationists purchasing a nature based tourism activity product. The findings from this study support this – given that two of the most important purchase motivations that were identified were connected to learning (*skill development* and *new activity*). At the same time they explained nearly 40% of the variance in purchase motivations (Paper II). Clearly, significant demand for nature based tourism products can be explained by the fact that they have become an arena for learning. This suggests that some of the growth in

the nature based tourism activity market can be explained and realised by knowledge transformation both temporary through guiding and more permanent through courses in outdoor activities (Paper III). A third reason for purchasing activity products was, in this study, related to a basic human need – being social (Paper II and IV). However, the effect of the social motivation dimension was weaker on both the intention to purchase (Paper IV) and the actual purchase of activity products (Paper II). Nevertheless, *social interaction* had a positive effect on the intention to purchase *learning products* (Paper IV).

The findings from this study support the claim that there is a close relationship between outdoor recreation activities and nature based tourism activity products (e.g. in Carr, 2002; McKercher, 1996; Moore, et al., 1995; Pomfret, 2006). Nevertheless, the findings from this study show that there are differences between outdoor recreation activities and nature based tourism activity products, and these are linked to the *supplementary experience attributes*. Buckley (2007) argued that when outdoor activities are transformed into commercial products they are often simplified in a considerable way so that they are to be placed at the soft end of the hard-soft adventure continuum. Hill suggest that soft “refers to activities with a perceived risk but low levels of real risk, requiring minimal commitment and beginning skills; most of these activities are led by experienced guides”, while hard activities “refers to activities with high levels of risk, requiring intense commitment and advanced skills” (1995, p. 63). Nature based tourism businesses often seek to develop products that appeal to a wider range of mainstream tourists. This can be achieved by including specialised equipment and guiding in the product (Buckley, 2007; Paper II; Paper III). In some products accommodation and meals are also included. By adding these services to the activity the commercial operators make it easier for people to try a new activity since they reduce or eliminate the barriers related to lack of knowledge, experience, safety concerns and specialised equipment needed.

Although this study has not directly analysed the relationship between social identity and consumption, when analysing why people purchase nature based tourism activity products, it is important to bear in mind that today consumption of products in a social context is an important part of the social identity construction project (Blindheim, et al., 2004; Roberts & Hall, 2004). All products that are consumed in a social context have a social function since they signal something to the environment about who they are or want to be (Solomon, 2004). It has been claimed that people in post-industrialised societies are what they consume

(Escalas & Bettman, 2003, 2005). Today for many groups, outdoor activities are an important part of their social identity – next to work and family (Trauer, 2006). Nature based tourism products make it easier for people to perform new well-regarded activities, thereby having them contribute to their social identity.

Previous research on behaviour among outdoor recreationist and nature based tourists has shown that recreation experience preferences (REP) influence on their behaviour (Manfredo, Driver, & Tarrant, 1996; Raadik, Cottrell, Fredman, Ritter, & Newman, 2010).

Findings from this study only partly support this in the context of purchasing nature based tourism products since only two of the six REP motives, *risk taking* and *social interaction*, had an effect on the intention to purchase commercial products (Paper IV). A feasible explanation to that there were no effect of *contemplation*, *physical fitness*, *enjoyment of nature*, or *skill development* on the intention to purchase is connected to the close relationship between outdoor activities and nature based tourism activity products. One can assume that the needs and wants that create these REP motives can be satisfied by performing the activity independent of context, Figure 1; therefore they do not create a desire to purchase commercial activity products. Another explanation are connected to that the needs underlying some this motives (e.g. *contemplation* and *physical fitness*) also can be satisfied through consumption of other tourism products that are not nature based (e.g. visiting a cinema and fitness centre).

The literature review shows that the nature based tourism market consists of a diverse group of tourists and it is clear that there are many dimensions across which variation will occur. Previous studies have showed that both motivation (e.g. Ahmed, Barber, & d'Astous, 1997; Beh & Bruyere, 2007; Frochot, 2005; Frochot & Morrison, 2000; Jang, Morrison, & O'Leary, 2002; G. Lee, Morrison, & O'Leary, 2006; Li, Huan, & Chi, 2009; Shoemaker, 1994) and household composition (e.g. Bojanic, 1992; Collins & Tisdell, 2002a, 2002b; Commuri & Gentry, 2000; Du & Kamakura, 2006; Gibson & Yiannakis, 2002; Hong et al., 2005; Lawson, 1991; Oppermann, 1995b; Wells & Gubar, 1966; Wilkens, 1995; Zimmerman, 1982) can explain and predict consumer behaviour among tourists and they are both identified as well-functioning segmentation criteria. Findings from this study clearly indicate that tourists who purchase or have an intention to purchase nature based tourism products are a complex group of tourists with different needs and wants that they wish to satisfy by doing so. This study has successfully segmented nature based tourists based on their purchase motivation and

composition of household. Further it has showed that the intention to purchase activity products was influenced by a combination of recreation experience preferences, motivation for having a second-home at a specific destination and socio-demographic variables. Consequently, nature based tourists can be segmented based on a combination of these variables. Clearly, segmentation based on motivation and socio-demographic variables, or a combination of them, are useful for nature based tourism businesses, since they can identify groups of tourists with similar characteristics and behaviour. In addition, they help to explain why tourists purchase nature based tourism activity products and help identify who they are.

5.2 Practical implications

Findings from this study have several implications for business and policymakers in rural areas. Within the Norwegian market, it has been shown that nature based tourism products such as *freshwater fishing, backcountry hiking and skiing, hunting and adventure activities* have a commercial potential (Mehmetoglu, 2007; Nybakk, Vennesland, Hansen, & Lunnan, 2008). However, Odden (2008) has shown that the level of participation among Norwegians in *freshwater fishing, backcountry hiking and skiing and hunting* has been relatively stable in the period from 1970 - 2004. For *adventure activities*, there has been an increase in participation between 1990 and 2004 (Odden, 2008). Still findings from this study indicate that there has been no increase between 1997 and 2007 in the number of people performing adventure activities (Paper I). The stability in the level of participation in outdoor activities indicates that a growth in turnover from products that are based on these four activity categories most likely will not come from a general level of increase in the number of recreationists, instead, it has to come from a larger number of them consuming commercial products. It is therefore critical for businesses that offer activity products to identify who are their most likely costumers, to understand why people choose these commercial activities and to develop their products towards targeted market segments. However, a growth in the nature based tourism activity market can also come from increased sale to those that already are customers by developing products that to a lager extent satisfies their needs and wants, and thereby motivating them to use more money on this type of tourism products.

The national survey showed that, independent of context, the likelihood of participation in outdoor activities among Norwegians was influenced significantly by a range of simple socio-demographic variables. The three variables that had the largest impact on the likelihood

of participating in outdoor activities were: gender, membership in outdoor recreation organisations, and access to a second-home (Paper I). The survey among members of the two largest outdoor recreation organisations showed that one-third of the members had purchased a commercial product during the last summer (Paper II and III). The survey among second-home owners showed that one-third of these owners had high intentions to purchase such products when staying at their second-home (Paper IV). Together, the findings from the three surveys identify that the active recreationists and the second-homeowner are two important general segments for Norwegian nature based tourism businesses. However, these two segments are not mutually exclusive and most likely there are overlaps between them. Further, this study has showed that these two general segments consist of several sub-segments (Papers II, III and IV). These more homogenous segments must be understood and identified among business operators if they are to succeed in realising a growth.

However, there is no simple answer to the question: *why do people purchase nature based tourism activity products*. This study identified four key purchase motivation dimensions by analysing the benefits tourists sought from the nature based tourism product: *quality improvement, new activity, skill development* and *social* (Paper II). There were large variations between the respondents in how important they found these four dimensions and it was therefore possible to identify five segments: *Want-it-all, Try new activity, Social, Performer* and *Unexplained*. None of the identified segments were motivated to purchase by only one of these motivation dimensions. *Quality improvement* was among the two most important purchase motivations for all five segments. There were larger variations between the five segments regarding the importance of the three other purchase motivation dimensions. Although the *social* dimension was among the least important for the sample as a whole, it was the most important for the *Social* segment. The *Social* segment placed less importance on the two purchase motivation factors that were connected to the two learning dimensions – *new activity* and *skill development*. The first one is connected to lack of knowledge and experience, while the second one is connected to a desire to learn more. The main purchase motive for the *Try new activity* segment was *new activity*, while *skill development* was the main purchase motive for the *Performer* segment (Paper II). This complexity is important for business operators to understand, both in product development and in marketing.

It was also possible to segment the nature based tourist according to household composition (Paper III). The five main household types: *Nuclear family*, *Single-parent*, *Couples without children*, *Singles* and *Adults living together*, and age groups within these household types demonstrated differences in the key experience dimensions; *risk/challenge*, *facilitation*, *learning* and *family/children friendly*, they sought when purchasing nature based tourism activity products. Still, *facilitation* and *learning* were the two most important experience attributes for all household types. The largest variation was found on the importance of *risk/challenge* and *family/children friendly* experience attributes. Both the *risk/challenge* and the *facilitation* experience attributes were more popular among the households without children, while the *family/children friendly* experience attribute was most important for the households with children. I also showed that presence of a partner in the household with children had a negative effect on the importance of the *risk/challenge*, *facilitation* and *learning* experience attribute.

In addition, the second-home market consists of several sub-segments that vary in their intention to purchase nature based tourism products (Paper IV). Their intention to purchase was influenced by both leisure motivations and socio-demographic variables. The highest intention to purchase nature based tourism activity products was found among young second-home owners with a high income and who were socially oriented risk takers.

It has been argued that secondary data only have an indirect effect on behaviour and therefore have a lower predicting power than variables that are more directly connected to behaviour, e.g. motivation (Frochot & Morrison, 2000; Jang, et al., 2002; G. Lee, et al., 2006; Li, et al., 2009). Nevertheless, this study has shown that the level of participation in outdoor activities (Paper I), intention to purchase (Paper IV) and the experience attributes that people sought when they purchased a nature based tourism activity product (Paper III) were influenced by several socio-demographic variables; gender, age, marital status, children in household, age of children in household, educational level, and size of residence. This study clearly shows that secondary data that are collected by the Central Bureau of Statistics can be used to reveal characteristics and monitor change in the leisure market and to gain knowledge about important market segments. This is a cost efficient method for gathering data about a market that is easy to implement for small businesses with limited resources. Statistics from Statistic Norway (SSB, 2011b) documents that in the years to come there will be changes connected to several of these variables that have been shown to influence the behaviour. The question is

how these changes will influence the tourism sector and the demand for nature based tourism activity products. The exact answer is dynamic and depends upon how business operators apply such knowledge to adapt and market orient their products in a time of change.

One of the significant changes in post-industrialised societies that will have an influence on the future demand for tourism products is connected to changes in household structure. Findings from this study show that the nature based tourism sector will be affected since the key experience dimensions tourists sought when they purchased nature based tourism activity products are influenced by household composition (Paper III).

Another important development trend is connected to an aging Norwegian population which may influence the demand for tourism products. Findings from this study indicate that the demand for products that are based on adventure activities, fishing and hunting will be negatively influenced (Paper I and IV). However, other studies indicate that the level of participation in hunting and fishing are stable, but the mean age of the performers is increasing (Odden, 2008). Indicating that the recruiting of young performers is reduced at the same time the number of older performers is increasing. This makes predicting the effect of an aging population on the demand for nature based tourism product in the Norwegian market challenging.

A third development trend that may influence the demand is the increase in educational level in the general population. As with age, the findings connected to the effect of educational level in this study are inconsistent and point in different directions. The findings from the national survey indicate the number of participants in hunting, backcountry hiking and skiing and adventure activities will increase as a consequence of increased educational level in the Norwegian population (Paper I). However, the survey among second-homeowners indicates that the intention to purchase activity products that are based on hunting and fishing decrease with increased educational level (Paper IV). One feasible explanation to this inconsistent is that the education level has dissimilar effects in different segments. Clearly it is important that the tourism sector monitor and adapt to these changes.

A fourth important trend is connected to urbanisation. The findings from the national survey indicate that size of the place where people live has a negative effect on the level of participation in fishing and hunting (Paper I). If urbanisation continues to be prevalent, the

demand for activity products that are based on fishing and hunting may decrease because a lower portion of the Norwegian population is participating in fishing and hunting. Still, it is important to bear in mind that the level of participation in outdoor activity is not the same as the market potential for activity products. Tourism businesses can recruit customers both among performers and non-performers.

Clearly these changes in the socio-demographic structure in the Norwegian market pull in different directions and it is therefore challenging to predict the future development of this sector. Moreover, these changes will most likely have implications in different market segments. However, this is not something that tourism business actors should sit still and watch. They need to adapt to these changes by gaining knowledge of these segments' needs and then create products accordingly.

6 Conclusion and future research

6.1 Conclusion

The aim of this study was to investigate the opportunities that exist in the Norwegian domestic market for nature based tourism activity products. This was done by analysing data from surveys from three different samples: (1) national representative survey (conducted by Statistic Norway), (2) members of the two largest outdoor recreation organisations (DNT and NJFF), and (3) second-homeowners in a rural municipality in southern Norway. Together, the findings from the four papers provide a deeper insight into why people purchase nature based tourism activity products and who the most likely consumers are. The results from this study also provide implications for product development. Findings from this study therefore contribute knowledge that can promote future growth within the nature based tourism sector in Norway.

The majority of the Norwegian population perform some sort of outdoor recreation activities, supporting the assumption that there is a potential for nature based tourism products that include outdoor activities. Several socio-demographic variables influence the level of participation in outdoor activities in general and which activities Norwegians perform. Two general segments that are of interest for Norwegian nature based tourism businesses were identified – active recreationists and the second-homeowners. However, these are two large segments that are highly diverse regarding behaviour, characteristics and motivation for performing outdoor activities. Clearly, there is a need for more precise segmentation of these two general segments. By analysing the benefits tourists sought from the activity product it was possible to identify four purchase motivation dimensions: *quality improvement*, *skill development*, *new activity* and *social*. Based on these four purchase motivation dimensions it was possible to identify five segments among the recreationists: *Want-it-all*, *Try new activity*, *Social*, *Performer* and *Unexplained*. These segments demonstrated sharp contrasts not only in their motivation to purchase, but also in their socio-demographic characteristics and behavioural variables. Further, these purchase motivations are connected to the four key experience attributes that tourists connect to nature based tourism activity products: *risk/challenge*, *facilitation*, *learning* and *family/children friendly*. The importance of these key experience attributes were influenced by the household composition when tourists purchased activity products. Clearly, household composition can be used to segment the

nature based tourism activity market. Second-homeowners' intention to purchase nature based tourism activity products is influenced by leisure motivations and socio-demographic variables. These variables can be used to identify second-homeowners that are interested in purchasing activity products.

Findings from this study show that the tourists that purchase nature based tourism activity products are a diverse group that are motivated to purchase such products by different reasons. To succeed, businesses need to segment the market and to develop products that are tailored towards specific segments to maintain and recruit new customers. Further, several socio-demographic variables are likely to influence their behaviour as consumers of tourism products. It is therefore likely that changes in the demographic structure in Norway will influence the demand for nature based tourism activity products. For small nature based tourism businesses the household composition segmentation approach is especially useful since it is often easy to implement and it is a cost efficient method of analysing the market. Further, analyses of household structure are also suitable for analysing the impact of demographic changes, trends about which the tourism sector should be aware of and adapt to.

6.2 Limitation and suggestions for future research

The results and analyses from this study need to be viewed in light of the following limitations. First, this study was based on three cross-sectional surveys and it cannot provide absolute conclusions regarding causality. However, the study's results, as supported by theory, were consistent with assumptions about causality. Similar studies should be repeated in the future to determine if the findings are constant over time. Second, the study was conducted prior to the global recession, and this event may have influenced the nature based tourism market for these products. Third, non-probability samples were used in Papers II and III. These studies were based on representative samples from the two largest Norwegian outdoor recreation NGOs. The choice of the sample framework for these studies means that the results first and foremost are possible to generalise over customer groups that are already active in nature based tourism. It is therefore problematic to generalise the results directly to a wider population. However, the findings are highly significant for market segments with a predisposed interest in nature based tourism products. Further research is also needed to confirm the experience attributes identified and possibly others that are connected with nature based tourism activity products. It was shown that household composition has an influence on

the importance of these attributes. Fourth, this study was based on the assumption that household units and consumption units are equivalent for tourism products. This is true for some products and purchases, but not for all. Some purchases might, for instance, be determined on an individual basis, or in other social contexts outside the household, such as amongst friends. Further research is needed on the interaction between household types and travelling companions. Similarly, further research should be focused more closely on the interaction between different types of travelling companions and actual consumers of nature based tourism activities. Fifth, since both nationality (Kim & Prideaux, 2005; Pizam & Sussmann, 1995) and cultural background (Ng, Lee, & Soutar, 2007) have been shown to have an influence on tourist behaviour, the findings from this study cannot be directly used to explain the behaviour of tourists in other countries. Future research is therefore also needed to test if the findings in this study are valid for other nationalities.

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Paper I

Socio-demographic differences between participants in four outdoor recreation activities – Implications for the Norwegian domestic market for nature based tourism

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Abstract

Tourism is seen as the salvation for many rural areas when traditional businesses are downgraded. Participants in outdoor recreation make up an important market base for these businesses. This study unveils significant differences between types of recreationists by analysing a national survey among Norwegians about their participation in four outdoor recreation activity categories: *freshwater fishing, hunting, backcountry hiking and skiing*, and *adventure activities*. Participation in these four activity categories is influenced by socio-demographic variables. This study identifies two important segments within the nature based tourism activity market – the *outdoor recreation organisations segment* and the *second-home segment*. Further, this study clearly shows that young males have the highest likelihood of participating in all four of the activity categories. *Freshwater fishing* and *hunting* were most popular among residents in rural areas. *Adventure activities* were most popular among young academic males. *Backcountry hiking and skiing* was the most popular category among females.

Key Words: Outdoor recreation behaviour; Nature based tourism; Activity products; Segmentation; Socio-demographic variables

1 Introduction

For many municipalities in rural areas, tourism is often seen as a salvation when traditional business activities, such as agriculture, forestry and industry, are downgraded (Briedenhann & Wickens, 2004; Nybakk, Crespell, Hansen, & Lunnan, 2009; Nybakk & Hansen, 2008; Place, 1991; Tervo, 2008). Across Europe, numbers of farmers have completely or partly transformed their business activity from farming to tourism production (Brandth & Haugen, 2011). One important form of rural tourism is nature based tourism, which is often referred to as one of the fastest growing markets internationally within the tourism sector (Fredman & Tyrväinen, 2010; Lee, 2009; Rinne & Saastamoinen, 2005). Nature based tourism activity products are often based on special interests outdoor recreation activities such as: fishing, hunting, backcountry hiking and skiing and adventure activities (Buckley, 2007; Pomfret, 2006, 2011; Tangeland & Aas, 2011). During the last decades there has been considerable interest for nature based tourism among politicians and entrepreneurs in rural areas. In Norway, stakeholders and authorities have argued that there is a significant untapped potential for nature based tourism activity products. For instance, The Norwegian Ministry of Agriculture and Food (LMD, 2010) and The Norwegian Forest Owners' Federation (Norges skogeierforbund) (NSF, 2010) have argued that the annual turnover in Norway from the sale of hunting and fishing products can be increased by 50% from the 2009 level, to NOK 5.9 billion in 2020. Previous studies have indicated that *backcountry hiking and skiing* and *adventure activities* are also activity categories are popular and have a commercial potential that may contribute to increase the total turnover from the tourism sector in rural areas (Nybakk, Vennesland, Hansen, & Lunnan, 2008; Tangeland & Aas, 2011).

The domestic market is an important, yet often underestimated basis for nature based tourism especially in developed countries with high-costs, such as Norway. For instance, in Norway nearly 74% of all accommodation and tourism activities are purchased by Norwegians (Auno & Sørensen, 2009; SSB, 2011b). Norwegians also have a dominant position when it comes to recreational fishing and hunting in Norway. In fact, 70% of all salmon fishers and 98% of the hunters in Norway are Norwegians (SSB, 2011a; Tangeland, Andersen, Aas, & Fiske, 2010). Despite this, key players such as Innovation Norway orient much of their marketing efforts towards foreign markets, with mixed success. Clearly, a better understanding of the domestic market is crucial to instigate an economically more sustainable development of nature based tourism in Norway.

Previous research has showed that the more individuals are involved in an activity in their daily setting, the more they tend to participate in the activity while they are travelling (Brey & Lehto, 2007). Therefore, it is reasonable to assume that those who participate in an outdoor activity are a key target group for those offering nature based tourism products such as organised trips, guides and courses. By analysing a national survey among Norwegians about their participation in four outdoor activity categories; *freshwater fishing, hunting, backcountry hiking and skiing* and *adventure activities*, this study seeks to identify key characteristics of likely customers in the Norwegian domestic market for nature based tourism activity products that are based on these activities. Further, by investigating how socio-demographic variables influence the likelihood of participating in these four outdoor activity categories, we seek to identify the characteristics of important market segments. The research question addressed was: *What influence do socio-demographic variables have on people's likelihood of participating in outdoor recreation activities?* The findings from this study are important for nature based tourism businesses, landowners, right-holders and policy makers that want to develop rural areas into successful tourism destinations by developing and providing tourism products that are based on outdoor recreation activities. Such knowledge will also help decision-makers to make strategic decisions regarding positioning against future market situations since it enables to the use of socio-demographic forecasts.

2 Context and theory

2.1 History of nature based recreation and tourism in Norway

In Norway, the development of nature based tourism and outdoor recreation are closely connected historically. For centuries, nature has played a major role in Norwegian tourism products and it has been a key attraction in motivating foreign tourists to visit Norway (Fredman & Tyrväinen, 2010; Grimeland, 2004; Pedersen, 1996; Rohde, 1998). In the early 1800s, British travellers from the upper social classes that had the time and money to travel were some of the first foreign tourists that came to Norway. They came to Norway as explorers to conquer mountains, fish for salmon, and for small and large game hunting (Berg, Julsrud, & Kristiansen, 2003; Hoemsnes, Berntzen, Gunnarson, Iglum, & Sjømoen, 1999; Jacobsen, 1990; Schiøtz, 1970). This tourist inspired Norwegian to start using nature for the recreation's sake. Outdoor recreation rapidly became popular among Norwegian. In this first period Norwegian preferred activities such as mountain hiking, hunting and fishing, but at the

end of the 1800s there was increasing interest in mountain climbing and cross-country skiing (Christophersen, 1968; Søylen, 1995).

As a consequence of the increase in the number of foreigners and Norwegians travelling in Norway, commercial services in rural Norway were developed to meet the needs and wants among the tourists and tourism became an important business sector in rural areas (Pedersen, 1996; Svalastog, 2008). During the late 1800s, a number of hotels and lodges were built along the west coast of Norway to meet the increased demand for accommodation (Berg, et al., 2003). The tourists did not only purchase accommodation during their stay. It was common for climbers, anglers and hunters to pay for guiding (local expert knowledge) in connection with their trips to new areas (Hoemsnes, et al., 1999). As a consequence, number of local farmers extended their business and started to offer transportation, guiding and accommodation.

In the first part of the 1900s, larger groups of the Norwegian population participate in outdoor recreation activities. The first to do so were functionaries and workers in the large cities, but gradually outdoor recreation become more popular rural areas as well (Broch, 1963). Around 1950, outdoor recreation was described as a commonly widespread leisure activity where all groups of the population took part (Broch, 1963; Frislid, 1983). Among the important activities were: hunting, fishing, and berry picking, together with hiking, cross-country skiing and bicycling tours. This helped to contribute to a shift in the distribution between foreign and Norwegian tourists in Norway. In the 1800s and beginning of the 1900s, the majority of the tourists that travelled in Norway were foreign (Berg, et al., 2003; Hoemsnes, et al., 1999; Jacobsen, 1990). Since World War II, the domestic market has become more important for the tourism sector in Norway. Today the majority of all tourism products that are sold in Norway are purchased by Norwegians (Auno & Sørensen, 2009).

Even though the Norwegian outdoors recreation underwent extensive democratization during the first half of the 1900s, the idea of outdoor life for the broad popular base was still more a myth than a reality. As late as the 1970s, large population groups, such as women, the elderly and rural area residents were greatly underrepresented in a range of activities (Odden 2008). However, during the next 30 years democratization was largely finished. Groups that had been underrepresented earlier were now on a par with the rest of the population and the general participation in outdoors life had increased further (Odden 2008). The result of this

process was that there was increased support for many outdoor activities. The support for activities such as hunting, fishing and overnight tours, however received decreased support among the youth, which resulted in relatively unchanged participation for these activities since 1970 (Odden 2008). However, for many activities there is still a marked difference in age and gender. In the last 10-15 years, the Norwegian outdoors recreation has gone through yet another change in that activities with a focus on excitement, physical development and mastery of skills have evolved (Odden 2008). Adventure activities such as freeride skiing and snowboarding, mountain biking, rock climbing, glacier trekking, along with kiting, rafting and whitewater kayaking, each have limited support, but in all, these are practiced by a relatively considerable portion of the Norwegian population. In addition, these activities have created a basis for commercial incentives because of their requirements for competence and special equipment (Buckley, 2007; Pomfret, 2011).

2.2 Nature based tourism

Nature based tourism can be defined in a number of ways since it is comprised of a large number of tourism products that to some degree depend on the inclusion of natural elements, such as scenery, waterfalls, rivers, forests, mountains, fish and/or wildlife, and protected areas, in the production of the tourism product. Thus it has proven difficult to establish an indisputable definition upon which the research community can agree to. In fact, how to define this is an ongoing debate among researchers (Fennell, 2000; Higgings, 1996; Mehmetoglu, 2007; Rønningen, 2010). To complicate the picture further, nature based tourism is frequently used as a collective term, and sometimes as a synonym, for: sustainable tourism, green, eco, rural, alternative, adventure and responsible tourism (Higgings, 1996; Luzar, Diagne, Gan, & Henning, 1998; Priskin, 2001; Roberts & Hall, 2004). An assessment of the proposed definitions indicates that nature based tourism is often defined in a normative way: being sustainable, non-consumptive, contributing to conservation, promoting learning about nature, and local empowerment. Despite the lack of a clear definition, a range of tourism products are based on outdoor activities, such as fishing, hunting and mountaineering (Nybakk & Hansen, 2008; Pomfret, 2011; Tangeland & Aas, 2011; Weber, 2001). These are all special interest outdoor recreation activities that often require the participants to have some skills to perform the activity and make use of the specialised equipment often needed (Buckley, 2007). The skills required can take years to master through practice in the field. However, in post-industrialised economies, these outdoor recreation activities are to a large extent treated more as a short-term holiday experience that can be purchased than as a

gradually acquired lifetime skill (Kane & Zink, 2004). It has also been argued that lack of experience and knowledge might have the result that some recreationists give up some of their independence to enjoy a problem-free guided trip (Pomfret, 2011; Tangeland, In Press).

2.3 Market segmentation

All markets consist of consumers with different needs and preferences and marketing segmentation has become a standard procedure in strategic marketing. In this case, not all performers are alike. Market segmentation is the process of identifying people with similar needs, wants and characteristics, and putting them into groups based on selected characteristics. When appropriate groups of tourists are identified, tourism businesses and organisations can be more precise in their product development and marketing work. Significant research has shown that a number of variables influence people's preferences and behaviour, such as: age (Collins & Tisdell, 2002a), gender (Collins & Tisdell, 2002b; Frew & Shaw, 1999; Meng & Uysal, 2008), family life cycle (Fodness, 1992), household composition (Tangeland & Aas, 2011), nationality (Kim & Prideaux, 2005; Pizam & Sussmann, 1995), cultural background (Ng, Lee, & Soutar, 2007), motivation (Crompton, 1979), consumer self-perception (Fodness, 1994), values (Sirakaya & Woodside, 2005), educational level (Vogt & Fesenmaier, 1998) and leisure time interests (Brey & Lehto, 2007). Each of these variables as well as combinations of them can be used as segmentation criteria. When segments are identified the next stage is to select those of the identified segments that should be targeted. Mill and Morrison (2009) formulated eight criteria for choosing a market segment: (1) measurable, (2) accessible, (3) substantial, (4) defensible, (5) durable, (6) competitive, (7) homogeneous and (8) compatible. Socio-demographic variables have been criticized as segmentation variables since they are believed to only have an indirect effect on the behaviour. Thus, they have less predictive power than variables that are more directly connected to the behaviour, e.g. motivation. Nevertheless, multivariate socio-demographic segmentation methods have been used with great success and are among the most used segmentation criteria within tourism research (Swarbrooke & Horner, 2007). Among the reasons why these segmentation criteria often are used are because they are cost efficient, easy to understand and applicable in a business setting. In addition, this segmentation approach gives insight into how changes in the population regarding socio-demographic compositions will affect future market situations. Therefore in this study, we will investigate how socio-demographic variables have an influence on peoples' likelihood of participating in four outdoor activity categories.

3 Methodology

3.1 Survey administration

The data was collected during the autumn of 2007 and the winter of 2008 from a representative sample of Norwegian residents between 16 and 79 years, and was executed by Statistics Norway (SSB). Data was collected through a combination of telephone and mail based interviews. The sampling was conducted in a three-stage process. In the first stage, a total of 5000 people were randomly selected from the National Register. A total of 160 of these were either dead or had moved abroad, resulting in a gross sample of 4840. The second stage was to contact the respondents by telephone and ask them the first part of the questionnaire. During this stage of the data collection, contact was established with 3212 (66.4% of the gross sample). The third stage was to mail the second part of the questionnaire to those that were reached via telephone. A total of 2002 completed questionnaires (a 62.3% response rate of those who completed the first part of the study) were returned. Of those who completed the survey, 1904 had responded to all the dependent and independent variables required for the data analysis in this study, representing a response rate of 59.3% of those who answered the first part of the questionnaire.

3.2 Questionnaire and measurement

During the telephone interview, the respondents were asked questions mapping their background: gender, age, marital status, children in household, age of children in household, educational level, member of outdoor recreation organisation, member of environmental organisation, if they owned or had access to a second-home, and size of residence, Table 1. These variables were used as the independent variables to explain the likelihood of participating in the four outdoor recreation activity categories. In the questionnaire that was mailed to the respondents, they were asked if they had participated in eighteen different types of outdoor activities during the last twelve months. The response options were: yes or no. The dependent variables in the analysis were participation in four outdoor recreation activity categories. The four categories were defined as: *freshwater fishing* (containing all types of fishing in freshwater, inland fishing in addition to the fishing of anadromous Atlantic salmon, brown trout and Char), *hunting* (small game and big game), *backcountry hiking and skiing* (longer cross country ski trips and hiking trips of more than one day's duration) and

adventure activities (consisting of activities that can be linked with thrill and action; rock climbing, glacier trekking, white water rafting, snow kiting, and off-piste skiing).

3.3 Data treatment

All the statistical analyses were performed using the software SPSS 19.0 and the general significance level was set to $\alpha = .05$. A binary logistic regression analysis was used to test how different socio-demographic characteristics influenced the likelihood of participation in the four activity categories. To fine-tune the four models, stepwise backward analysis (Wald test) was applied. To validate the solutions, a forward stepwise analysis was also applied.

4 Results

4.1 Sample characteristics

As seen in Table 1, the sample consisted of an almost equal number of females and males. The sample was between 16 and 79 years old. A majority of the sample were married. The majority of the sample did not have children living in their household. Of those that were married, nearly half (47%) had children younger than 19 years old living in the household. Only 11% of those that were single had children younger than 19 years living in their household. The most common place to live was a small village or a city. One-third of the sample had studied at a university. One-fifth were members of a nongovernmental outdoor recreation organization. Nearly half of the sample owned or had access to a second-home. The characteristics of the sample corresponded well with the profile of the Norwegian population and there is reason to believe that the sample is a representative sample for the Norwegian population. A great majority of the sample participated in one or more outdoor activities during the last twelve months (88%). Among the four activity categories of special concern to this study, freshwater fishing was the most popular (28%), followed by backcountry hiking and skiing (17%), hunting (9%) and adventure activities (7%).

Table 1. The characteristics of the sample

Sex (N = 2002)		Size of residence (N = 2 000)	
Males	48.1%	Rural areas (< 2 000)	20.8%
Females	51.9%	Densely populated areas (2 000 – 100 000)	57.1%
Age (N = 1986)		Large city (> 100 000)	
16 – 24	10.8%	Children living in household (N = 2002)	
25 – 34	15.0%	No children	64.1%
35 – 44	21.5%	Youngest child 0 – 6 Years	15.8%
45 – 54	20.0%	Youngest child 7 – 18 years	20.1%
55 – 64	20.7%	Education level (N = 1922)	
65 – 79	12.0%	Primary school	19.8%
Marital status (N = 2002)		Upper secondary/high school	44.3%
Single	29.6%	University (1-3 years)	26.7%
Married	70.4%	University (+ 4 years)	9.2%
Ownership or access to a second-home (N = 2002)		Member of (N = 2002)	
No	52.2%	Outdoor recreation organisation	17.2%
Yes	47.8%	Environmental organisation	6.3%

4.2 Likelihood of participating in outdoor activities

In order to investigate how socio-demographic variables influenced the likelihood of participation in the four outdoor recreation activities, a logistic regression analysis was conducted for each of the four activity categories. The dependent variable in the models was the logarithm of the odds that respondents would participate in an outdoor recreation activity (*freshwater fishing, hunting, backcountry hiking and skiing, and adventure activities*). The dependent variables were then predicted by the nine independent variables: *gender, age, marital status, children living in household, educational level, and membership in an outdoor recreation organisation, membership in an environmental organisation, access to a second-home, and size of residence*, Table 1. The correlations between the independent variables were between .007 and .299, indicating that the variables were independent from each other.

The logistic model for the likelihood for participating in an outdoor recreation activity is expressed as follows:

$$\ln (P / (1 - P)) = \sum_1^9 \beta_i \ln X_i$$

Where:

- P** the probability that respondents would participate in an outdoor recreation activity (freshwater fishing, backcountry hiking and skiing, hunting, and adventure activities),
 X_i independent variable,
 β_i estimated parameters,
 \ln natural logarithm.

The logistic equation is written as:

$$\ln Y = \beta_0 + \beta_1 \ln X_1 + \beta_2 \ln X_2 + \dots + \beta_9 \ln X_9 + \varepsilon$$

Where:

- Y** 1 – (Participate in an outdoor recreation activity),
 0 – (Not participate in an outdoor recreation activity),
 X_1 **gender** (0: Female, 1: Male),
 X_2 **age;**
 1 – 16 to 24 years
 2 – 25 to 34 years
 3 – 35 to 44 years
 4 – 45 to 54 years
 5 – 55 to 64 years
 6 – 66 to 79 years
 X_3 **marital status** (0: Single, 1: Married)
 X_4 **children living in household;**
 0 – No children
 $X_{4.1}$ – Youngest child 0 – 6 Years
 $X_{4.2}$ – Youngest child 7 – 18 years,
 X_5 **educational level;**
 1 – Primary school
 2 – Upper secondary/high school
 3 – University (1-3 years)
 4 – University (+ 4 years),
 X_6 **member of outdoor recreation organisation** (0: No, 1: Yes),
 X_7 **member of environmental organisation** (0: No, 1: Yes),
 X_8 **ownership or control of a second home** (0: No, 1: Yes),
 X_9 **size of residence;**
 1 – Rural areas (< 2 000)
 2 – Densely populated areas (2 000 – 100 000)
 3 – Large city (> 100 000)
 β_0 **coefficient of intercept,**
 β_1, \dots, β_9 estimated parameters,
 \ln natural logarithm,
 ε error term.

The results of the logistic regression models are showed in Tables 2, 3, 4 and 5. The data fits the models satisfactorily. Overall, 74.3% – 93.5% of all cases could be correctly classified in the four models. However, the classification ratio was clearly higher with regard to those that had not participated in the four activity categories: *freshwater fishing* (94.3%), *hunting* (98.7%), *backcountry hiking and skiing* (98.0%), and *adventure activities* (99.9%), than in the group that had participated in four activity categories: *freshwater fishing* (21.6%), *hunting* (19.4%), *backcountry hiking and skiing* (12.9%), and *adventure activities* (.8%). This was mainly due to the high share of cases that had not participated in these activities.

Nevertheless, the Hosmer Lemeshaw tests and the Omnibus tests indicate that the models adequately fit the data. However, both Cox and Snell R^2 (from .068 to .146) as well Nagelkerke R^2 (from .158 to .316) turned out to be rather low in all four models. Consequently, the predictive powers of the models are limited, but at an acceptable level.

Table 2: Results of logistic regression – likelihood for participating on freshwater fishing (N = 1904)

Variables in the equation	β	S.E.	Wald	df	Sig	Exp(β) Odds Ratio
X ₁ , gender (0: Female, 1: Male)	.985	.112	77.900	1	.000	2.678
X ₂ , age	-.150	.039	15.025	1	.000	.861
X ₃ , Marital status (0: Single, 1: Madrid)	.308	.131	5.577	1	.018	1.361
X ₆ , Member of outdoor recreation organisation	.828	.133	38.686	1	.000	2.288
X ₈ , Ownership or dispose of a second home	.622	.111	31.120	1	.000	1.862
X ₉ , Size of residence	-.418	.084	24.674	1	.000	.658
X ₀ , Constant	-.830	.249	11.087	1	.001	.436
Variables not in the equation						
	Score	df	Sig.			
X ₄ , Children living in household	1.267	2	.531			
X ₅ , Educational level	.250	1	.617			
X ₇ , Member of environmental organisation	.002	1	.961			

Cox & Snell $R^2 = .110$, $R^2_{\text{Logit}} = .098$, Nagelkerke $R^2 = .158$. Omnibus test of Model coefficients $\chi^2(6) = 221.105$, $p < .000$. Hosmer and Lemshow test: $\chi^2(8) = 8.931$, $p = .348$. Percentage correct predicted = 74.3%.
- 2 Log likelihood = 2029.035

Table 3: Results of logistic regression – likelihood for participating on Hunting (N=1904)

	β	S.E.	Wald	df	Sig	Exp(β) Odds Ratio
Variables in the equation						
X ₁ , Gender (0: Female, 1: Male)	1.854	.234	62.664	1	.000	6.386
X ₂ , Age	-.309	.067	21.403	1	.000	.734
X ₄ , Children living in household			7.380	2	.025	
X _{4.1} : Youngest child 0-6 years	-.747	.284	6.899	1	.009	.474
X _{4.2} : Youngest child 7-18 years	-.301	.231	1.704	1	.192	.740
X ₅ , Educational level	.237	.111	4.578	1	.032	1.268
X ₆ , Member of outdoor recreation organisation	1.908	.191	99.723	1	.000	6.736
X ₇ , Member of environmental organisation	-.820	.434	3.574	1	.059	.440
X ₈ , Ownership or dispose of a second-home	.471	.190	6.166	1	.013	1.601
X ₉ , Size of residence	-1.013	.149	46.343	1	.000	.363
X ₀ , Constant	-1.769	.438	16.294	1	.000	.171
Variables not in the equation						
	Score	df	Sig.			
X ₃ , Marital status (0: Single, 1: Madrid)	2.311	1	.128			

Cox & Snell $R^2 = .146$, $R^2_{\text{Logit}} = .263$, Nagelkerke $R^2 = .326$. Omnibus test of Model coefficients $\chi^2(9) = 300.824$, $p < .000$. Hosmer and Lemshow test: $\chi^2(8) = 7.207$, $p = .514$. Percentage correct predicted = 91.6%.
- 2 Log likelihood = 844.935

Table 4: Results of logistic regression – likelihood for participating on backcountry hiking and skiing (N=1904)

	β	S.E.	Wald	df	Sig	Exp(β) Odds Ratio
Variables in the equation						
X ₁ , Gender (0: Female, 1: Male)	.345	.133	6.709	1	.010	1.413
X ₂ , Age	-.360	.046	60.359	1	.000	.698
X ₄ , Children living in household			16.171	2	.000	
X _{4.1} : Youngest child 0-6 years	-.792	.203	15.287	1	.000	.453
X _{4.2} : Youngest child 7-18 years	-.301	.168	3.201	1	.074	.740
X ₅ , Educational level	.164	.077	4.568	1	.033	1.178
X ₆ , Member of outdoor recreation organisation	1.565	.147	113.168	1	.000	4.783
X ₇ , Member of environmental organisation	.702	.235	8.930	1	.003	2.018
X ₈ , Ownership or dispose of a second-home	.243	.134	3.310	1	.069	1.276
X ₀ , Constant	-1.284	.236	29.558	1	.000	.277
Variables not in the equation						
	Score	df	Sig.			
X ₃ , Marital status (0: Single, 1: Madrid)	1.380	1	.240			
X ₉ , Size of residence	1.789	1	.181			

Cox & Snell $R^2 = .109$, $R^2_{\text{Logit}} = .126$, Nagelkerke $R^2 = .182$. Omnibus test of Model coefficients $\chi^2(8) = 219.820$, $p < .000$. Hosmer and Lemshow test: $\chi^2(8) = 5.752$, $p = .752$. Percentage correct predicted = 83.5%.
- 2 Log likelihood = 1523.532

Table 5. Results of logistic regression – likelihood for participating on adventure activities (N = 1904)

Variables in the equation	β	S.E.	Wald	df	Sig	Exp(β) Odds Ratio
X ₁ , Gender (0: Female, 1: Male)	.862	.210	16.878	1	.000	2.369
X ₂ , Age	-.621	.078	63.663	1	.000	.537
X ₄ , Children living in household			5.676	2	.059	
X _{4.1} : Youngest child 0-6 years	-.670	.281	5.673	1	.017	.512
X _{4.2} : Youngest child 7-18 years	-.153	.261	.341	1	.559	.858
X ₅ , Educational level	.393	.111	12.471	1	.000	1.482
X ₆ , Member of outdoor recreation organisation	1.175	.211	30.857	1	.000	3.237
X ₀ ,Constant	-2.310	.330	48.987	1	.000	.099

Variables not in the equation	Score	df	Sig.
X ₃ , Marital status (0: Single, 1: Married)	.202	1	.653
X ₇ , Member of environmental organisation	.004	1	.947
X ₈ , Ownership or dispose of a second-home	.172	1	.679
X ₉ , Size of residence	.122	1	.727

Cox & Snell $R^2 = .068$, $R^2_{\text{Logit}} = .147$, Nagelkerke $R^2 = .178$. Omnibus test of Model coefficients: $\chi^2(6) = 133.879$, $p < .000$. Hosmer and Lemshow test: $\chi^2(8) = 6.889$, $p = .549$. Percentage correct predicted = 93.5%.
- 2 Log likelihood = 777.922

All nine independent variables had a significant effect on the likelihood for participating in at least one of the outdoor recreation activity categories, which indicates that participation in outdoor recreation activities is influenced by socio-demographic variables.

The most influential component for the probability of participating in the four activity categories was *membership in an outdoor recreation organisation*. The Odds ratio indicates that those that were members of an outdoor recreation organisation had a seven times higher likelihood for participating in *hunting*, five times higher for *backcountry hiking and skiing* and three times higher in *adventure activities* and twice the likelihood for participating in *freshwater fishing* than those that were not members.

Gender was the second most influential component for the probability of participating in the four activity categories. The Odds ratio indicated that males had a six times higher likelihood for participating in *hunting*, two and a half times higher for *freshwater fishing* and *adventure activities*, and one and half times larger likelihood for participating in *backcountry hiking and skiing* than females, all other factors being equal.

Age had a significant negative effect on the likelihood for participating in all four activity categories. The strongest negative effect of age was found to be on the likelihood for participating in the *adventure activities* (Odds ratio = .537), followed by *backcountry hiking*

and skiing (Odds ratio = .698), *hunting* (Odds ratio = .734) and *fishing* (Odds ratio = .861). This indicates that when a person moves from one age category to another, e.g. from 16 – 24 years to 25 – 34 years, the likelihood for participating in adventure activities decreased by a factor of .537, all other factors being equal. The same interpretation can be done for the three other activity categories.

The likelihood for participating in *hunting, backcountry hiking and skiing* and *adventure activities* were significantly negatively affected by the presence of young *children in the household* (0 – 6 years). The Odds ratios of young children in these three activities were between .453 and .512. This means that the likelihood for participating in *backcountry hiking and skiing, hunting* and *adventure activities* decreases by a factor of .453, .474 and .512 if there are young children in the household compared with households without children, all other factors are being equal. When the children were older, between seven and eighteen, this negative effect disappears. For *backcountry hiking and skiing*, there was also a significant negative effect of having children between seven and eighteen in the household on the likelihood for participating (Odds ratio = .740).

Educational level had a significant positive effect on the likelihood for participating in *hunting, backcountry hiking and skiing* and *adventure activities*. People with more than 4 years education at a university had an almost five times higher likelihood for participating in *adventure activities*, two and a half times higher for *hunting*, and twice for *backcountry hiking and skiing* than those with only a primary school education.

Access to a second-home had a significant positive effect on the likelihood for participating in *freshwater fishing, hunting, and backcountry hiking and skiing*. Those that either owned or had access to a second-home had a 1.8 times higher likelihood for participating in *freshwater fishing*, 1.6 times higher for *hunting*, and 1.3 times higher likelihood for participating in *backcountry hiking and skiing*.

The *size of residence* had a significant negative effect on the likelihood for participating in *freshwater fishing* and *hunting*. Those living in rural areas had a three and a half times higher likelihood for participating in *freshwater fishing* and twenty-one times higher likelihood for participating in *hunting* than those living in large cities.

Being a *member of an environmental organisation* had a significant effect on the likelihood for participating in *hunting* and *backcountry hiking and skiing*. Those that were not members of an environmental organisation had more than twice the likelihood for participating in *hunting*, however, those that were members had twice the likelihood for participating in *backcountry hiking and skiing*.

Marital status had the lowest impact on the likelihood for participating in the four outdoor activity categories. Marital status only had a significant effect on the likelihood for participating in *freshwater fishing*. Being married increased the likelihood for participating in *freshwater fishing* by a factor of 1.36, all other factors being equal.

The most likely participators in *freshwater fishing* were young males that lived in a rural area, were married, member of an outdoor recreation organisation and had access to a second-home. *Hunting* was most popular among young males living in a household without children in a rural area, with access to a second-home. They had a high educational level, were members of an outdoor recreation organisation, but not members of an environmental organisation. The most likely hikers were young males living in a household without children in a rural area and they had access to a second-home. They were highly educated and were members of both an outdoor recreation organization and an environmental organisation. *Adventure activities* were most popular among young males living in a household without children, with a high educational level that was member of an outdoor organisation.

5 Discussion

5.1 Main findings

This paper has explored the level of participation in outdoor activities among Norwegians, and how this is influenced by socio-demographic variables. The findings clearly show that there are some similarities but also clear differences between participants in the four activity categories. However, the low predictive powers of the likelihood models indicate that participation in the four activity categories is only partly explained by socio-demographic variables. Clearly other variables such as motivation and interest also influence the likelihood for participating in these activities. Still, this study showed that the likelihood of participation in outdoor activities was influenced by the socio-demographic variables and these variables can be used to identify market segments within the recreation market.

The likelihood for participating in all four activity categories was clearly positively influenced by a *membership in outdoor recreation organisations*. The high positive effect of *membership in outdoor recreation organisations* on hunting can partly be explained by the fact that people that hunt will often be interested in being member of a hunter organisation such as NJFF, which is the second largest outdoor recreation organisation in Norway. Almost the same explanation can be used to explain the high positive effect of membership on the likelihood for participating in backcountry hiking and skiing since the main focus of the largest outdoor recreation organisation in Norway, DNT, is on backcountry hiking and skiing activities. The positive effect of membership on the likelihood for participating in adventure activities can partly be explained by the fact that DNT also organises courses and arrangements that are social meeting places for people that perform adventure activities. However, it was surprising to see that membership had a much lower effect on the likelihood for participating in fishing than on hunting, since NJFF is an organisation for both hunters and anglers. The explanation for the lower effect of membership on fishing is connected to the fact that fishing is also a popular activity among those that are not members of the outdoor organisations. A feasible explanation is connected to the fact that recreational freshwater fishing is a large activity with more "casual" performers resulting in a lower organisational percent (Odden, 2008).

Participation in the four activity categories was clearly influenced by gender. The largest effects of age were found to be on the likelihood for participating in fishing and hunting. These are activities that have a tendency to be experienced as masculine activities and therefore appeal to a larger extent to males (Humberstone & Pedersen, 2001). The difference between the genders in the likelihood for participating in adventure activities can be explained by the fact that males generally are more risk takers than females (Diehm & Armatas, 2004; Eckel & Grossman, 2002). The lower effect of gender on the likelihood for participating in backcountry hiking and skiing indicates that this is an activity that to a larger extent appeals to both genders.

Although *age* had a strong negative effect on the likelihood for participating in all four activity categories it is reasonable to assume that age probably does not have a direct effect on the likelihood for participating in outdoor activities. However, age is strongly correlated with other factors such as available leisure time and level of physical fitness (Savela et al.,

2010; Wood, Hondzinski, & Lee, 2003), which may have a more direct effect on the likelihood for participation in outdoor activities. Previous research has showed that the relationship between age and available leisure time can be illustrated as a U-curve (Mill & Morrison, 2009). Young and old people are the ones with most available leisure time. People in their 40s have the least available leisure time. The main causes for the changes in available leisure time are connected with changes in working and household situations. A feasible explanation as to why the participation in these activities does not increase when people grow older and have more leisure time is connected to physical fitness. All four activity categories that were investigated in this study require that the performer has a minimum of physical fitness. As people grow older, their physical fitness is reduced. This makes it more difficult to perform these activities.

The negative effect of having young children in the household on participation in hunting, backcountry hiking and skiing and adventure activities corresponds to the negative effect of age. As people grow older they have a tendency to have children, which again reduces the available leisure time. Another feasible explanation is connected to the fact that hunting, long backcountry hiking and skiing trips and adventure activities are often experienced as not children friendly activities. When the children in the household grow older, the negative effect on participation in hunting and adventure activities disappeared. Our findings support Tangeland and Aas (2011) who showed that households with children preferred activities that were experienced as family and children friendly, especially when the children were 12 years or younger. When the children in the household became older, the importance of the risk/challenge dimension increased.

It was expected to find a positive effect of *educational level* on the likelihood for participation in most outdoor activities. Several previous studies have shown that participation in outdoor recreation is influenced by social class, with which educational level is strongly correlated (Odden, 2008; Skogen, 1999), and that tourists who purchase nature based tourism products in general have a higher educational level than those purchasing mass tourism products (Beh & Bruyere, 2007; Holden & Sparrowhawk, 2002; Meng & Uysal, 2008; Meric & Hunt, 1998). We found as Odden (2008) did that there was no effect of educational level on participation in recreational freshwater fishing. One likely explanation to this finding is connected to the fact that recreational freshwater fishing is comprised of many types of fishing activities that appeal to different groups. Odden explained this finding by the

fact that historical freshwater fishing in Norway has been an outdoor activity mainly preformed by people living in rural areas and members of the working class (Odden, 2008).

Second-home owners are a group of tourists that are often overlooked in tourism studies and in targeting customers among tourism businesses. They are distinguished from other tourism segments by not purchasing accommodation when they visit the area where they have the second-home. Mostly, they arrange their own meals and transportation. However, there are no reasons to assume that they have a lower likelihood for purchasing organised activities than other segments of tourists have. Our findings clearly show that people with access to a second-home had a higher likelihood for participating in freshwater fishing, hunting and backcountry hiking and skiing than others did. It was also shown that *size of residence* had a negative effect on the likelihood for participating in hunting and fishing. Both the positive effect of access to second-home (which is often located in rural areas) and the negative effect of *size of residence* (indicating attachment to the nature resources needed) were essential for participating in these activities.

5.2 Business implications

The level of participation among Norwegians in outdoor activities and the distribution between the activity categories found in this study correspond well with what has been found in previous studies (Odden, 2008; Vaage, 2009). This indicates stability in participation in outdoor recreation activities in the last decade. For the tourism sector, this means that in the short-term they cannot expect the main growth in the market for nature based tourism activity products to come from a large increase in numbers of those that engage in these activities. However, recent studies on motivations among recreationists indicate that there has been a shift in why people are performing these outdoor activities from a strong a focus on gathering to a greater focus on using nature as a place for training. Another evident change in outdoor activities preferences is connected to the increased popularity of adventure activities during the two last decades (Odden, 2008). Both these changes may contribute to increase the demand for nature based tourism activity products.

Brey and Lehto (2007) showed that more a person is involved in an activity in their daily living, the higher the likelihood were that he/she would participate in this activity when they were travelling. Consequently, the main strategy nature based tourism businesses should

follow is to target those that are already performing the activity. Even though it has been argued that socio-demographic variables only have an indirect effect on behaviour, this study clearly shows that participation in outdoor activities is influenced by socio-demographic variables, and that there are major differences in characteristics between participants in each activity category. It is clear that market segments can be identified by using socio-demographic variables as core segmentation criteria.

Further, two of the nine variables that were investigated in this study are easy to apply in marketing and use as segmentation variables, *member of outdoor recreation organisation* and *access to a second-home*; at the same time, they can have a strong impact on the participation in the four outdoor activity categories. Another advantage with these two variables is that they are to some degree more directly connected to performance of outdoor activities than the other variables are. Among those that were members of outdoor recreation organisations, 47% participated in freshwater fishing, 28% in hunting, 43% in backcountry hiking and skiing and 15% in adventure activities. The level was somewhat lower among the second-home segment with 35% in freshwater fishing, 12% in hunting, 21% in backcountry hiking and skiing and 8% in adventure activities. The level of participation is clearly higher than for the total sample, indicating that these two segments should be targeted by nature based tourism activity businesses.

Both the *outdoor recreation organisation segment* and the *second-home segment* passes Mill and Morrison (2009) eight criteria for choosing market segments. Both segments are possible to find and they are reachable. The outdoor recreation organisations have member registers and high quality magazines (e.g. *Fjell og Vidde* and *Jakt og fiske*), which can be used to communicate with this segment. The second-home segment is a geographically defined segment resulting in that the owners and users of the second-homes can be reached when they are at the second-home. There are also several magazines in Norway that have second-home owners as their target audience (e.g. *Hytteliv* and *Hyttemagasinet*), which can be used to communicate with this segment. Clearly both segments are sufficient when it comes to the number of people of which they are comprised. The two largest outdoor organisations in Norway, DNT and NJFF, have respectively 241,520 and 121,223 members each as of 2011 and the total number of registered members in outdoor recreation organisations in Norway was 680,000 (Kaasa, 2011). In 2010, there were 398,686 second-homes in Norway, and approximately 1.2 million Norwegians (one in four) had access to at least one second-home

(Statistikknett, 2010). During the last decade, there have been positive developments in the number of registered outdoor recreationists and second-homes in Norway. Clearly both represent important segments for the Norwegian domestic market for nature based tourism activity products. However, the large size of these segments and the fact that participation in outdoor activities is influenced by a number of other socio-demographic variables such as: *gender, age, educational level, size of size of residence and children living in household*, indicates that these two segments most likely must be split into sub-segments to be sufficiently homogenous. By using the other socio-demographic variables as additional segmentation criteria, identification of the sub-segments within the *outdoor recreation organisations segment* and the *second-home segment* is possible.

The fact that young males have a higher likelihood for participating in all four outdoor activity categories indicates that for a short-term approach, nature based tourism businesses should target this sub-segment and develop products that appeal to them. In addition, businesses that offer freshwater fishing and hunting activity products should focus their marketing towards those living in rural areas within both the *outdoor recreation organisations segment* and the *second-home segment*; while those that offer adventure activities should target young males with a high educational level.

6 Conclusion

Nature based tourism is seen as the salvation for municipalities in rural areas when traditional business activities, such as agriculture, forestry and industry, are downgraded. The aim of this study was to investigate the level of performance of outdoor recreation activities and the characteristics of the performers. By doing so, this study sought to investigate the potential in different segments within the Norwegian domestic market for nature based tourism activity products that are based on freshwater fishing, hunting, backcountry hiking and skiing and adventure activities. It was found that the majority of the Norwegian population had participated in an outdoor activity during the last twelve months. The two most popular activities were freshwater fishing and backcountry hiking and skiing among the four activity categories investigated. The two least popular activities were hunting and adventure activities.

The findings from this study clearly show that participation in outdoor activities is influenced by a number of socio-demographic variables and this can be used to identify market segments that have a higher likelihood for participating on these activities, and hopefully also to purchase nature based tourism products that are based on these activities. In fact, findings from this study show that the *outdoor recreation organisations segment* and the *second-home segment* are two important segments for the nature based tourism activity market. They have a higher likelihood for participating in freshwater fishing, hunting, backcountry hiking and skiing and adventure activities than others have. However, the large size of these two segments indicates that they most likely consist of sub-segments that can be identified by using the other socio-demographic variables that this study revealed had an effect on the likelihood for participating in these four activity categories. Within these two segments, the most likely participators in freshwater fishing are young males living in rural areas. Businesses offering activity products that are based on backcountry hiking and skiing should target young males living in households without children, who have a high educational level and are member of an environmental organisation. Those offering hunting products should target young males living in rural areas in households without children with a high educational level and who are not members of an environmental organisation. Adventure activity businesses should target young males living in households without young children that have a high educational level.

This study clearly shows that secondary data that are collected by the Central Bureau of Statistics can be used to reveal characteristics of leisure markets for outdoor recreation activities and to identify market segments. Clearly this is a cost efficient method for gathering data about a market. In addition to providing information about market opportunities today, this method also provides information about possible development trends in the market.

The results and analyses from this study need to be viewed in light of the following limitations. First, the predicting power of the four likelihood models was limited, which indicates that socio-demographic variables can only partly explain participation in outdoor activities. Still, we believe that findings from this study will help nature based tourism businesses, which offer products that are based on freshwater fishing, hunting, backcountry hiking and skiing and adventure activities, to choose the profitable market segments. Future studies should include variables such as motivation and interest when investigating the characteristics of the performers. Such an approach will give a more complete picture of the

performer segments. Second, the survey that this study is based on did not distinguish between if the activity was performed in a free recreation context or in a commercial tourism context. There may be differences in the socio-demographic characteristics of those that purchase nature based tourism activity products and those that perform the activities in a free recreation context. Future studies should include questions around the context in which the activity was performed. Third, since both nationality (Kim & Prideaux, 2005; Pizam & Sussmann, 1995) and cultural background (Ng, et al., 2007) have been shown to have an influence on tourist behaviour, the findings from this study cannot be directly used to explain the behaviour of tourists in other countries. Further research is needed to test to see if the effect of socio-demographic variables on outdoor recreation behaviour would also be valid for the population in other countries.

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Paper II

Why Do People Purchase Nature-Based Tourism Activity Products? A Norwegian Case Study of Outdoor Recreation

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ABSTRACT *This paper addresses the need for a better understanding of why people purchase nature-based tourism activity products as a basis for management decisions. In order to satisfy the tourist's needs, wants and goals, businesses must first understand the tourist's motivations for purchasing such products. A factor-cluster segmentation approach was employed for a survey among members from two of Norway's largest nongovernmental outdoor recreation organisations. Four motivation factors: quality improvement, skill development, new activity and social, and five segments: Want-it-all, Try new activity, Social, Performer and Unexplained were identified. These segments differed in terms of their purchase motivation, socio-demographic characteristics and travelling behaviour. Understanding the differences in these segments will help managers of nature-based tourism businesses to target more profitable segments, develop products that better satisfy the needs in targeted segments, and to develop better market communication.*

KEY WORDS: Nature-based tourism, activity products, motivation, benefit segmentation, Norway

Introduction

Tourism in rural and natural areas has been extensively studied from the supply view-point, but regarding the consumer perspective, relatively few studies have been performed (Frochot, 2005; Park & Yoon, 2009). The aim of this study is to investigate what motivates people to purchase nature-based tourism activity products, and to identify who they are. From a business point of view, such knowledge can help nature-based tourism businesses to develop products that better satisfy needs, wants and goals in selected segments, to develop more efficiently integrated market communication strategies (Belch & Belch, 2004), and as such contribute to improve their profitability (Rønningen, 2010). The results from this study are also of interest from an academic

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point of view since insights into the purchase motives may explain why nature-based tourism is growing internationally.

Nature-based tourism activity products are often based on outdoor recreation activities that historically have been performed and enjoyed for free or at a low price (Nybakk, Vennesland, Hansen, & Lunnan, 2008; Pomfret, 2011). Today, it is often possible to perform the same activity for “free” in an outdoor recreation-context and in a “commercial” tourism-context (Tangeland & Aas, 2011). The fact that nature-based tourism activity products are frequently based on non-commercial outdoor recreation activities makes it challenging to draw a line between recreation and tourism activities in nature areas (Carr, 2002; Fredman & Tyrväinen, 2010; McKercher, 1996; Tervo, 2008). They share the same resources, the same facilities and compete for the same money and time (Carr, 2002; McKercher, 1996). Among researchers, “free” outdoor recreation and “commercial” tourism are recognised as “end points” on a continuous leisure scale (Carr, 2002; McKercher, 1996; Moore, Cushman, & Simmons, 1995; Pomfret, 2006). To draw a line between them, in this paper, *nature-based tourism activity products* are defined as those tourism activities in which the focus is on activities that: take place in a nature area, are dependent on or enhanced by the natural environment, and in which the tourist has to pay a third party (e.g. tour operator or a local guide) to participate in the given activity (Tangeland & Aas, 2011).

Tourists who purchase nature-based tourism activity products are diverse. It is generally agreed that it is necessary to segment the nature-based tourism market to better understand it, and provide products that are adapted to segments within this market (Beh & Bruyere, 2007; Bichis-Lupas & Moisey, 2001). Marketers have argued that the most effective predictor of tourism behaviour is motivation because it is more directly related to the purchase intentions and actual behaviour than for instance demographic variables, and therefore has a higher predictive power (Haley, 1968; Li, Huan, & Chi, 2009; Park & Yoon, 2009). Even though tourism motivation has received considerable attention in the tourism literature, there are few studies published that have specifically considered purchase motivation in nature-based tourism and the resulting segments.

This paper seeks to achieve three objectives. First, to identify what motivates recreationists to purchase nature-based tourism activity products by analysing the benefits they sought from such products. Second, to identify motivation-based segments in the nature-based tourism activity market. And third, to reveal similarities and differences between these segments with respect to socio-demographic characteristics and behavioural variables. The research question addressed was: *Why do people purchase nature-based tourism activity products, and who are they?*

Theoretical Framework

Motivation to Purchase – Benefit Seeking

Motivation can be defined in a number of ways. Generally, it is defined as a driving force that initiates and directs behaviour (Crompton, 1979; Iso-Ahola, 1982). It can be viewed as a kind of internal force which drives a person to do something in order to achieve an outcome or benefit. Oliver (2010) proposed that there are two fundamental reasons

why tourists purchase products. They either do it to remove a need (e.g. eating to reduce the feeling of hunger) or to add something to his or her life (e.g. new knowledge). Common to both answers is that there is a discrepancy between a person's ideal state and actual state. The cause of this discrepancy is influenced by both the internal (psychological factors such as: cultural background, personality, values, and consumer self-perception) and external (situational factors such as advertising) reality in which he/she finds themselves (Iso-Ahola, 1982). This discrepancy can create an uncomfortable level of tension in the individuals' minds (Fodness, 1994). When this tension becomes great enough, this will lead to behaviour designed to release this tension by satisfying the unmet need so that the ideal state and actual state are again more or less equal. The drive is a temporal or dynamic state within a person, which is not concerned with his/her personality. It is important to bear in mind that an action will only happen when the tension becomes great enough and the individual wants to satisfy the unmet need (Fodness, 1994; Goossens, 2000). Further, motivation to purchase a specific tourism product will never arise unless the tourist is aware of the product that he or she believes will, wholly or partly, meet their unmet needs. Then, and only then, will the tourist be motivated to buy (Goossens, 2000).

Tourist motivations are complex and multi-faceted and they occur at both the individual and the aggregate levels of analyses (Prebensen, 2006). The fact that motivation is the sum of many motives makes the picture challenging. For example, a tourist may participate in a glacier hike to be with friends and at the same time learn something new and experience the thrill of it. Intuitively, one should expect that tourists with similar needs and motives would purchase similar activity products. However, as previous studies of motivation among tourists have shown, the relationship between motivation and choice is often not that simple. Different activities can meet the same need. For example, both climbing and angling can contribute to the individual's need for stress reduction. However, the opposite can occur: tourists may be motivated to engage in the same activity but achieve different benefits from the experience. For example, some tourists may be motivated to participate in white water rafting to learn something new, while for others it may be a means of increased self-esteem. Another complicating factor is that tourists participate in the "production" of the tourism experience (Boswijk, Thijssen, Peelen, & Johnston, 2007; Pine & Gilmore, 1999), and the tourists that participate in the same activity may have conflicting desires, needs, tastes and dislikes. Even though there is not a one-to-one relationship between motivation and tourist behaviour, there is agreement among researchers that insight into tourist motivation is fundamental for understanding their choice of activities and their vacation decision-making processes, as well as for product development (Beard & Ragheb, 1983; Crompton & McKay, 1997; Dann, 1977; Frochot & Morrison, 2000; Gnoth, 1997).

Measuring Motivation

The review of the motivation literature indicates that there is a general agreement about what motivation is. However, the review also reveals that there is a lack of a universally agreed-upon conceptualisation of the tourist motivation construct. Fodness pointed out that motivation for travelling is measured either by "hypothesized reasons for travel" (often referred to as motives in the literature) or "benefits sought from the leisure

travel experience” (Fodness, 1994, p. 558). Frochot and Morrison (2000) argued that a number of motivation studies use benefit analysis to reveal tourist motivations (e.g. in Beh & Bruyere, 2007; Dey & Sarma, 2010; Lundberg, 1971; Ryan & Glendon, 1998; Yoon & Uysal, 2005). The push motivations are often measured by psychological benefits (e.g. in Dey & Sarma, 2010; Holden & Sparrowhawk, 2002; Kim, Lee, & Klenosky, 2003; Swanson & Horridge, 2006; Yoon & Uysal, 2005), while the pull motivations are often measured by the destination benefits attribute, such as price, aspects of product quality, appearance, and effectiveness (e.g. in Kim et al., 2003; Yoon & Uysal, 2005). All these studies support the idea that the benefits tourists connect to, or prefer as outcomes from tourism experiences can be used as an approximation for motives when measuring motivation.

In cognitive social-psychology, motivation is linked to expected outcomes (benefits) of behaviour (Dunn Ross & Iso-Ahola, 1991). It has been argued that people engage in outdoor recreation activities in order to realise certain benefits that they believe will satisfy their unmet needs and wants (Ajzen, 1991; Bergier, 1981; Manfredi, Driver, & Tarrant, 1996). This corresponds well with Haley’s (1968) and Jang, Morrison, and O’Leary’s (2002) argumentation – the benefits consumers connect to products to a large extent equals their motivation to purchase them. A decision to purchase a nature-based tourism activity product is an example of a direct action, which is triggered by a desire to meet a need or a want and the tourists believe that the benefits they connect to a specific product, or the product category, will meet their unmet needs. Therefore, by measuring motivation through the benefits tourists sought from the product one can reveal their purchase motivations and related market segments (Haley, 1968).

Market Segmentation

The basic idea of market segmentation is that some consumers are more similar to each other than others. It is therefore possible to cluster consumers into different groups based on one criterion, or a combination of several characteristics. The goal is to divide the total market into a smaller number of niches with similar characteristics. When these market segments are identified, one will have a better understanding of the structure of the market (Bloom, 2004). Subsequently, the marketing mix: products and services, prices, distribution channels, and promotions, can be adjusted to fit the needs and wants of the market segments that are targeted (Kotler, 1991).

Swarbrooke and Horner (2007) concluded that socio-demographic (e.g. in Le Serre, 2008) and geographic (e.g. in Charters & Ali-Knight, 2002) categorisations have been most widely used for segmenting the tourism market. Such segmentation methods are useful when the goal is to describe the market – who are the tourists and where do they live. Several researchers have argued that the benefit people seek in products is one of the best segmentation criteria for tourism since it allows a deeper insight into consumption motivation, and it is more directly connected to the purchase decision than socio-economic, demographic, geographical variables, and general travelling motivation, thus it would predict consumer behaviour more effectively (Frochot & Morrison, 2000; Jang et al., 2002; Lee, Morrison, & O’Leary, 2006; Li et al., 2009).

Within tourism research, benefit segmentation has received a great deal of attention (Frochot & Morrison, 2000; Lee et al., 2006), and been applied to different research

areas such as rural tourists (Frochot, 2005; Kastenholz, Davis, & Paul, 1999; Molera & Albaladejo, 2007), destination choice (Ahmed, Barber, & d'Astous, 1997; Jang et al., 2002; Lee et al., 2006; Ryan & Glendon, 1998), hotel guest room customers (Chung, Oh, Kim, & Han, 2004), tourists visiting national reserves (Beh & Bruyere, 2007), trail users (Bichis-Lupas & Moisey, 2001) and festivals (Li et al., 2009). Frochot and Morrison (2000) identified four general categories of applications of benefit segmentation in tourism research: destination marketing, targeting specific markets, management of attractions, events and facilities, and examining tourist decision-making processes. In this study, the approach is an insight into the decision-making processes of customers for nature-based tourism activity products.

Some segmentation studies have been published that have used benefits sought as segmentation criteria when categorising tourists that either have participated in nature-based tourism activities or have visited a nature-based tourism destination. For example among international tourists to Belize, Palacio and McCool (1997) identified four purchase motivations: *escape*, *learning about nature*, *healthy activities*, and *cohesive*. Furthermore, they identified four types of tourists: *Nature escapists*, *Ecotourists*, *Comfortable naturalists*, and *Passive players*. These segments differed significantly on: gender, age, number of previous visits to Belize, size of travelling group, and duration of stay. In the USA, Bichis-Lupas and Moisey (2001) identified four segments among users of a rail-trail in the Katy Trail State Park: *Fitness seekers*, *Typical trail users*, *Group naturalists* and *Enthusiasts*. These were based on the importance of five motivations for use of the trail: *escapism*, *exploration*, *company*, *nature appreciation*, and *fitness and health*. These segments differed significantly in their: expenditures, gender, age, education, place of residence, and activities in which they participated. In Kenya, Beh and Bruyere (2007) identified three segments among tourists visiting three national reserves: *Escapists*, *Learners*, and *Spiritualists*. These were based on eight motivation diminutions for visiting the reserves: *general viewing*, *nature*, *culture*, *adventure*, *mega-fauna*, *escape*, *learning*, and *personal growth*. A weakness with this study is that it did not describe the segments identified except for their motivations for visiting the reserves.

In summary, these works have increased our understanding of why nature tourists travel and visit nature-based tourism attractions. Further, they have shown that nature-based tourist motivation can be identified through analysing the benefits tourists connect to, and sought from, tourism products and destinations. It was found that tourists that either participated in nature-based tourism activities or visited a nature-based tourism destination were influenced by a number of motivation factors. The relative importance of these motivational forces varied between the market segments identified. In this study, benefit segmentation was employed: to identify what motivated recreationists to purchase nature-based tourism activity products, to group tourists into smaller groups with similar characteristics, and finally to profile them.

Methodology

Sample

In order to collect the necessary data to shed light on the research question *why do people purchase nature-based tourism activity products*, the study population was

defined as active outdoor recreationists. A number of studies dealing with nature tourists appear to be based on samples of general tourists instead of tourists with a specific interest in nature-based tourism products (Weaver, 2002). It was believed that outdoor recreationists would be more likely to purchase nature-based tourism products relative to the broader Norwegian population, because of their focus on outdoor recreation activities. Unfortunately, a complete register of outdoor recreationists in Norway does not exist. However, there are several large nongovernmental organisations (NGO) that organise outdoor recreationists and these organisations have member registers. The two significantly largest and oldest outdoor recreation organisations in Norway are the Norwegian Trekking Association (Den Norske Turistforening, DNT) and the Norwegian Association of Hunters and Anglers (Norges jeger- og fiskeforbund, NJFF). DNT was established in 1868 and has more than 230,000 members, while NJFF was established in 1871 and has about 117,000 members. Another aspect of these two organisations that makes them of particular interest when examining nature-based tourism in Norway is the fact that DNT and NJFF are two of the largest suppliers of activity products in the Norwegian nature-based tourism market. Through their work, these two organisations have had a large impact on how Norwegians define and perform outdoor recreation. Today, DNT holds a strong position in the urban areas, and NJFF in the rural parts of Norway. Together, the member lists of the DNT and the NJFF provided the most complete list of outdoor recreationists available in Norway. It was therefore chosen as the sample framework for this study.

Data were collated during September 2007. The sampling was conducted in a two-stage process. In the first stage, a total of 8,000 members from DNT and NJFF were randomly selected from their membership databases. During the second stage, the members sampled were contacted by telephone in order to obtain their consent to participate in the survey. During a 2-week period, contact was made with 4,920 (61.5%) of the members sampled. Of these, 4,524 (92.0%) agreed to participate in the survey and provided us with an email address, which was then used for the distribution of a web-based questionnaire (Dillman, 2000). During the first week of the survey, error reports for 354 email addresses were received. The questionnaire successfully reached 4,170 email addresses in total. A total of 2,685 completed questionnaires (a 64.4% response rate) were returned. Of those who completed the survey, the study population was restricted further to respondents who had consumed (i.e. bought) a nature-based tourism activity product between 1 May and 31 August 2007, a period that corresponds to the Norwegian summer holiday season. A total of 763 (27.4%) of the respondents who completed the questionnaire had consumed a nature-based tourism activity product. These respondents were included in the survey analysis.

Demographics

The majority of the respondents in this study were male (59.6%). Most of the respondents were married or cohabiting (56.7%). Just over half of the respondents (55.2%) had children, 64.8% of whom lived at home permanently or temporarily. The age of the respondents ranged from 17–74 years, and the mean age was 40 years. A total of 80.2% of the respondents were employed full time and had an average of 3.6

weeks of holiday time during the summer of 2007. The main nature-based tourist activity purchased by respondents lasted an average of 2.8 days and had an average price of 313 US dollars (approximately 1,700 NOK).

Measures

The questionnaire was developed during the spring of 2007. To ensure concept validity, Malhotra (1999) recommended pre-testing the questionnaire before use. The questionnaire was pre-tested on three different groups from the same population to which this survey was addressed. A total of 200 respondents participated in the pre-testing phase. Minor adjustments were made to improve the questionnaire after the two first pre-tests.

The first question asked in the survey was: "Have you participated in any of the following nature-based activity products during the summer of 2007 (1 May – 31 August)?" A total of 25 different nature-based activity products and one open alternative was then presented. If they had purchased more than one activity, they were asked to identify their main activity and to answer the rest of the question based on the main activity. The second part of the survey that was used in the current paper sought to reveal what motivated tourists to purchase nature-based tourism activity products. The respondents were asked to what extent they agreed on 24 items, using a 5-point scale anchored from one (Strongly Disagree) to five (Strongly Agree), which described the psychological benefits they had sought from the nature-based tourism activity product (Table 1). The 24 benefit statements were constructed based on explorative interviews with a small number of Norwegian tourists who had participated in nature-based tourism activity products during the summer of 2006. The third part of the survey, asked a set of more specific questions connected to the product they had purchased: length (number of days), the price they had paid, what was included in the price, and with whom they had travelled. The final part of the questionnaire consisted of questions related to the demographic characteristics of the respondents: age, gender, marital status, number of children, age of youngest, education, employment status and family income. The questions in the third and final part of the questionnaire were used when profiling the benefit segments.

Data Treatment

All the statistical analyses were performed using the software SPSS 19.0 and the general significance level was set to $\alpha = .05$. The data analyses consisted of three steps. The first, an explorative factor analysis using a principal component factoring procedure with varimax rotation, was used to identify the underlying motivation structure of the 24 benefit-sought items. Varimax was used as rotation since it minimises the number of variables that have high loadings on each factor, which simplifies the interpretation of the factors (Hair, Anderson, Tatham, & Black, 1998). Factors with an eigenvalue greater than 1 were kept. Items with extraction communalities below .35 and or that had a high ($>.4$) loading on more than one factor were excluded from the factor analysis. The mean score of the items belonging to the factors was saved as new variables. Second, a cluster analysis was employed to classify

Table 1. Total of 24 benefit items connected to nature-based tourism activity products. Scale from 1 = Strongly Disagree to 5 = Strongly Agree.

	Mean	SD
The activity is important to me ^a	4.12	0.999
It increased the quality of the experience	3.98	1.017
I expected a safe experience ^a	3.84	1.078
It ensured the quality of the experience	3.73	1.124
It improved the quality of the experience	3.70	1.087
I wanted to learn more about the activity	3.68	1.139
It was easier than organising everything by myself ^a	3.53	1.321
It feels safer to be with an instructor than performing the activity by myself	3.45	1.433
It was a simpler way to attempt a new activity ^a	3.39	1.274
It feels safer than performing the activity by myself	3.25	1.465
I wanted to develop myself as a performer	3.23	1.251
I wanted to be a better performer	3.21	1.272
I did not have enough experience to perform the activity by myself	3.21	1.561
I saved time since an organiser did all the practicalities surrounding the activity ^a	3.18	1.351
I wanted to meet other people that had the same interest in the activity as I did	3.13	1.308
I wanted to meet other people that perform this activity	3.10	1.299
I did not know the area and needed a guide with local knowledge	3.04	1.490
I identify myself with people that perform this activity ^a	2.98	1.268
I wanted to meet new people	2.91	1.327
It would have been dangerous to perform the activity by myself	2.89	1.571
It was the only way the activity was accessible ^a	2.86	1.472
I wanted to be associated with people that perform this activity	2.77	1.288
There was a need for special equipment that I did not have	2.72	1.618
The equipment was too expensive to buy	2.46	1.412
Valid N (listwise)		763

^aItems not included in the final factor analysis.

the recreationists into mutually exclusive groups, on the basis of the Ward method using a K-means clustering procedure (Hair et al., 1998). The mean score of the items belonging to the factors was used as the input variable in the cluster analysis. Scheffe multiple-range tests were then employed to examine any differences between the clusters with respect to their motivation for purchasing nature-based tourism activity products. The third and final analytical step was to run a series of one-way ANOVAs (on *age*, *number of children*, *age of youngest child*, *education level*, *income*, *activities purchased*, *price for the activity*, *included in the price*, *number of days of the activity*, and *travelling companion*) and χ^2 -tests (on *gender*, *marital status*, and *employment status*) to identify some other unique characteristics of the segments identified in terms of socio-demographic, purchased activities and trip attributes.

Results

Factor Analysis – Motivations to Purchase

The factor analyses initially revealed five factors with eigenvalues greater than 1. However, extraction communalities for five of the 24 benefit-sought items were less than .35 and these were excluded from the second analysis. The second analysis resulted in a four-factor model. In this analysis, two of the benefit-sought items had a factor loading greater than .4 on more than one factor and were subsequently excluded from the third analysis. A final factor analysis with the remaining 17 benefit-sought items was conducted to fine-tune the categorisations exhibiting the best structure. This resulted in a four-factor solution, which explained 67.11% of the variance (Table 2). Overall, the scale had a high level of internal consistency, showing reliability α of 0.87. All four factors had acceptable Cronbach's α ranging from 0.70 to 0.88. The four factors (motivations) were given names: *new activity*, *social*, *skill development*, and *quality improvement*.

The category *new activity* accounted for 23.91% of the total variance and had a reliability coefficient of .880, Table 2. This motivation category incorporated six benefit-sought items, addressing different aspects of trying a new activity such as safety aspects and lack of experience. *Social*, the second motivation dimension, accounted for 16.77% of the variance with a reliability coefficient of 0.846 and it incorporated four benefit-sought items, which included statements about meeting and being with people. *Skill development*, the third motivation factor, explained 14.20% of the variance with a reliability coefficient of 0.814, and it incorporated three benefit-sought items addressing a wish to become a better practitioner, and to learn more about the activity. The final motivation factor, which was called *quality improvement*, accounted for 12.22% of the variance with a reliability coefficient of 0.701 and it incorporated four benefit sought items, all dealing with different aspects of quality improvement of the experience.

Overall, the most important motivation for tourists to purchase nature-based tourism activity products in this study was found to be *quality improvement*, which had a mean value score of 3.61 on a scale from one (Strongly Disagree) to five (Strongly Agree) (Table 2). This was followed by *skill development* (3.37), *new activity* (3.00) and *social* (2.98).

Cluster Analysis (K-means) – Identification of Marked Segments

The K-means cluster analysis was performed with two to ten clusters. The five-cluster solution appeared to be the most appropriate of the nine solutions that were analysed. ANOVA tests indicated that all four motivation factors contributed to differentiate between the five clusters ($p < .000$) (Table 3). In addition, the Scheffe multiple-range tests were employed to examine any differences between clusters with respect to the four motivation factors. The Scheffe test indicated that there were significant differences between most of the clusters on the four motivation factors (Table 3). However, there were no significant differences between Clusters V and IV on the mean score for *new activity*, Clusters I and III and Cluster IV and II on the mean score for *skill development*, and between Cluster IV and III on the mean score for *quality improvement*.

Table 2. Factor analysis of descriptive statements. Scale from 1 = Strongly Disagree to 5 = Strongly Agree ($N = 763$).

Factor/Attribute	Loading	Eigenvalue	Variance Explained	Cronbach's Alpha	Mean
<i>New activity</i>		4.065	23.91%	.880	3.00
It would have been dangerous to perform the activity by myself	,836				
There was a need for special equipment that I did not have	,798				
It felt safer to be with an instructor than performing the activity by myself	,796				
It feels safer than performing the activity by myself	,791				
I did not have enough experience to perform the activity by myself	,752				
The equipment was too expensive to buy	,666				
<i>Social</i>		2.851	16.77%	.846	2.98
I wanted to meet other people that had the same interest in the activity as I did	,877				
I wanted to meet other people that perform this activity	,803				
I wanted to meet new people	,785				
I wanted to be associated with people that perform this activity	,701				
<i>Skill development</i>		2.414	14.20%	.814	3.37
I wanted to develop myself as a performer	,817				
I wanted to be a better performer	,761				
I wanted to learn more about the activity	,693				
<i>Quality improvement</i>		2.078	12.22%	.701	3.61
It improved the quality of the experience	,763				
It increased the quality of the experience	,691				
I did not know the area and needed a guide with local knowledge	,559				
It ensured the quality of the experience	,526				
Overall			67.11%	.869	

Note: Extraction method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 5 iterations.

Table 3. Cluster analysis results, Mean score on a scale from 1 = Strongly Disagree to 5 = Strongly Agree ($N = 763$).

Cluster Factors	I Social	II Want-it-all	III Try new activity	IV Performer	V Unexplained	F-value	Scheffe test
New activity	2.20	3.81	4.05	1.92	1.65	405.0 ^a	5,4 < 1 < 2 < 3
Social	3.57	3.86	2.22	2.75	1.53	264.2 ^a	5 < 3 < 4 < 1 < 2
Skill development	2.88	4.29	2.97	4.08	1.84	305.2 ^a	5 < 1,3 < 4,2
Quality improvement	3.21	4.33	3.68	3.52	2.51	140.3 ^a	5 < 1 < 4,3 < 2
Size (n)	161	218	183	116	85		
Percentage of cluster in total sample	21.1%	28.6%	24.0%	15.2%	11.1%		

^a $p < 0.0001$

For *Cluster I*, *social* (3.57) and *quality improvement* (3.21) were the two most important motivation categories, so it was called *Social*, and contained 161 respondents (21.1%) (Table 3). *Cluster II* was called *Want-it-all*, since all four motivation categories were important: *quality improvement* (4.33), *skill development* (4.29), *social* (3.86) and *new activity* ($M = 3.81$). The *Want-it-all* cluster was the largest of the clusters with 218 respondents (28.6%). *New activity* ($M = 4.05$) and *quality improvement* (3.68) were the two most important motivation categories for *Cluster III*, so it was called *Try new activity*, and contained 183 respondents (24.0%). The two most important motivation categories for *Cluster IV* were *skill development* (4.08) and *quality improvement* (3.52), so it was called *Performer*, and contained 116 respondents (15.2%). *Cluster V* was the smallest of the clusters with 85 respondents (11.1%) and it differed from the four other clusters since it had a low score on all four motivation categories: *quality improvement* (2.51), *skill development* (1.84), *new activity* (1.65) and *social* (1.53). This indicates that this survey did not manage to reveal what motivated this cluster to purchase nature-based tourism activity products. Therefore, it was called *Unexplained*.

In order to further identify the profile of the five clusters, a series of ANOVA and chi-square tests were employed with external variables such as socio-demographic variables, the activities they purchased, and their travelling behaviour. The results of the tests indicated that there was a statistically significant difference for all clusters with respect to socio-demographic variables and travelling behaviour (see Tables 4, 5 and 6). The main characteristics of the five clusters are presented below.

The *Social* cluster was dominated by middle-aged men with adult children. Most of them had a high educational level and worked fulltime with an average family income of \$94,944 (516,000 NOK) (Table 4). The most common nature-based tourism activity products purchased by this cluster were: *organised mountain hiking*, *bicycle tour in a nature area*, *organised fishing in a river or freshwater lake*, and *guided tour in a nature area* (Table 5). They usually had *accommodation*, *meals*, and *transportation* included

Table 4. Socioeconomic profiles of each cluster, ANOVA test and Pearson Chi-Square-test ($N = 763$).

Clusters Characteristics	Social	Want-it-all	Try new activity	Performer	Unexplained	Sample mean
Gender**						
Female	37.9%	52.8%	41.0%	27.6%	29.4%	40.4%
Male	62.1%	47.2%	59.0%	72.4%	70.6%	59.6%
Age**						
Mean	42.0	37.5	37.8	42.3	40.9	39.7
Marital status**						
Single	41.0%	42.2%	25.7%	21.6%	17.6%	32.1%
Couple, but do not live together	6.2%	17.0%	11.5%	6.0%	10.6%	11.0%
Married/cohabitant	52.8%	40.8%	62.8%	72.4%	71.8%	56.9%
Children (number)						
Mean**	2.37	2.01	2.22	2.67	2.58	2.30
No children**	45.3%	56.4%	49.2%	26.7%	31.8%	45.1%
Mean Age youngest child* ($n = 419$)	18.9	18.3	14.8	15.7	15.7	16.8
Education**						
Primary school	6.8%	4.6%	2.7%	6.0%	7.1%	5.1%
Upper secondary/high school	26.7%	28.9%	14.2%	30.2%	23.5%	24.5%
University (1–3 years)	26.7%	26.1%	29.5%	27.6%	34.1%	28.2%
University (+ 4 years)	39.8%	40.4%	53.6%	36.2%	35.3%	42.2%
Employment status**						
Working full-time	79.5%	72.0%	83.1%	87.9%	85.9%	80.2%
Part-time employee	12.4%	11.5%	8.7%	3.4%	5.9%	9.2%
Not working; Unemployed/ retiree/ student	8.1%	16.5%	8.2%	8.6%	8.2%	10.6%
Income (Family income, Yearly) (US\$) ^{a**}	94,944	78,936	100,464	112,424	115,368	96,600

All differences across clusters are not significant unless indicated otherwise: *Differences among clusters are significant at the 0.05 level; **Differences among clusters are significant at the 0.01 level. ANOVA-test or Pearson Chi-Square-test.

^a1NOK = 0.184US\$

in the activity products. Among the five clusters, they paid the second highest price for the activity product, \$325 (1,765 NOK). The mean number of days the activity took was 3.2. This gives an estimated per day price of \$101 (552 NOK). The average size of travelling groups was 4.6 and their preferred travelling companions were friends and family. However, travelling alone was not unusual for this cluster (Table 6).

Table 5. Range of activity-based nature tourism products consumed per cluster during the summer of 2007 (in percentages) ($N = 763$).

Cluster Activities	Social	Want-it-all	Try new activity	Performer	Unexplained	Sample mean
Organised mountain hike**	31.7	24.8	7.7	11.2	8.2	18.2
Organised fishing trips in a river or freshwater lake (with or without guide)**	16.8	8.3	7.1	38.8	27.1	16.5
Organised glacier hiking**	8.7	20.2	29.0	4.3	9.4	16.3
Guided tour in a nature area**	14.9	16.5	9.8	12.9	12.9	13.6
Bicycle tour in a nature area*	17.4	12.8	6.0	15.5	16.5	13.0
Rock climbing/mountaineering with a guide**	9.9	16.5	17.5	6.9	5.9	12.7
Rafting/white-water kayaking with instructor**	3.7	10.1	24.6	0	3.5	10.0
Horse riding**	5.0	5.0	12.6	4.3	7.1	6.9
Climbing**	2.5	12.8	7.1	6.0	1.2	6.9
Hiking between huts	9.3	6.0	4.4	6.9	7.1	6.6
Attend an outdoor event, where you had to pay for entrance	8.7	8.3	4.9	4.3	4.7	6.6
Kayaking with instructor**	5.0	11.0	4.9	6.9	1.2	6.6
Organised fishing trips in salt water (with or without guide)	3.1	4.6	7.1	9.5	5.9	5.8
Downhill bicycling	3.7	6.9	2.2	6.0	7.1	5.0
Kiting/surfing**	1.2	7.8	2.7	0	0	3.1
Caving	0.6	4.1	3.3	1.7	3.5	2.8
Safari/wildlife viewing	1.9	2.8	2.7	1.7	2.4	2.4
Visiting a wilderness camp	2.5	2.3	1.1	2.6	1.2	2.0
Nature photo	0.6	2.3	0.5	2.6	2.4	1.6
Mushroom picking	0.6	3.2	0.5	1.7	1.2	1.6
Canyoning	1.2	2.3	0.5	0.9	2.4	1.4
Off-road bicycling (guided tour)	1.2	2.3	0.5	0.9	2.4	1.4
Via ferrata/Tyrolean traverse/rappelling	1.2	1.8	0	0.9	0	0.9
Flora study	0.6	1.8	0	1.7	0	0.9

All differences across clusters are not significant unless indicated otherwise: *Differences among clusters are significant at the 0.05 level; **Differences among clusters are significant at the 0.01 level. ANOVA-test.

Table 6. Purchase behaviour profiles for each cluster ($N = 763$).

Clusters Characteristics	Social	Want-it-all	Try new activity	Performer	Unexplained	Sample mean
Price for the activity (total) for one person**						
Mean (US\$) ^a	325	360	258	298	305	313
Price for the activity (one day) for one person**						
Mean (US\$) ^a	101	110	161	85	109	112
Included in the price						
Hire of equipment**	22.4%	58.3%	82.0%	22.4%	29.4%	47.7%
Course**	11.2%	53.2%	50.3%	30.2%	12.9%	35.6%
Guiding**	33.5%	49.1%	49.2%	25.0%	25.9%	39.6%
Accommodation**	54.7%	48.6%	23.0%	37.1%	35.3%	40.5%
Meals**	52.2%	40.4%	26.8%	35.3%	31.8%	37.9%
Transportation**	48.4%	37.2%	31.7%	28.4%	44.7%	37.7%
Number of days (activity)						
Mean **	3.2	3.3	1.6	3.5	2.8	2.8
Travelling with number of people**						
Alone**	13.0%	19.3%	3.8%	14.7%	4.7%	11.9%
Partner/cohabitant**	29.2%	28.9%	43.7%	43.1%	47.1%	36.7%
Children younger than 18 years*	16.8%	12.8%	24.6%	21.6%	25.9%	19.3%
Other family*	11.2%	8.3%	9.8%	7.8%	20.0%	10.5%
Friends	50.9%	45.0%	47.0%	40.5%	36.5%	45.1%
Business *	6.8%	8.7%	13.1%	4.3%	15.3%	9.4%

All differences across clusters are not significant unless indicated otherwise: *Differences among clusters are significant at the 0.05 level; **Differences among clusters are significant at the 0.01 level. ANOVA-test and Pearson Chi-Square-test

^a1NOK = .184US\$

The *Want-it-all* cluster was dominated by younger females with a high educational level. It also differed from the other clusters in terms of marital status. It was common to be single (42.2%) and this was the cluster with the lowest share that were married/cohabiting (40.8%). It also differentiates from the other clusters in the terms of having children. The majority of this cluster did not have any children. Only three of four in this cluster worked fulltime and the family income was \$78,936 (429,000 NOK) (Table 4). The most common nature-based tourism activity products purchased by this cluster were: *organised mountain hiking, organised glacier hiking, guided tour in a nature area, rock climbing/mountaineering with a guide, climbing, bicycle tour in a nature area, kayaking with instructor, and rafting/white-water kayaking with instructor* (Table 5). Usually they had: *equipment, course, guiding, accommodation, meals and transportation* included in the activity product. Among the clusters, the *Want-it-all*-cluster paid the most for the activity products, \$360 (1,955 NOK). They

usually travelled with friends. Among the five clusters, this cluster travelled most often alone and least with children. The average size of travelling groups was 4.6 persons (Table 6).

The *Try new activity* cluster was one of the youngest clusters, and at the same time they were the highest educated cluster. The majority of this cluster was younger than 40 years and married/cohabiting. Half of the cluster members had children and the mean age of the youngest child was 14.8 years. The majority were employed fulltime and their mean family income was \$100,464 (546,000 NOK) (Table 4). The most common nature-based tourism activity products purchased by this cluster were: *organised glacier hiking, rafting/white-water kayaking with instructor, and rock climbing/mountaineering with a guide* (Table 5). They usually had *hiring of equipment, a course in the activity, and guiding* included in the activity product. Among the five clusters, the *Try new activity* cluster participated in the shortest activities with a mean duration of 1.6 days. Most common for this cluster was to participate in half-day and one-day activities. Among the five clusters, they paid the highest estimated day prices, \$161 (875 NOK), and travelled in the largest travelling groups (5.6). The most common travelling companions were friends and spouse/cohabitant. Among the five clusters, the *Try new activity* cluster travelled second most frequently with business relations (Table 6).

The *Performer* cluster was dominated by middle-aged men of relatively high educational levels. Many had children (mean age of youngest child was 16 years), were working fulltime and the average family income was \$112,424 (611,000 NOK) (Table 4). The most common nature-based tourism activity products purchased by this cluster were: *organised fishing trips in a river or freshwater lake, bicycle tour in a nature area, guided tour in a nature area, and organised mountain hiking* (Table 5). The average price they paid for the activity product was \$298 (1,620 NOK) and, in this price, *accommodation and meals* were usually included. Among the cluster, they participated in the activities with the longest duration (3.5 days) and paid the lowest estimated day price: \$85 (463 NOK). They travelled usually with family and friends when they purchased-nature based tourism activity products. However, it was not unusual for this cluster to travel alone (Table 6).

The *Unexplained* cluster was dominated by middle-aged men. Most were married and had older children. Among the five clusters, this one had the lowest educational level. A total of 83.1% were working fulltime and among the clusters, the *Unexplained*-cluster had the highest family income, \$115,368 (627,000 NOK) (Table 4). The most common activity products purchased by this cluster were *organised fishing in a river or freshwater lake and bicycle tour in a nature area* (Table 5). They paid \$305 (1,655 NOK) for the activity products and this price usually included *transportation, accommodation, and meals*. The average size of travelling groups was 4.7. The most common travelling companion was their partner/cohabitant and friends. Among the five clusters, the *Unexplained* cluster travelled the most frequently with their partner/cohabitant, children, other family and business, and least with friends (Table 6).

Discussion

One of the main objectives of this study was to reveal *why people purchase nature-based tourism activity products*. Oliver (2010) proposed that tourists purchase products

to remove a defect or to add something to his or her life. It has been argued that purchase motivation arises when a person becomes aware of an unmet need and at the same time is aware of a product that can provide the benefits that are needed to satisfy the unmet need (Goossens, 2000). Based on an analysis of the benefits tourists sought from nature-based tourism activity products this study successfully identified four purchasing motivations: *new activity*, *quality improvement*, *skill development* and *social*. All of them can be categorised as motivational dimensions that added something to their lives. Further, these findings indicate that the purchase motivation is triggered by different categories of unmet needs and the benefits that are associated with such products. In addition, the purchase motivation is usually influenced by more than one motive. These findings are in line with previous studies of motivation among nature-based tourists (Beh & Bruyere, 2007; Bichis-Lupas & Moisey, 2001; Palacio & McCool, 1997).

The second objective was to identify who these tourists were and to identify market segments within the nature-based tourism activity market. The findings highlight that the people that purchase nature-based tourism activity products are a diverse group that is motivated to purchase by several reasons. It is therefore misleading to talk about one nature-based tourism activity segment when in reality this consists of several sub-segments. Indeed, the present study successfully identified five segments, labelled: *Want-it-all*, *Try new activity*, *Social*, *Performer* and *Unexplained*. These segments were differentiated not only in their motivation to purchase nature-based tourism activity products, but also according to their socio-economical and behavioural characteristics. The findings support Frochot and Morrison's (2000) conclusion that benefit segmentation can be used to explain why tourists behave the way they do, since it reveals their purchase motivations. The findings also support Ajzen's (1991), Bergier's (1981) and Manfredo et al.'s (1996) postulations that people engage in a behaviour in order to realise certain benefits and it is these benefits that motivate their behaviour.

The most important purchase motivation dimension for the sample as a whole was *quality improvement*. Swarbrooke and Horner (2007) argued that people have limited time and resources for travelling on vacation and therefore try to ensure that the holidays they go on are successful. The findings from this study indicate that the respondents expected that by participating in a commercialised activity it would improve and ensure the quality of the experience compared to what they would have experienced if they had performed the activity on their own. Therefore the purchase motivation can to a certain extent be seen as a part of an uncertainty reduction strategy triggered by a safety need. This applies to all the segments identified since the *quality improvement* motivation dimension was one of the most important motivations for all of them. Even though tourism motivation has been studied for years, it has not been possible to identify other studies that have identified *quality improvement* as a central motivation factor for purchasing tourist products.

The second and third most important purchase motivation dimensions were both connected to a desire to learn, *skill development* and *new activity*. Together, these two motivation dimensions explain one third of the variance, indicating that, for the sample as a whole, the motivation to purchase nature-based tourism activity products is strongly influenced by a desire to learn something. Even though they both can be linked to a learning desire there are large differences between them. The *skill*

development dimension is triggered by a desire to learn more about an activity they already perform. Among the identified segments *skill development* was one of the most important purchase motivations for the *Performer* segment and the *Want-it-all* segment. The *new activity* motivation dimension is triggered by a feeling/belief that it would be unsafe to perform the activity alone because they lack enough knowledge. The *Try new activity* and the *Want-it-all* were the two segments that showed the strongest motivation to purchase by the *new activity* motivation dimension.

The high importance of these two learning motivation dimensions is consistent with the findings in a number of other studies that have identified learning and education to be important motivational aspects driving modern tourism behaviour. However, researchers have labelled the knowledge-seeking motivation factors differently to emphasise different dimensions of learning: *knowledge/education* (Yoon & Uysal, 2005), *intellectual* (Ryan & Glendon, 1998), *knowledge and entertainment* (Jang et al., 2002), *novelty/learning* (Mehmetoglu, 2007) *learn about nature* (Palacio & McCool, 1997), *knowledge function* (Fodness, 1994), *general knowledge* and *specific knowledge* (Dunn Ross & Iso-Ahola, 1991) and *learning* (Beh & Bruyere, 2007; Park & Yoon, 2009), to name some. The majority of the sample in this study had a university education (70.4%), which is significantly higher than the average Norwegian population where 26.7% had a university education in 2008 (Statistics Norway, 2010). This may help to explain the high focus on learning in this sample. However, the high educational level in this sample corresponds with other studies on nature-based tourists and ecotourists, which have a higher educational level among such tourists than is found in the average population (Beh & Bruyere, 2007; Holden & Sparrowhawk, 2002; Meng & Uysal, 2008; Meric & Hunt, 1998). Another likely explanation for the high score on these two learning motivation factors is connected to the fact that outdoor activities have become more specialised during the last decades. To perform activities such as rafting/white-water kayaking and climbing, there is a need for knowledge and experience, as well as the use of specialised equipment, to perform the activity in a safe way (Pomfret, 2011). Historically, people gained the knowledge and experience that were needed through participating in activities with performers who were more experienced, often family or peers (Grimeland, 2004). Since the 1960s it has become more common to pay for participation in courses to learn the needed skills. This change in knowledge distribution within the outdoor recreation community in Norway and other countries may have contributed to the growth in the nature-based tourism market. Today, a significant part of the nature-based tourism activity market can be regarded as an arena for learning (Tangeland & Aas, 2011).

Being *social* has been identified as a central motivation dimension in a number of studies of tourist behaviour (e.g. Chang, Wall, & Chu, 2006; Crompton & McKay, 1997; de Guzman, Leones, Tapia, Wong, & de Castro, 2006; Kastenzholz et al., 1999; Li et al., 2009; Mehmetoglu, 2007; Park & Yoon, 2009; Silverberg, Backman, & Backman, 1996). The findings in this study verified only somewhat that being *social* is a central motivation factor given that it was the least important motivation factor for the sample as a whole. The low importance of the *social* motivation dimensions can be explained partly by Tangeland and Aas's (2011) findings. They proposed that attributes connected to nature-based tourism activity products can be categorised as either supplementary or inherent. Supplementary experience attributes, they suggest,

“are those that are added to an activity through the commercialisation of an activity into a tourism product. In contrast, inherent experience attributes are those that are implicitly connected to the activity itself and are independent of the context in which the activities are undertaken” (Tangeland & Aas, 2011, p. 828). In their study, they identified two supplementary experience attributes, *facilitation and learning*, and two inherent experience attributes, *family/children friendly and risk/challenge*. The three most important motivations dimensions for the sample as a whole identified in this study, *quality improvement, new activity and skill development*, can be satisfied by the supplementary experience attributes connected to nature-based tourism activity products. These are experience attributes that are only accessible through purchasing nature-based tourism activity products. In contrast, the need to be social can be satisfied by an inherent experience attribute. If a person wishes to be social, he or she can satisfy this need by performing an activity together with other people. The context in which the activity is performed, nature-based tourism or outdoor recreation, does not affect the activities’ ability to meet the need to socialise as long as it is carried out along with other people. Even though being *social* was the least important motivation dimension for the sample as a whole, it was one of the most important purchase motivations for two of the identified segments; *Try new activity* and *Want-it-all*.

Which one of the market segment(s) identified a business should target depends on the type of activity product they are offering and the profitability in the segments (Kotler, 1991). For instance, a company that offers freshwater angling products should primarily target the *Performer* segment, since they have the highest likelihood for purchasing such products (38.8%), secondarily target the *Unexplained* segment (27.1%) and finally target the *Social* segment (16.8%). The *Want-it-all* and *Try new activity* segments have a lower likelihood of purchasing freshwater angling products (8.3% and 7.1%). These two segments, *Try new activity* and *Want-it-all*, should be targeted by a company that offers activity products such as: *glacier hiking, rafting/white-water kayaking and rock climbing/mountaineering*. Businesses offering such activity products might also consider targeting the *Try new activity* segment specifically, since they pay significant more for the activity, \$150 (816 NOK), compared to the other segments, ranging from \$82 (446 NOK) to \$107 (582 NOK), measured by estimated per person per day price.

Since the purchase motivation varies between the segments identified, it is crucial that businesses tailor their products and marketing communications so that the tourists, in the selected market segment(s), believe that the product has the necessary benefits that are required to satisfy their unmet needs and wants (Fodness, 1994; Iso-Ahola, 1982). For a company that offers freshwater angling products, it would be challenging to target both the *Performer* segment and the *Social* segment with the same product, since they are motivated to purchase by different benefits. To reduce production costs, it is therefore better to select only one market segment and develop products and market communications so that these meet the needs and wants in the targeted segment.

Conclusion

The present study sheds more light on the market for nature-based tourism products. The aim was to identify what motivates tourists to purchase nature-based tourism

activity products, and to identify who they are. This was achieved by using a factor-cluster segmenting approach. Four purchase motivation factors were identified: *quality improvement*, *skill development*, *new activity* and *social*. Based on these factors it was possible to divide the nature-based tourism activity tourists into five segments: *Want-it-all*, *Try new activity*, *Social*, *Performer* and *Unexplained*. The results indicate that the people who purchase nature-based tourism activity products are a diverse group of tourists. Furthermore, these findings support Palacio and McCool (1997), Bichis-Lupas and Moisey (2001), and Beh and Bruyere's (2007) argumentation that it is necessary to segment the nature-based tourism market to better understand it.

There is no simple answer to the question: *why do people purchase nature-based tourism activity products?* As this study has shown, motivation to purchase such products varies between the segments identified. None of the segments were motivated to purchase by only one motivation dimension. *Quality improvement* seems to be a central factor in explaining why people purchase nature based tourism activity products, since it is ranked as either the most or second most important motivation factor for all the segments. The greatest differences were found to be between the five segments and the importance of the two learning motivation dimensions and the *social* motivation dimension. For three of the segments identified the two learning motivation factors, *new activity* and *skill development*, were ranked as the two most central motivation dimensions influencing their decision to purchase, indicating that for these three segments the desire to learn is what motivates them to purchase. Even though *social* was the least important motivation factor for purchasing for the overall sample, it was a central motivation factor for two of the identified segments.

In previous studies, motivation has been identified as a well functioning segment criterion (e.g. in Ahmed et al., 1997; Beh & Bruyere, 2007; Frochot, 2005; Frochot & Morrison, 2000; Jang et al., 2002; Lee et al., 2006; Li et al., 2009; Shoemaker, 1994) and the results from this study support this conclusion. Further, the results show that benefit segmentation methods can be used for identifying purchase motivations and to identify segments within the nature-based tourism market. The five segments identified demonstrated sharp contrasts not only in their motivation to purchase but also in their socio-demographic characteristics and behavioural variables. This is information that can ultimately help businesses to design and market their products more effectively.

The results and analyses from this study need to be viewed in light of the following limitation. This study was based on a sample from the two largest Norwegian outdoor recreation NGOs with a specific interest in outdoor activities. The choice of the sample framework for this study means that the results first and foremost are possible to generalise over customer groups that are already active in nature-based tourism. Even though the sample is not a probability sample for the Norwegian population, there is reason to believe that the findings will also be partially valid for the general population in Norway, since the total membership list of the DNT and NJFF covers a cross section of the Norwegian population with regard to demographics and geography. Thus, the findings are believed to be highly significant for market segments with a predisposed interest in nature-based tourism activity products. This would be especially true in Norway, but also in other countries where the results can be generalized, first and foremost, to other Scandinavian countries, but also to other post-industrialized countries

with land areas that can be used for the production of nature-based tourism products. However, it is likely that the motivation for purchasing nature-based tourism activity products is influenced by factors such as cultural background. It is therefore difficult to generalise the results directly to other nationalities. Further research is needed to test if the motivation factors identified in this study are valid for the Norwegian population in general as well for other consumer groups.

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Paper III



Household composition and the importance of experience attributes of nature based tourism activity products – A Norwegian case study of outdoor recreationists

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ABSTRACT

This study examines the relationship between household composition and the consumption of nature based tourism products by analysing the results of a survey among members from two of Norway's largest outdoor recreation NGOs. Survey respondents were categorised into five main household types, namely: *nuclear family*, *single parent*, *couples without children*, *single*, and *adults living together*. These five main household types were then further divided into 19 age-based subgroups. Four key experience attributes connected to nature based tourism activities were identified, namely: *Risk/challenge*, *Facilitation*, *Learning* and *Family/children friendly*. This study reveals differences between household types in terms of the importance of the experience attributes sought from nature based tourism activity products. The tourism sector needs to be aware of variations in the key experience attributes different household types seek and to adapt to the process of changes in household structures in post-industrialised societies.

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1. Introduction

Internationally, the tourism sector has experienced a significant growth during the second half of the 20th century (Gibson & Yiannakis, 2002). Nature based tourism, in particular, is now considered to be one of the fastest growing markets within this sector, with a growth rate of 10–12% per year (Higgings, 1996; Mc Kercher, 1996; Neto, 2003; TIES, 2007) compared to the lower average annual tourism growth rate of 3.6% recorded for international tourist arrivals between 2000 and 2006 (WTO, 2007).

Traditionally, tourism products have been conceptualised into four parts: the provision of activities/experiences, eating and drinking, accommodation and transportation (e.g. Mill & Morrison, 1992; Seaton & Bennett, 1996). This study focuses specifically on tourism products that are based upon activities that take place in a natural environment such as trekking and hiking, rafting, climbing, nature photography, wildlife safaris, and camping in natural areas. Many of these activities can be enjoyed free of charge if users have the competence and necessary equipment. But increasingly,

such activities have also been converted into nature based tourism products by outfitters, tour operators, and guides (Pomfret, 2006). Drawing definitive boundaries between *non-commercial outdoor recreation* and *commercial tourism* in nature areas is however challenging, because the differences between such activities have become increasingly blurred. For instance, both outdoor recreation and tourism share the same resources, sometimes the same public facilities and compete for the same money and time (Carr, 2002; Mc Kercher, 1996). Therefore, there is a growing recognition that *free* outdoor recreation activities and *commercial* tourism activities are, in fact, *end points* on a continuous leisure scale (Carr, 2002; Mc Kercher, 1996; Pomfret, 2006). For instance, across Europe there are long traditions for landowners, both private and public, to sell hunting and fishing privileges on their land. The low-priced products (i.e. licences which provide access to fishing and hunting) are often regarded as outdoor recreational activities, while other opportunities that include accommodation, guiding, etc., are regarded as tourism products.

To understand why nature based tourism is growing faster than other sectors within the tourism sector, and in order to sustain or enhance this trend, it is important to understand why consumers sometimes choose to consume nature based tourism activity products, when quite parallel outdoor recreation opportunities are often accessible free of charge or available at least at a lower cost.

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From a marketing perspective it is important to better understand how consumers experience different types of nature based tourism activity products and what type of experience attributes they prefer (Solomon, 2004; Swarbrooke & Horner, 2007). Improved knowledge of preferred experience attributes is an important means of helping tourism businesses to develop nature based tourism activity products that better fit the needs of different markets segments, and to develop more efficient and integrated marketing communication strategies (Belch & Belch, 2004).

Tourism consumer behaviour is affected by a range of variables, such as demographic, socioeconomic, and product-related behavioural factors, as well as attitudes towards – and preferences for – particular attractions, experiences and services (Bloom, 2004). Consumption today, as some have argued, is now more closely related to social identity and status than function or form (Blindheim, Jensen, Nyeng, & Tangen, 2004; Roberts & Hall, 2004; Solomon, 2004). This development has complicated the understanding of markets and products, and there is a need for further research to identify the key factors driving tourism demand (Roberts & Hall, 2004) as well as a need to understand consumer preferences within different and changing market segments.

Traditionally, large-scale tourism marketing is typically based on careful analysis and assessments of relevant markets and the associated needs and wants. However, nature based tourism businesses are typically small (Roberts & Hall, 2004): in Norway, for example, it is estimated that 75% of all nature based tourism companies have less than two full-time employees (Derivo, Aas, Kaltenborn, & Andersen, 2003). In smaller businesses like these, marketing tends instead to be more unplanned and, unsurprisingly, to be given a lower priority relative to other business operations (Roberts & Hall, 2004).

Several market segmentation techniques have been developed in nature based tourism research (e.g. Carmichael & Smith, 2004; Hvenegaard, 2002; Luzar, Diagne, Gan, & Henning, 1998; Mehmetoglu, 2007; Silverberg, Backman, & Backman, 1996), and these have contributed to an understanding of the specific characteristics of the nature based tourism market. However, these segmentation techniques have generally required an in-depth knowledge of statistical techniques, as well as extensive investments of both money and time.

In this paper, we have utilised a household concept approach to market segmentation that is a more cost efficient method of analysis that can help small, nature based tourism businesses obtain a better understanding of existing and future markets. The household concept is a multi-factorial construct and utilises a combination of demographic variables, such as age, the presence and age of children, and the presence of a partner (Wells & Gubar, 1966) as well as social identity (Solomon, 2004). The concept of *household type* describes the composition of a household at a given point of time (Solomon, 2004) with a household unit consisting of both family members and non-family members living together (Zimmerman, 1982).

Household type can be viewed as a stage in both the individual lifecycle and family lifecycle at a given point of time. The lifecycle concept has been shown to be a powerful theoretical and empirical approach in consumer behaviour research (Solomon, 2004). However, the application of this concept within a tourism consumer behaviour context is uncommon. Oppermann, for example, has noted: “Although the life cycle theory is a widely used concept...It’s application to the tourists themselves in form of the family life cycle has been limited” (1995b: 547). At the time of planning this study, no published studies that examine the relationship between individual lifecycles, family lifecycles, and household composition, and the consumption of nature based tourism products had been identified.

The transformation of household structure in post-industrialised societies is one of the significant changes in the society. In Norway, for example, the number of nuclear families decreased from 31.8% in 1980 to 22.2% of all private households in 2008. During this period, other household types increased in number: single-parent households, for instance, rose from 3.6% to 5.7%; people living alone from 27.9% to 39.3%; and couples without children from 20.1% to 21.3% (SSB, 2008). Similar trends can be observed in other post-industrialised societies (Kapinus & Johnson, 2003). Earlier research on the relationship between household composition and consumer behaviour indicates that household composition influences demand for different types of tourism products (e.g. Bojanic, 1992; Collins & Tisdell, 2002a, 2002b; Dellaert, Prodigious, & Louviere, 1998; Du & Kamakura, 2006; Lawson, 1991; Nanda, Hu, & Bai, 2006; Oppermann, 1995a, 1995b, 1995c; Wells & Gubar, 1966; Wilkens, 1995; Zimmerman, 1982). Therefore, if transformation of household structure continues it is likely to continue to affect the tourism sector. It is therefore crucial to gain a better understanding of the impact of household composition on demand.

This paper has two key objectives: (1) to identify key experience attributes connected with nature based tourism activity products, using an exploratory factor analysis; and (2) to identify which of these particular experience attributes different household types prefer, using a one-way between-groups analysis of variance. The central research question addressed in this study is: *does household composition influence on the experiences tourists seek when they purchase nature based tourism activity products?*

2. Theoretical background

2.1. Nature based tourism

The concept of nature based tourism is broad and encompassing. It is therefore unsurprising that establishing an exact definition has proved to be both difficult and is a source of ongoing debate among researchers (Fennell, 2000; Higgings, 1996; Mehmetoglu, 2007). Despite this, particular elements are common among many of the definitions, namely that learning, recreation and adventure take place in natural surroundings (Laarman & Durst, 1987; Laarman & Gregersen, 1996; Wurzing & Johansson, 2006). Nature based tourism is frequently used synonymously with other terms such as *sustainable tourism*, *green*, *rural*, *alternative*, *adventure* and *responsible tourism* (Higgings, 1996; Luzar et al., 1998; Priskin, 2001; Roberts & Hall, 2004; Weiler & Hall, 1992). In this study, we do not differentiate between these types of tourism given that all of them are natural resource based forms of tourism.

Laarman and Durst were among the first academics to attempt to define the concept of nature based tourism specifically, suggesting that in this form of tourism the “traveller is drawn to a destination because of his or her interest in one or more features of that destination’s natural history” (1987: 5). Lindberg (1991) argued that it is possible to define nature based tourism in a number of ways, with the distinction between nature based tourism and mass tourism being particularly important. Similarly, Valentine – in one of the best known definitions of nature based tourism – contends that such tourism is “primarily concerned with the direct enjoyment of some relatively undisturbed phenomenon of nature” (1992: 108).

Somewhere along the line, however, nature based tourism grew to encompass commercial outdoor recreational based activities including, for example, trekking and hiking in natural areas, rafting and climbing. Such activities are also sometimes referred to as *adventure tourism*, which Page and Dowling define as “commercially operated activities involving a combination of adventure and

excitement pursued in an outdoor environment" (2002: 12). Buckley, however, suggests that the definition of adventure tourism is broader than this, describing it as "guided commercial tours, where the principal attraction is an outdoor activity that relies on features of natural terrain, generally requires specialised equipment, and is exciting for the tour clients. In this sector, clients may operate the equipment themselves or they may simply be passengers" (2006: 1428). Other researchers, such as Weber (2001), have argued against the use of the term "adventure" altogether in the context of nature based tourism, and suggested instead that it need not be associated with a specific setting, such as being outdoors in nature. A large number of adventure tourism products are directly or indirectly dependent on nature as a resource and could therefore be categorised as part of nature based tourism. But, at the same time, it is not necessarily possible to categorise a large number of nature based tourism activity products, including botanical studies and safari/wildlife viewing, for example, as adventure-based tourism products. Valentine and Cassells (1991) have argued that nature based tourism experiences (activities) can be classified into three distinct types: experiences dependent on nature, experiences enhanced by nature, and experiences in which the natural settings are supplementary.

In this study, we define *nature based tourism activity products* as tourism activities in which the focus is upon activities that take place in a nature area and where the tourism activities are directly or indirectly dependent on – or enhanced by – the natural environment, and in which the tourist pays a third party to participate in a given activity.

The debates and definitions above indicate that nature based tourism activity products do not constitute a homogeneous group and can therefore be categorised in a number of ways. Pomfret (2006), for instance, categorises adventure tourism activities into four main categories, each defined by the resources depended on, and terms these *land based*, *water based*, *air based* and *mixed* (land/water/air). He and other researchers (Ewert, 1989; Hill, 1995; Lipscombe, 1995) also argue that it is possible to categorise adventure tourism activities along soft-hard dimensions. Hill (1995: 63) suggests that soft "refers to activities with a perceived risk but low levels of real risk, requiring minimal commitment and beginning skills; most of these activities are led by experienced guides". In contrast, hard activities "refers to activities with high levels of risk, requiring intense commitment and advanced skills" (Hill, 1995: 63). While this approach may seem useful initially, it is important to consider that the risk elements defined by such researchers are assumed to be based on apparently objective criteria rather than the subjective risk experiences and perceptions of tourists themselves. An activity that might be categorised as *hard*, for example rafting, can be experienced quite differently for two people. One individual may experience the activity as extremely dangerous, while another person may experience the same activity as boring. Therefore, in this study we categorise the key experience attributes connected with nature based tourism activity products instead of the activities.

2.2. Segmentation based on household composition

2.2.1. Categorisation of the household

The application of the concept of lifecycle is important both for marketing management and to understand consumer behaviour. It has also been shown to be a successful way of define market segmentation and predicting consumer behaviour (Du & Kamakura, 2006; Gilly & Enis, 1982; Solomon, 2004; Swarbrooke & Horner, 2007). Three key related theoretical approaches to lifecycle have been used in research. The first focuses on individuals as they progress from birth to death. The second, in contrast, focuses on the

broader family unit, with family lifecycles operationalising the family career into categories that modally represent types of families (Kapinus & Johnson, 2003). A third key approach focuses on households and describes and evaluates their composition, highlighting the fact that households may include both family members and non-family members living together. In this study, the focus is upon how household composition at a given point in time influences the experiences tourists seeks when they purchase nature based tourism activity products.

Although the concept of household structure is seen as highly useful within marketing and tourism research, considerable disagreement exists about how the concept can be operationalised: i.e. with regard to *the classification* of household types and the *identification of sequences* that different household types follow (Du & Kamakura, 2006; Schaninger & Danko, 1993). In 1966, Wells and Gubar argued that a family lifecycle could be divided into nine sequential stages based on marital status, the age of household head, employment status, the presence of children, and the age of the youngest child. This classification system is based on the assumption that people change from one family lifecycle stage to another in a linear, uniform sequence, but this need not necessarily be so.

Lawson (1991), for example, reported that 39.7% of respondents in a study of international visitors to New Zealand could not be classified according to the categories proposed by Wells and Gubar. As Kapinus and Johnson (2003) argue, different household types, do not always follow a specific order, and individuals may move between different household types in somewhat stochastic processes. Half of all marriages in the western world today end in divorce, with most people re-marrying, a trend which suggests that more traditional understandings of lifecycles need to reflect ongoing changes in demographic patterns. A person may, for example divorce and then re-marry: in one year they may be living in a household consisting of a husband, a wife, and a teenager about to leave home, while in the next year they may be living in a household consisting of a husband, a wife and two preschoolers.

Several researchers have therefore attempted to modernise more traditional models of household types. Such changes have included the recognition of additional household types including single-parents, divorced/separated, and middle-aged couples without children (Bojanic, 1992; Collines & Tisdell, 2002b; Murphy & Staples, 1979; Oppermann, 1995b; Wilkens, 1995; Zimmerman, 1982). Murphy and Staples (1979) developed a household model based on marital status, the presence of children and the age of the head of the household and identified 14 household types linked by multiple paths. In 1982, Zimmerman presented a refined household category system based on age, the marital status of the household head, the presence and age of the oldest child, and the presence of other relatives and non-relatives in the household. In turn, based on these variables, Zimmerman (1982) divided these households further into five main household types: the nuclear family, the single-parent family, the childless couple, single persons and households of unrelated individuals. These five household types were then divided again into 39 substages, based on the age of the household head or the age of the oldest child if present. Although this approach was more detailed, Oppermann (1995b) criticised Zimmerman (1982) for making a simple concept too complex to be attractive, and proposed instead a simpler alternative 11-stage lifecycle categorisation based solely on the age of respondents. Similarly, Collines and Tisdell (2002a, 2002b) have also argued that it is possible to define lifecycle categories based only on age and gender. However, we contend that neither Oppermann's (1995b) nor Collines and Tisdell's (2002a, 2002b) approaches take into account the increasingly weaker correlation between age and household type within post-industrialised societies, and the fact

that household categories are generally more fluid today (SSB, 2008).

In summary, the research highlighted above related to the categorisation of household clearly shows a lack of agreement regarding both how household type categories should be operationalised *and* the identification of sequence that individual household follow. This lack of standardisation makes it difficult to compare results from different studies directly. Nevertheless, a degree of consensus is evident in the recognition that a set of socio-demographic variables such as age, marital status of household heads, and the presence and age of children, are some of the variables shown to strongly influence consumer behaviour. These core variables are therefore used as the basis for defining household types in this study.

2.2.2. Composition of household and consumer behaviour

Rapaport and Rapaport (1975) were amongst the first researchers to apply the concept of lifecycles to the field of leisure, in their discussion of the changing context of activities across the span of people's lives. In 1982, Zimmerman analysed the effect of five different household types and 39 age groups on the number of trips conducted by people within a 24 h period. Results from the study indicated that both household type *and* age influenced the number of trips people undertook. Similar results were noted by Lawson (1991) in his analysis of the spending pattern of international visitors to New Zealand, where household types were reflected in the type of vacation products consumed. In his research, activities were found to correlate with the age of the adult members of the group. Young singles were also noted to be more socially-minded than people in other lifecycle stages, with young singles and young couples found to participate more in physically challenging activities, such as rafting and skiing, compared to nuclear families.

In a similar study, Bojanic (1992) used a more refined household model as an analytical segmentation tool, and included extra stages that recognised single-parents and middle-age couples without children. In his study of patterns of consumption amongst 2000 American tourists visiting Europe within a three year period, Bojanic (1992) concluded that household models were effective market segmentation criteria according to Kotler's (1991) major requirements for effective market segmentation. Single-parents and middle-aged couples without children, the study noted, travelled abroad more than those in other lifecycle stages and demonstrated a greater destination loyalty. Fodness (1992), too, found that household composition influenced vacation decision-making processes with both the information search undertaken by travellers and their final decision making being influenced by their particular lifecycle stage.

Oppermann (1995a, 1995b, 1995c) analysed changing tourist behaviour patterns across three dimensions: between age groups, over the last three decades, and between generations. These studies concluded that all three dimensions had an impact on tourism behaviour and destination choices and revealed patterns of consumer choice across nine household types that were similar to those noted by Lawson (1991) and Bojanic (1992). Oppermann (1995b) found, for example, that younger generations tended to travel farther and more frequently than older generations. Choice of destination appeared to be shaped by both generation and age. Similarly, Collins and Tisdell (2002a, 2002b) noted that both age and gender also influence the reasons people make short-term trips abroad, with men tend to travel more frequently for business, and women travel more for leisure. However, no distinct differences between men and women were evident with regard to the number of holiday trips taken. Hong, Fan, Palmer, and Bhargava (2005) also found that differences in household composition shape variations

in spending patterns. Couples without children and couples with older children, as the study showed, were more likely to spend time and money on leisure travel than singles, whereas single people were more likely to spend time and money on leisure travel than single-parents and widows or widowers.

Vacation decisions are often the result of joint decision-making processes between household members when travelling together (Dellaert et al., 1998; Fodness, 1992; Nanda et al., 2006; Nickerson & Jurowski, 2001; Seaton & Bennett, 1996). As Commuri and Gentry (2000) have noted, the desire to minimise potential conflict in a household has been identified as a dominant agenda driving household decision making. Children have been shown to have an influence upon decision making during the holiday planning process both before and during the trip, both in terms of group decision making and group behaviour (Cullingford, 1995; Dellaert et al., 1998; Nickerson & Jurowski, 2001; Thornton, Shaw, & Williams, 1997). Household members who go on holiday with children also have a tendency to participate in activities where children are also able to take part (Dellaert et al., 1998). However, the degree of impact that children have upon the decision process varies between different household types and the type of products consumed (Commuri & Gentry, 2000; Cullingford, 1995; Dellaert et al., 1998; Nanda et al., 2006).

The review above highlights the fact that household composition influences tourism consumer behaviour, including spending patterns, the underlying reasons for travelling, actual activities conducted during holiday trips, and the numbers of daily trips taken. It is therefore likely, we contend, that household composition will affect the experience tourists seek when they purchase nature based tourism activities.

3. Methodology

3.1. Sample

Members of the two largest outdoor NGOs in Norway, the Norwegian Trekking Association (Den Norske Turistforening, DNT) and The Norwegian Association of Hunters and Anglers (Norges jeger-og fiskeforbund, NJFF), were chosen as the sample frame for this study. The DNT is Norway's largest outdoor recreation organisation and has more than 210 000 members. The NJFF is the only national NGO for both hunters and anglers, and has more than 100 000 members. Both the DNT and the NJFF are two of the largest suppliers of nature based tourism activities in Norway. These organisations were chosen for this study because of their focus on outdoor recreation, which we believed indicated that their members would be more likely to consume nature based tourism products relative to the broader Norwegian population. The organisations were also chosen as the sample frame for this study in order to rationalise data collection.

Data were collated during September 2007. The sampling was conducted in a two-stage process. In the first stage, a total of 8000 members from the DNT and the NJFF were randomly selected from their membership databases. During the second stage, the sampled members were contacted by telephone in order to obtain their consent to participate in the survey. During a two week period, contact was made with 4920 (61.5%) of the sampled members. Of these, 4524 (92.0%) agreed to participate in the survey and provided us with an email address that was then used for the distribution of a web-based questionnaire (Dillman, 2000). During the first week of the survey, error reports for 354 email addresses were received, with the questionnaire successfully reaching 4170 email addresses in total. A total of 2785 completed questionnaires (a 66.7% response rate) were returned. Of those who completed the survey, the study population was restricted

further to respondents who had consumed (i.e. bought) a nature based tourism activity product between the 1st of May and the 31st of August 2007, a period which corresponds to the Norwegian summer tourist/holiday season. A total of 763 (27.4%) of the respondents who completed questionnaire had consumed a nature based tourism activity product and these were included in the survey analysis.

3.2. Demographics

The majority of the respondents in this study were male (59.6%). Most of the respondents were married or cohabiting (56.7%). Just over half of the respondents (55.2%) had children, 64.8% of whom lived at home permanently or temporarily. The age of respondents ranged from 17 to 74 years, and the mean age was 40 years. A total of 80.2% of respondents were employed full time and had an average of 3.6 weeks of holiday time during the summer of 2007. The main nature based tourist activity purchased by respondents lasted an average of 2.51 days and had an average price of 1649 NOK (approximately 236 US\$).

3.3. Measures

The questionnaire used in this study was developed during the spring of 2007. To ensure concept validity the questionnaire was pre-tested before use (Malhotra, 1999). Pre-testing was undertaken on three different groups from the same sample frame (members of DNT and NJFF) to which this survey was addressed. A total of 200 respondents participated in the pre-testing phase. Minor adjustments were made to improve the questionnaire after the first two pre-tests.

The first question asked in the survey was: "Have you participated in any of the following nature based activity products during the summer of 2007?" A total of 25 different nature based activity products and one open alternative were then presented. If respondents had purchased more than one activity, they were asked to identify their main activity and to answer the rest of the questions based on this main activity.

In the second part of the survey, respondents were asked to rate 18 descriptive statements related to nature based tourism activity

Table 1

Overview of the 18 descriptive items listed in the study survey, expressing respondents' experiences during their participation in nature based tourism activities. Scale from 1 to 5 where: 1 = Strongly Disagree to 5 = Strongly Agree. Sd = Std. Deviation.

Descriptive items	Mean	Sd
Facilitated	4.28	1.030
Several in my travelling companion could participate ^a	4.26	1.025
Group activity	4.06	1.199
Organised	4.02	1.295
New knowledge	3.97	1.023
Educational	3.85	.970
Challenging	3.69	1.164
Exciting	3.65	1.215
Physical challenge	3.44	1.213
Family activity	3.16	1.409
Time-consuming ^a	3.13	1.201
Needed previous knowledge ^a	2.94	1.413
Cultural influence ^a	2.93	1.232
Expensive ^a	2.78	1.275
Children friendly	2.63	1.350
Risk activity	2.55	1.353
Mental challenge	2.50	1.292
Frightening	2.22	1.213

^a Items not included in the final factor analysis.

experiences on a scale of 1–5, where 1 represented strong disagreement and 5 represented strong agreement. These statements were descriptions of the activities that respondents said they had participated at (see Table 1) and were based on earlier explorative interviews with a small number of Norwegian tourists who had participated in similar nature based tourism activities during the summer of 2006. The purpose of these ratings was to reveal underlying key experience attributes related to nature based tourism activities. Subsequently, respondents were asked additional questions related to their product purchases, such as the duration (number of days), and price.

The final part of the questionnaire consisted of questions related to the demographic characteristics of respondents, including age, gender, marital status, the number of people in their household, the number of children living at home, and the age of the youngest child in the household. These details were then used to categorise respondents according to household type.

3.4. Operationalisation of household types

In this survey, a simplified version of Zimmerman's (1982) categorisation system was used to classify respondents into different household types. Respondents were divided into five main household types (see Table 2): the *nuclear family* (family with two parents and children), the *single-parent* household, households in which there were *couples without children*, the *single* household (in which people lived alone and without children), and a household with *adults living together* (without children). These five main household types were further divided into 19 subgroups based on age. Households with children, for instance, were divided into five subgroups based on the age of the youngest child: 0–5 years, 6–12

Table 2

Household types and subgroups (age groups) identified, and number of respondents.

Household types	Subgroups (age groups)	Number of respondents
Nuclear family		318
	Children 0–5 years	62
	Children 6–12 years	92
	Children 13–18 years	44
	Children 19–25 years	60
	Children 26 and older	60
Single-parent		103
	Children 0–5 years	12
	Children 6–12 years	23
	Children 13–18 years	22
	Children 19–25 years	25
	Children 26 and older	21
Couples without children		116
	One person in the couple is younger than 24 years	20
	One person in the couple is between 25 and 34 years	79
	One person in the couple is 35 years or older	17
Single, living alone without children		135
	Younger than 24 years	24
	25–34 years	79
	35 years or older	32
Adults living together, without children		92
	Younger than 24 years	53
	25–34 years	36
	35 years or older	3
Overall		763

years, 13–18 years, 19–25 years, and 26 years and older. Households without children were divided further into three subgroups based on the age of the respondent: 0–24 years, 25–34 years, and 35 years and older. According to Wilkens (1995), the age of 35 years is believed to be a key milestone for childbearing for women. Therefore the age of 35 was chosen as the lower limit for the oldest age group for households without children. All of five household types and 19 subcategories (age groups) were mutually exclusive categories. Household type was used as an independent variable in this study to explain consumer behaviour during the summer of 2007 among respondents.

3.5. Data treatment

All statistical calculations were carried out using the statistical programmes SPSS 17.0 and the general level of significance was $\alpha = .05$. The data analysis in the study was undertaken in several stages. The first, an explorative factor analysis using a principal-axis factoring procedure with varimax rotation, identified the underlying structure of the 18 descriptive statements related to nature based tourism activity experiences. Factors with an eigenvalue greater than 1 were kept. Statements with extraction communalities below .35 and/or with a high loading ($>.4$) on more than one factor were excluded from the factor analysis (Hair, Anderson, Tatham, & Black, 1998). The purpose of factor analysis was to reveal underlying dimensions connected to how the respondents experienced the activities they had participated at (Hair et al., 1998), and these are referred to as *key experience attributes* in this paper. Summated scales were constructed by combining the items belonging to each factor. The mean score for these four summated scales were saved and used as dependent variables in a one-way between-groups analysis of variance (ANOVA) (Hair et al., 1998).

In the second and final stage of data treatment, a series of ANOVA was conducted to explore the influence of household composition on the emphasis that respondents placed on the key experience attributes connected to nature based tourism activities. Where the ANOVA results indicated significant differences between the household types, the Tukey HSD test was then conducted to reveal between which household types there was a significant differences (Hair et al., 1998). If no significant differences were found, between the two household types with children (*nuclear families* and *single-parents*), these household types were then merged before analysing the effect of the age of the youngest child. The same procedure was conducted on the three household types without children (*couples without children*, *singles* and *adults living together*). Where no significant differences were apparent between the household types, they were merged before analysing the impact of the age of the respondents. This was done in order to minimise statistical problems related to the under-representation of particular household types.

4. Results and discussion

4.1. Key experience attributes connected to nature based tourism activities

Factor analyses initially revealed four factors with an eigenvalue greater than 1. However, extraction communalities for five of the items were less than .28 and these were therefore excluded from the second analysis. A new factor analysis with 13 items was conducted to fine-tune these categorisations, thereby exhibiting the best structure. This resulted in a new four factor solution, which accounted for 53.85% of the variance, with all four factors having acceptable Cronbach's alphas that ranged between .70 and .84 (Table 3). These factors (key experience attributes) were named:

Table 3

Final factor analysis of the remaining 13 descriptive statements used to characterise respondents' experiences of activity based nature tourism. Scale from 1 to 5 where: 1 = Strongly Disagree to 5 = Strongly Agree. Sd = Std. Deviation.

Factor (key experience attributes)	Loading	Eigenvalue	Variance explained	Cronbach's alpha	Mean	Sd
Risk/challenge		4.168	20.66%	.84	2.85	.971
Risk activity	.746					
Mentally challenging	.701					
Frightening	.672					
Challenging	.637					
Physical challenging	.584					
Exciting	.560					
Facilitation		1.88	11.55%	.70	4.12	.933
Organised	.753					
Facilitated	.708					
Group activity	.481					
Learning		1.45	11.40%	.78	3.91	.904
Educational	.783					
New knowledge	.734					
Family/children friendly		1.21	10.25%	.78	2.89	1.248
Family activity	.797					
Children friendly	.773					
Overall			53.85%	.72		

Note: Extraction method: Principal-axis factoring. Rotation method: Varimax with Kaiser normalization.

Risk/challenge, *Facilitation*, *Learning*, and *Family/children friendly*. These four key experience attributes, we argue, correspond well to earlier studies showing that elements of learning, recreation, and adventure usually are included in nature based tourism products (Laarman & Durst, 1987; Laarman & Gregersen, 1996; Wurzinger & Johansson, 2006).

The first key experience attribute identified was *Risk/challenge* and it accounted for 20.66% of the total variance; with a reliability coefficient of .84 (Table 3). This key experience attribute incorporated six items. *Facilitation*, the second key experience attribute, accounted for 11.55% of the variance, with a reliability coefficient of .70 and incorporated three items. *Learning*, the third attribute, accounted for 11.40% of the variance, with a reliability coefficient of .78. The final attribute, termed *Family/children friendly*, accounted for 10.25% of the variance, with a reliability coefficient of .78. Both the second and the third key experience attributes incorporated two items each.

The most important experience attribute connected to the consumption of nature based tourism activity products reviewed in this study was that of *Facilitation* which had a mean value score of 4.12, followed by *Learning*, which had a mean score of 3.91 (Table 3). Table 4 shows an overview of the mean scores of the key experience attributes for the 25 commercial activities listed in the survey. *Facilitation* (with the mean ranging from 3.34 to 4.66) and *Learning* (with the mean ranging from 3.80 to 4.71) were the two most important key experience attributes for all the activities listed. These high mean scores indicated that *Facilitation* and *Learning* are central to the way in which the sample population experiences nature based tourism activity products.

The two remaining key experience attributes we identified in this study appeared to be of less overall importance for the sample (both had a mean score value below 3 – i.e. a neutral value). These were the *Family/children-friendly* experience attribute which had a mean score of 2.89, and the *Risk/challenge* experience attribute which had a mean score of 2.85. Between the 25 activities in this study, larger differences in the mean score for the *Family/children-*

Table 4
Overview of the activities purchased by respondents and the relationship to the four key experience attributes identified. Scale from 1 to 5 where: 1 = Strongly Disagree to 5 = Strongly Agree. Sd = Std. Deviation. N = Number of respondents.

Key experience attributes	Activity	N	Risk/challenge		Facilitation		Learning		Family/children friendly	
			Mean	Sd	Mean	Sd	Mean	Sd	Mean	Sd
	Organised mountain hike	139	2.64	.899	4.41	.664	3.91	.884	2.55	1.176
	Arranged fishing in a river or freshwater lake (with or without guide)	125	2.53	.850	3.34	1.161	3.91	.880	2.89	1.270
	Glacier hiking (course/guided tour)	123	3.05	.868	4.47	.644	4.02	.818	2.84	1.257
	Guided tour in a nature area	104	2.71	.931	4.38	.653	4.10	.798	2.77	1.234
	Bicycle tour in a nature area	100	2.78	.960	3.90	.898	3.96	.819	3.06	1.168
	Rock climbing/mountaineering with a guide	97	3.17	.953	4.38	.633	3.81	.890	2.65	1.224
	Rafting/whitewater kayaking with instructor (course/guided tour)	76	3.76	.724	4.66	.511	3.97	.824	2.66	1.028
	Horse riding (course/guided tour)	53	2.78	1.035	4.29	.840	3.80	.972	3.79	1.081
	Climbing (course/guided tour)	53	3.73	.762	4.22	.692	4.34	.848	2.59	1.152
	Hiking between huts with separate baggage transport	52	2.62	.799	3.77	1.127	3.87	.852	2.98	1.283
	Attend an outdoor event, where you had to pay for entrance	50	2.65	.900	4.15	.765	3.94	.907	2.62	1.223
	Arranged sea fishing (with or without guide)	44	2.46	1.009	4.18	.834	3.82	.995	3.63	1.216
	Downhill bicycling	38	3.19	.871	3.85	1.033	3.93	.709	3.18	1.210
	Kayaking on salt water with instructor (course/guided tour)	34	3.23	.872	4.17	.702	4.25	.939	2.47	.929
	Kiting/surfing (course/guided tour)	24	3.76	.551	4.10	.771	4.52	.769	2.25	1.063
	Caving (course or guided tour)	21	2.78	1.130	4.35	.628	3.93	.746	3.24	1.211
	Safari/wildlife viewing	18	2.50	.925	4.15	1.104	4.42	.695	3.50	1.272
	Kayaking on a freshwater lake with instructor (course/guided tour)	18	3.24	.807	4.46	.550	4.25	.712	2.83	1.213
	Visiting a wilderness camp	15	2.62	.963	4.58	.584	4.10	1.004	3.47	1.457
	Nature photo (course/guided tour)	12	2.65	1.192	4.31	.926	4.42	.848	3.38	1.227
	Mushrooming (course/guided tour)	12	2.54	.971	4.28	.763	4.29	.656	2.96	1.322
	Canyoning (course/guided tour)	11	2.83	1.179	4.03	.781	4.14	.869	3.14	1.247
	Off-road bicycling (guided tour)	11	3.41	1.007	4.48	.545	4.09	.889	2.09	1.114
	Via ferrata/tyroliatraverse/rappelling	7	3.86	.772	4.33	.745	4.50	.646	2.93	.976
	Floral study (course/guided tour)	7	3.14	1.207	4.19	.742	4.71	.488	2.36	1.029

friendly attribute (with the mean ranging from 2.09 to 3.79) and the *Risk/challenge* experience attribute (with the mean ranging from 2.46 to 3.86) were identified. Some activities had a high mean score for the *Family/children-friendly* experience attribute such as horse riding (3.79), arranged sea fishing (3.63), safari (3.50) and wilderness camp (3.47). Unsurprisingly, the *Risk/challenge* experience attribute was associated with activities such as via ferrata (3.86), rafting (3.76), kiting/surfing (3.76) and climbing (3.73).

The low variation between the 25 activities and the mean scores on the *Facilitation* and the *Learning* experience, we suggest, indicates that these experience attributes are not directly connected to the activities themselves, but more to the context in which they are performed. While, the larger variation between the 25 activities and mean scores on the *Family/children-friendly* and the *Risk/challenge* experience attributes may indicate that these experience attributes are less connected to the commercial element of the activity, but more to the activity itself. Activities such as rafting and climbing, for example, will have a tendency to be experienced as risky and challenging, regardless of the context they are performed within. We argue therefore that experience attributes connected to nature based tourism activity products can be categorised as either *supplementary* or *inherent*. *Supplementary experience attributes*, we suggest, are those that are added to an activity through the commercialisation of an activity into a tourism product. In contrast, *inherent experiences attributes* are those that are implicitly connected to the activity itself and are independent of the context in which the activities are undertaken. In this study we have identified two *supplementary experience attributes*; *Facilitation* and *Learning*, and two *inherent experiences attributes*; *Family/children-friendly* and *Risk/challenge*.

4.2. Household types and experiences connected to nature based tourism activities

Statistical analysis confirmed that the importance of the key experience attributes connected with nature based tourism activity

products varied between household types (Tables 5 and 6). The results also indicated that there is a weaker yet significant effect of age within the household types on the importance of the four experience attributes identified (Tables 5 and 6).

4.2.1. Risk/challenge experiences

Statistically significant differences were noted between the different household types in relation to the *Risk/challenge* experience attribute, $F_{4, 758} = 7.127, p = .000$ (Table 5). *Nuclear families* placed significantly less emphasis on the *Risk/challenge* experience attribute (2.64) than *couples without children* (3.00), *singles* (3.05) and *adults living together* (3.14). There were no significant differences between *nuclear families* and *single-parents* (2.81) in this regard. These findings indicated that the presence of children in these households had a negative impact on the consumption of *Risk/challenge*-associated products such as rafting and climbing.

Since there were no significant differences between *nuclear families* and *single-parents*, these categories were merged before analysing the possible effects of the age of the youngest children in households upon the *Risk/challenge* experience attribute. Once these household types were merged, the age of children was shown to have a significant effect on the *Risk/challenge* experience attribute, $F_{4, 416} = 2.933, p = .021$ (Table 6). Households with children older than 25 years of age placed less emphasis on *Risk/challenge* experiences (2.43) than households with children between 6 and 12 years of age (2.82) and those with children between 13 and 18 years (2.86). No significant differences were noted between other age groups. The importance of the *Risk/challenge* experience attribute for households with children appears to follow an inverse u-curve, (see Tables 5 and 6), so that *Risk/challenge* activities are most popular when children are of school-going age. The presence of a partner within a household with children did not appear to affect the emphasis in such households on *Risk/challenge* experiences.

There were no significant differences between the three household types without children and these were therefore merged before evaluating the effect of age. Significant differences

Table 5

Importance of the four key experience attributes (Factors) by household types and age subgroups, Scale from 1 to 5 where: 1 = Strongly Disagree to 5 = Strongly Agree. Sd = Std. Deviation. Analysis of variance (ANOVA) between household types.

Key experience attributes	Risk/challenge		Facilitation		Learning		Family/children friendly	
	Mean	Sd	Mean	Sd	Mean	Sd	Mean	Sd
Nuclear families	2.65	.92	3.93	1.03	3.79	.92	3.19	1.27
Children 0–5 years	2.59	.94	4.04	1.00	3.82	.99	3.46	1.37
Children 6–12 years	2.74	.89	3.94	.95	3.74	.87	3.49	1.22
Children 13–18 years	2.78	.93	4.02	.98	3.90	.89	3.07	1.22
Children 19–25 years	2.68	1.02	4.06	.94	3.90	.95	3.06	1.15
Children 26 and older	2.44	.85	3.58	1.26	3.72	.92	2.70	1.21
ANOVA between the subgroups in nuclear families, <i>p</i> -value	.226		.069		.833		.001	
Single-parents	2.81	.99	4.34	.81	4.17	.73	2.84	1.35
Children 0–5 years	2.99	1.24	4.42	.70	4.46	.66	3.58	1.44
Children 6–12 years	3.12	1.03	4.38	.55	4.00	.78	3.50	1.27
Children 13–18 years	3.02	.88	4.23	.94	4.07	.76	2.77	1.32
Children 19–25 years	2.65	.93	4.41	.73	4.35	.67	2.40	1.05
Children 26 and older	2.81	.99	4.30	1.05	4.11	.69	2.29	1.27
ANOVA between the subgroups in single-parents, <i>p</i> -value	.076		.936		.294		.002	
Couples without children	3.00	.96	4.22	.89	4.03	.83	2.67	1.20
Younger than 24 years	2.78	.99	4.28	.80	4.18	1.05	3.05	1.41
Between 25 and 34 years	3.10	.97	4.28	.87	4.00	.79	2.62	1.15
35 years or older	2.76	.90	3.88	1.07	4.03	.76	2.44	1.10
ANOVA between the subgroups in childless-couples, <i>p</i> -value	.222		.235		.708		.254	
Singles, without children	3.05	1.03	4.23	.83	3.93	.93	2.59	1.16
Younger than 24 years	2.82	.94	4.28	.82	4.08	.92	3.06	1.15
Between 25 and 34 years	3.27	1.03	4.24	.83	3.98	.94	2.41	1.08
35 years or older	2.67	1.00	4.20	.86	3.70	.91	2.66	1.27
ANOVA between the subgroups in singles, <i>p</i> -value	.009		.938		.249		.045	
Adults living together, without children	3.14	.88	4.22	.76	3.86	1.00	2.68	1.03
Younger than 24 years	3.13	.93	4.27	.73	3.90	1.08	2.63	1.04
25–34 years	3.18	.83	4.13	.83	3.78	.90	2.68	1.03
35 years or older	2.72	.51	4.44	.51	4.33	.76	3.67	.29
ANOVA between the subgroups in adults living together, <i>p</i> -value	.687		.610		.615		.242	
ANOVA between the five main household types, <i>p</i> -value	.000		.000		.003		.000	

were noted between the three age groups, $F_{2, 339} = 5.188, p = .004$ (Table 6). Childless households between 25 and 34 years of age placed more emphasis on the *Risk/challenge* experience attribute (3.19) than households in which members were older than 34 years (2.70). No significant differences were found between childless households younger than 25 years (2.98) and the two other age groups. The findings indicate that in all three childless household types, an increase in the age of the household members had a negative influence on the emphasis upon the *Risk/challenge* experience attribute.

4.2.2. Facilitation experiences

There were statistically significant differences between the household types related to the *Facilitation* experience attribute, $F_{4, 758} = 6.248, p = .000$ (Table 5). *Nuclear families* placed less emphasis on this experience dimension (3.93) than *single-parents* (4.34), *couples without children* (4.22) and *singles* (4.24). No significant differences were found between *nuclear families* and *adults living together* (4.22). There were also no significant differences between the age groups within any of the household types (Tables 5 and 6).

Products that scored highly on the *Facilitation* experience attribute were most popular amongst *single-parent households*, *singles* and *couples without children*. The *Facilitation* experience was the least popular attribute amongst *nuclear families* (Table 5). Although researchers such as Lawson (1991) concluded that young people participated more in socially-orientated activities than older people, our findings do not support this in the context of nature based tourism activities.

4.2.3. Learning experiences

Statistically significant differences were evident between household types with regard to the *Learning* experience attribute, $F_{4, 758} = 4.051, p = .003$ (Table 5). *Single-parents* placed greater emphasis on the importance of the *Learning* experience attribute (4.17) than *nuclear families* (3.79) did. There were no significant differences between the subcategories within any of the household types (Tables 5 and 6). These findings indicate that the absence of a partner in households with children increases the importance of the *Learning* experience attribute. Examples of activities with a high score for the *Learning* experience attribute included course-

Table 6

Importance of the four key experience attributes (Factors) by household types (with and without children). Scale from 1 to 5 where: 1 = Strongly Disagree to 5 = Strongly Agree. Sd = Std. Deviation. Analysis of variance (ANOVA) between household types.

Key experience attributes	Risk/challenge		Facilitation		Learning		Family/children friendly	
	Mean	Sd	Mean	Sd	Mean	Sd	Mean	Sd
Households with children	2.69	.94	4.03	1.00	3.88	.89	3.10	1.30
Children 0–5 years	2.66	1.00	4.10	.97	3.93	.97	3.48	1.37
Children 6–12 years	2.82	.93	4.03	.90	3.80	.86	3.49	1.23
Children 13–18 years	2.86	.92	4.09	.96	3.92	.85	2.97	1.25
Children 19–25 years	2.67	.99	4.16	.90	4.02	.89	2.88	1.16
Children 26 and older	2.43	.85	3.77	1.24	3.88	.89	2.59	1.23
ANOVA between the subgroups in nuclear families, <i>p</i> -value	.021		.108		.497		.000	
Households without children	3.05	.97	4.23	.83	3.95	.92	2.64	1.14
Younger than 24 years	2.98	.95	4.27	.76	4.00	1.03	2.82	1.16
25–34 years	3.19	.97	4.25	.84	3.95	.87	2.55	1.10
35 years or older	2.70	.94	4.11	.92	3.85	.86	2.64	1.20
ANOVA between the subgroups in childless-couples, <i>p</i> -value	.004		.499		.622		.145	
ANOVA between the two main household types, <i>p</i> -value	.000		.003		.331		.000	

oriented products such as photo courses, flower studies and kiting-courses.

Between the other household types, smaller differences were apparent. Learning activities were least popular amongst *adults living together* (see Table 5). Why the *Learning* experiences attribute was more popular amongst *single-parents* than amongst other household types is difficult to assess. One explanation may relate to the fact that *Learning* experiences are associated with courses in which people usually do not know each other. A feasible explanation for this phenomenon appears to be associated with the gender of the household head. Within the study, there was a slight over-representation of females (54.4%) within *single-parent* households relative to the total survey sample (40.4%). For the overall study sample, a significant difference was evident between men and women, $T_{761} = 3.049$, $p = .002$. Women (4.03), for example, emphasised the *Learning* experience more than men (3.83). However, it was not possible to study these gender effects more specifically using the data available in this study.

4.2.4. Family/children-friendly experiences

There were statistically significant differences between household types in terms of the degree of emphasis they placed on the *Family/children-friendly* experience attribute, $F_{4, 758} = 8.404$, $p = .000$ (Table 5). It is not surprising that *nuclear families* placed greater importance on the *Family/children-friendly* experience attribute (3.19) relative to *couples without children* (2.67), *singles* (2.59) and *adults living together* (2.68). There were no significant differences in the mean scores of *nuclear families* and *single-parents* (2.84).

There were no significant differences between *nuclear families* and *single-parents* and these household types were therefore merged before analysing the effect of the age of the youngest children. There was a significant difference between the age groups of children on the emphasis on the *Family/children-friendly* experience attribute, $F_{4, 416} = 9.248$, $p = .000$ (Table 6). Households with children younger than 6 years of age (3.48) placed greater emphasis on the *Family/children-friendly* experience attribute than

households in which children were older than 18 (2.87 and 2.59). Households in which the youngest child was between 6 and 12 years of age (3.49) placed greater emphasis on the *Family/children-friendly* experience attribute than households in which the youngest children was older than 13 years of age.

Of the three childless household types, only *singles* showed significant differences between the three age groups, $F_{2, 132} = 3.089$, $p = .045$. *Singles* younger than 25 years of age had higher mean scores associated with the *Family/children-friendly* experience attribute (3.06) compared to *singles* aged between 25 and 34 years (2.41). This may indicate that *singles* younger than 25 spent their summer holidays together with family members or parents (see Table 5). There were no significant differences between the three childless household types and these were therefore merged before analysing the effect of age on the *Family/children-friendly* experience attribute. The ANOVA test showed that there were no statistically significant differences between the three age groups (Table 6).

The data showed that the degree of importance that households placed on the *Family/children-friendly* experience attribute is influenced by both the presence of children in the households and their age of the children. Similarly, the presence of a partner in households with children also influences the importance of the *Family/children-friendly* experience attribute. For households with children, this experience attribute is particularly important when children are aged between 0 and 12 years (Tables 5 and 6). However, patterns of behaviour for *nuclear family* and *single-parent* households develop differently as children within them grow older: the emphasis upon *Family/children friendly* activities drops more rapidly for *single-parents* than *nuclear families*, for instance, once children in these households reach the age of 13 years (Table 5). For the three childless household types, the *Family/children-friendly* experience attribute was of less importance. *Singles*, unsurprisingly, were the household type with the lowest score on the *Family/children-friendly* experience attribute.

4.2.5. Discussion of the main findings

All household types had a high mean score on the two *supplementary experiences attributes*, namely *Facilitation* and *Learning*. A feasible explanation to the high score on both *Facilitation* and *Learning* for all household types is that the tourist uses the free recreation variation of the activity as a refraction point. The high score on the *Learning* experience attribute accord with earlier studies that identified learning as one of the central experience attributes connected with nature based tourism products (Laarman & Durst, 1987; Laarman & Gregersen, 1996; Wurzinger & Johansson, 2006). However, statistical analysis showed that the importance of these *supplementary experiences attributes* to some extent vary across different households. Among the five household types identified, *nuclear families* were the household type with the lowest mean score on both *Facilitation* and *Learning*, while *single-parents households* had the highest mean score on both *Facilitation* and *Learning* (Table 5).

Larger differences were noted between household types in terms of the importance of two *inherent experience attributes*, namely *Risk/challenge* and *Family/children friendly* (Tables 5 and 6). Unsurprisingly, the presence of children within households was shown to decrease the importance of the *Risk/challenge* experience attribute and increase the importance of the *Family/children-friendly* experience attribute (Tables 5 and 6). Across the five household types the *Risk/challenge* experience attribute was most important for *adults living together* and least important for *nuclear families*. The *Family/children-friendly* experience attribute, as expected, was the least important attribute for all three childless household types; *couples without children*, *singles* (childless) and

adult living together. Across the five household types the *Family/children-friendly* experience was most important for *nuclear families* (Table 5).

Collins and Tisdell (2002b) and Lawson (1991) argue that age is an important factor for predicting tourism consumer behaviour. However, our research only partly supports this argument given that only the two *inherent experience* attributes, *Family/children friendly* and *Risk/challenge*, were significantly affected by the age of household head or youngest child (Tables 5 and 6). For household types without children a negative effect of age on the importance of the *Risk/challenge* experience attribute was observed (Tables 5 and 6). The *Family/children-friendly* experience attribute was least popular when head of households without children was between 25 and 34 years. For households with children the *Family/children-friendly* experience attribute was most popular when children within these households were younger than 13 years. Differences were also observed between *nuclear families* and *single-parent* households with regard to the *Family/children friendly* key experience attribute. The importance of this particular experience attribute, as the data showed, was the same for both household types with children, when such children were aged between 0 and 12 years (Table 5). However, the mean score on the *Family/children-friendly* experience attribute dropped more noticeably for *single-parent* households than for *nuclear families* when the youngest child turned 13 (Table 5). When children reached the age of 13 years, the importance of *Family/children friendly* was shown to decline and become the least important experience attribute for such households, together with *Risk/challenge* (Table 5). The association between the age of children in household and the mean score was weaker for the *Risk/challenge* experience attribute. The *Risk/challenge* experience attribute was most important for those households with children and in which the youngest child was between 6 and 18 years of age (i.e. of school-going age) (Table 6). Age of household head or youngest child in household did not influence the importance of the two *supplementary experiences* attributes, namely *Facilitation* and *Learning*. To some degree, the low sample numbers for some of the household age subgroups may explain why it was not possible to identify significant differences between all the household age subgroups. This may also have been due to the considerable variations within each of the age subgroups, as evidenced by the standard deviations (Tables 5 and 6).

5. Conclusions

The aim of this study was to examine how household composition influence the key experience attributes that tourists seek when selecting and consuming nature based tourism activity products. This approach, we contend, gives additional insight into the importance of the reasons for purchasing nature based tourism activity products. Four key experience attributes were identified and named; *Risk/challenge*, *Facilitation*, *Learning* and *Family/children friendly*. These experiences attributes were then subcategorised further into two groups, namely *supplementary* and *inherent*. *Supplementary experience attributes*, as we suggested, are those experience attributes added to an activity through the commercialisation of the activity into a tourism product. In these cases, we regarded the *Facilitation* and *Learning* experience attributes as supplementary. While *inherent experience attributes* are implicitly connected to the activity itself and are independent of the context in which the activities are undertaken; here *Risk/challenge* and *Family/children friendly* are regarded as inherent.

The findings of this investigation have some significant theoretical and practical implications for nature based tourism in particular as well as for tourism in general. First, the study underlines that many outdoor recreation activities can be

commercialised into nature based tourism activity products by adding *supplementary experience attributes* to the activity. Second, the findings in this study correspond well with earlier studies that have shown that household composition is a powerful demographic analytical tool to explain consumer behaviour (e.g. Bojanic, 1992; Collins & Tisdell, 2002a, 2002b; Commuri & Gentry, 2000; Du & Kamakura, 2006; Gibson & Yiannakis, 2002; Hong et al., 2005; Lawson, 1991; Oppermann, 1995b; Wells & Gubar, 1966; Wilkens, 1995; Zimmerman, 1982). Household composition clearly influences on the key experience attributes that tourists seeks when consuming nature based tourism activity products. It is therefore possible to use household composition as one way to segment the nature based tourism activity marked. This approach is especially useful for small nature based tourism businesses since segmentation by household composition is often easy to implement and it is therefore a cost efficient method of analysing the marked. Third, analyses of household structure, as we have argued, are also suitable for analysing the impact of demographic changes in post-industrialised societies, trends about which the tourism sector should be aware. A decrease in the number of *nuclear families*, for example, may well result in a decrease in the demand for *Facilitation* and *Learning* activities that are also *Family/children friendly*. As people in post-industrial settings delay having children, and the number of young couples without children rises, tourist operators may face rising demand for *Facilitated* and *Learning* activities that also include *Risk/challenge* attributes. Similarly, an increase in the number of *singles* and households with *adults living together* may also result in an increase in this type of demand.

The results and analyses from this study need to be viewed in light of the following limitations. First, this study was based on a sample from the two largest Norwegian outdoor recreation NGOs with specific interest in outdoor activities. It is therefore problematic to generalise the results directly to a wider population. However, our findings are highly significant for market segments with predisposed interest in nature based tourism products. Second, this study was based on the assumption that household units and consumption units are equivalent for tourism products. This is true for some products and purchases but not for all. Some purchases might, for instance, be determined on an individual basis, or in other social contexts outside the household, such as amongst friends. Further research is needed on the interaction between household types and travelling companions. Similarly, further research should be focused more closely on the interaction between different types of travelling companions and actual consumers of nature based tourism activities. Through this study, we have identified four experience attributes that are connected with nature based tourism activity products. Further research is also needed to confirm these experience attributes and possibly others that are connected with nature based tourism activity products. The sample in this study was Norwegian and it is likely that their experience of nature based tourism activity products is influenced by factors such as cultural background. Future research is therefore also needed to test if the findings in this study are valid for other nationalities. Household types varied most in terms of the ranking of *inherent experiences attributes*, and this should therefore also form the focus of future research.

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Paper IV

Motivation and the intention to purchase nature based tourism activity products: An empirical study of second-home owners in Norway

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Abstract

Tourism is acknowledged as an important business sector in rural areas. This paper argues that second-home owners are an important market segment for businesses that offer nature based tourism activity products. Previous research on tourism behaviour has shown that a number of factors influence tourists' behaviour. This study examined how motivation and demographic variables affect the intention of second-home owners to purchase three different types of activity products: *learning*, *adventure*, and *hunting and angling*. We found large variations in the intention to purchase these products among second-home owners. This intention was influenced by leisure motivations, age, income and educational level. Second-home owners who have a high intention to purchase nature based tourism activity products tend to be young, have high income, and being socially oriented risk takers. Businesses offering nature based tourism activity products should use a combination of demographic and psycho-graphical variables when they segment the second-home market.

Keywords: Nature based tourism activity products; Motivation; Behaviour models; Recreation experience preference (REP); Purchase intention; Consumer behaviour; Market segmentation

1 Introduction

Tourism in rural areas has received attention in recent years and is acknowledged as an important business sector (Frochot, 2005). Over the two last centuries, the agricultural sector in Europe has been radically restructured. Rural areas has gone from primarily being a place for food and fibre production to also being a place for recreation and consumption (Burton & Wilson, 2006). In several countries, the tourism trade is seen as potential income for rural municipalities where traditional business activities, such as agriculture, forestry and industry, are no longer profitable (Briedenhann & Wickens, 2004; Nybakk, Crespell, Hansen, & Lunnan, 2009; Nybakk & Hansen, 2008; Place, 1991; Tervo, 2008). In Europe, the US and Canada, the scale of rural tourism has sharply increased, due in part to the rapid growth of second-home ownership after the second-world war (Jacobsen, 1990; Kaltenborn, Andersen, Nellesmann, Bjerke, & Thrane, 2008). This increase has created new economic opportunities for local communities. In recent years, several Norwegian rural municipalities have built a large number of second homes, and companies have been established to sell products and services to the owners of these homes. In 2008, there were 388,220 second-homes in Norway, and approximately 1.2 million Norwegians (one in four) had access to one or more second-homes (Statistikknett, 2010). These numbers represent an important segment of the Norwegian domestic market for rural tourism products.

It is common to conceptualise the tourism products into four parts: transport, accommodations, food, and activities (Mill & Morrison, 2009). Second-home tourists differ from other tourists because they do not purchase accommodations and often organise transportation and food on their own. One of the objectives of this study was to investigate whether second-home owners were interested in purchasing nature based tourism activity products while they were at their second-home. Previous studies have indicated that three types of nature based tourism activity products are relevant to rural mountain areas in Norway: *learning products*, *adventure products*, and *hunting and angling products* (Dervo, Aas, Kaltenborn, & Andersen, 2003; Nybakk, Vennesland, Hansen, & Lunnan, 2008; Tangeland & Aas, 2011). In this study, we investigated second-home owners' intentions to purchase these three product categories.

Although motivation has been a central research topic in tourism since the 1970s (Gnoth, 1997) and nature based tourism, a special form of rural tourism, has been a growth area for

some time (Fredman & Tyrväinen, 2010; T. H. Lee, 2009), few published studies have examined what motivates tourists to purchase nature based tourism products which is the .

This study proposed the following research question: *How do second-home owners' leisure motivations and demographic variables influence their intentions to purchase nature based tourism activity products?* This information would give the suppliers of nature based tourism activity products better insight into tourist preferences and establish a foundation for product development based on the needs and wants of tourists in select market segments. It would also provide planners in rural areas with a knowledge platform from which to develop clearer business strategies to attract more second-home builders and to construct targeted portfolios for local providers of nature based tourism products.

2 Theoretical Framework

2.1 Nature based tourism activity products

Nature based tourism is often used synonymously with ecological, sustainable, green, alternative, and responsible tourism; as well as mountain tourism (Higgings, 1996; T. H. Lee, 2009; Luzar, Diagne, Gan, & Henning, 1998; Roberts & Hall, 2004; Weiler & Hall, 1992). These types of tourism, which are directly dependent on the use of natural resources in relatively pristine natural areas (Valentine, 1992), are referred to as nature based tourism in this study. Nature based tourism activity products are often based on traditional outdoor activities, such as hunting, angling, climbing, mountain hiking, and bird watching (Nybakk, et al., 2008). But also newer types of activities, such as rafting, kiting and surfing, are being transformed into tourism products (Weber, 2001). Several authors have argued that there is no clear distinction between “free” outdoor recreation and “commercial” tourism activities in natural areas (Carr, 2002; McKercher, 1996; Moore, Cushman, & Simmons, 1995; Pomfret, 2006; Tangeland & Aas, 2011) and that both of these types of activities are the endpoints of a continuous leisure scale. This study defines *nature based tourism activity products* as *activities that take place primarily in nature, that are dependent on or enhanced by the natural environment, and for which the tourist pays a third party to participate* (Tangeland & Aas, 2011).

2.2 Behavioural models

Different academic disciplines have developed theories and models to explain human behaviour. In social psychology, there are several theories and models that attempt to explain behaviour (Leone, Perugini, & Ercolani, 1999). The two most used models are the theory of reasoned action (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) and its extended version, the theory of planned behaviour (Ajzen, 1991) (Figure 1). According to the latter model, a person's behaviour is influenced by his intention to behave in a particular way. Intention is determined by three factors: 1) the person's attitudes toward the behaviour; 2) the subjective norms he/she believes his significant other holds concerning the behaviour; and 3) the perceived behavioural control (the perception of whether the behaviour can be performed). Both the theory of reasoned action and the theory of planned behaviour are considered to be simple and easily operationalised and have been applied with great success to a range of topics, such as choice (Fishbein & Ajzen, 1981), leisure choice (Ajzen & Driver, 1992), health studies (Reddy, York, & Brannon, 2010), education studies (Poulter & McKenna, 2010), and career decision making (Giles & Rea, 1999).

Bagozzi and colleagues have criticised both theories for lacking a motivation variable as a condition for intention and action (Bagozzi, 1992; Bagozzi & Kimmel, 1995; Bagozzi & Warshaw, 1992; Perugini & Bagozzi, 2004). Furthermore, these authors have criticised both of these theoretical models for claiming that attitudes affect direct intention, and they have noted that a positive attitude toward a particular behaviour does not necessarily cause a person to form the intention to behave accordingly. For example, a person may have a positive attitude toward hiking on a glacier with no intention of doing so. Bagozzi (1992) argued that the intention to perform an action (e.g., to participate in a glacier expedition) does not form unless the person is motivated and has the desire to perform a certain behaviour. Consequently, Bagozzi (1992) introduced a third model, the theory of self-regulation (Figure 2), which includes a motivation variable. In this model, intention and behaviour are dependent on the motivation variable of desire.

Leone et al. (1999) compared these three models (the theory of reasoned action, the theory of planned behaviour and the theory of self-regulation) and concluded that the self-regulation model had the highest predictive power for intention. Bagozzi and Kimmel (1995) and Leone et al. (1999) indicated that the effect of attitudes and subjective norms on intention ceases to

apply when the motivation variable, desire, is included in the model. A possible explanation for this result is that attitudes are the result of evaluations based on the cognitive and affective components of specific objects (e.g., an action or product) (Eagly & Chaiken, 1993). If the evaluation leads to a positive attitude, it motivates the person to perform the act (Perugini & Bagozzi, 2004). Leone et al. (1999) suggested that further research should examine the relationship between motivation and intention. Therefore, in this study, we investigated how leisure motivations among second-home owners influence their intention to purchase different types of nature based tourism activity products.

2.3 Motivation

Purchase motivation occurs when a person is aware of a product or service and believes that purchasing and consuming it will have a positive effect of satisfying an unmet need (Goossens, 2000). Generally, motivation is defined as the underlying psychological force that drives a person to perform an action to achieve a goal (Iso-Ahola, 1982). According to motivation theory, individuals constantly strive to achieve a state of stability. It is believed that a motivation arises when there is a discrepancy between the consumer's ideal state and the actual state. This discrepancy in an individual can create a uncomfortable level of tension in the mind and body (Fodness, 1994). When this tension becomes great enough, it triggers a behaviour to reduce it.

Previous studies of tourist motivation have shown that motivation is the sum of many motives, which makes it a complex issue (Mehmetoglu, 2007; Prebensen, 2006). A tourist may have several needs that he/she wishes to satisfy by purchasing a product. Another complicating factor in predicting behaviour is that people may purchase different products to satisfy the same need. A third challenge is that people with different needs may be motivated to purchase the same product (Crompton & McKay, 1997). Nevertheless, there is a consensus that motivation is a critical variable for explaining tourist behaviour, and it has been used to explain decision making and planning processes (Bansal & Eiselt, 2004; Kim & Prideaux, 2005), destination choice (Beh & Bruyere, 2007; Goossens, 2000), destination loyalty (Yoon & Uysal, 2005), and choice of activities and products (Meric & Hunt, 1998; Qu & Ping, 1998). Furthermore, motivation has been used with great success as the core segmentation criteria in a number of studies (e.g. in de Guzman, Leones, Tapia, Wong, & de Castro, 2006;

Frochot, 2005; Kibicho, 2005; C.-K. Lee, Lee, & Wicks, 2004; Oh, Uysal, & Weaver, 1995; Park & Yoon, 2009).

A review of the literature on tourism motivation indicates that the push-pull model has been the dominant paradigm for formulating and testing motivation (Bansal & Eiselt, 2004). The framework provides a simple and intuitive approach to explore the motivations underlying tourist behaviour (Crompton, 1979; Dann, 1977). According to this model, push factors are specific forces in a tourist's life that lead to the decision to travel outside his/her daily environment, and pull factors are those that subsequently lead him/her to select a destination (Klenosky, 2002). The push-motivation factors are related to the tourist's needs and wants, such as the desire to take risks, relax, be physically active, enjoy nature, learn something new, or engage in social interaction (Devesa, Laguna, & Palacios, 2010). The pull-motivation factors are linked to external, situational, or cognitive aspects, such as attributes of the chosen destination (Devesa, et al., 2010; Klenosky, 2002). Examples of the attributes of a rural mountain area that can pull tourists to travel there are hiking opportunities, surroundings, and opportunities to hunt, angle, and ski. These attributes motivate people to travel to a particular location or, in this case, to purchase and travel to a second-home in a rural municipality.

Crompton (1979) and Dann (1981) argued that push and pull factors influence each other. However, there has been a tendency to use push-motivation factors to explain the decision to travel and pull-motivation factors to explain location choice (Kim, Lee, & Klenosky, 2003). However, several recent studies have shown that these factors are not independent of each other (Kim, et al., 2003; Oh, et al., 1995). Furthermore, research has shown that both factors influence the initial travel decision and location choice (Klenosky, 2002; Yoon & Uysal, 2005). The sum of the push and pull motivations determines what the tourist does. It is therefore reasonable to assume that people's motivations to have a second-home in a certain location and their leisure motivations will influence the activities they intend to purchase when they visit their second-homes.

Over the last decade, a number of motivation studies on nature based tourism have identified the following common push factors: adventure and risk taking (Beh & Bruyere, 2007; Kim, et al., 2003; Luo & Deng, 2008; Skår, Odden, & Vistad, 2008), contemplation and escape from everyday routine (Beh & Bruyere, 2007; Kim, et al., 2003; Mehmetoglu, 2007; Skår, et al., 2008), physical activity (Luo & Deng, 2008; Mehmetoglu, 2007; Raadik, Cottrell, Fredman,

Ritter, & Newman, 2010; Skår, et al., 2008), enjoyment of nature (Luo & Deng, 2008; Raadik, et al., 2010; Skår, et al., 2008), self-development (Beh & Bruyere, 2007; Luo & Deng, 2008; Raadik, et al., 2010), and being social (Eagles, 1992; Kim, et al., 2003; Mehmetoglu, 2007; Skår, et al., 2008). These motivational dimensions are often measured with the recreation experience preference (REP) scale, which was developed in leisure research to measure what motivates people to perform activities in nature areas (Driver, Tinsley, & Manfred, 1991; Manfred, Driver, & Tarrant, 1996). The REP scale is widely used to measure people's motivation to engage in outdoor activities, and it has proven to be a reliable and valid measurement tool (Hall, Seekamp, & Cole, 2010; Manfred, et al., 1996; Raadik, et al., 2010). The original REP scale consisted of 19 motivational dimensions that were measured using 328 items (Driver, et al., 1991; Manfred, et al., 1996). Manfred et al. (1996) argued that it is possible to use a simplified version of the original REP scale by adapting it to the context in which a study is implemented. In the past decade, several studies have employed simplified REP scales to investigate push motives among tourists and recreationists (e.g. Beh & Bruyere, 2007; Luo & Deng, 2008; Raadik, et al., 2010; Skår, et al., 2008). The REP scale belongs to a line of leisure-motivation research known as the experiential approach (Manfred, et al., 1996). According to this approach, activities represent more than the core activity, such as angling and glacier hikes, and can be defined as psycho-physiological experiences that are innately rewarding, take place in leisure time and are a result of free will (Manfred, et al., 1996). This approach assumes that behaviour is motivated and goal-directed and that an individual's cognitive qualities, such as motives, needs, desires, and benefits, are instrumental in directing the subsequent behaviour (Ajzen & Driver, 1991). In a tourism context, this assumption means that tourists believe that the benefits (in terms of their psycho-physiological experiences) of participating in an activity are greater than the costs (in terms of money and time). This belief is the basis for an exchange between seller and buyer (Mill & Morrison, 2009).

Pull-motivational factors are directly connected to a site's specific features, and thus the factors identified in a study depend on the study's location. This location dependency makes it challenging to generalise findings from one study area to another. However, the common pull factors found in studies conducted in rural areas are connected to landscapes and surroundings (Eagles, 1992; Raadik, et al., 2010; Saleh & Karwacki, 1996), opportunities to watch animals in their natural habitat (Beh & Bruyere, 2007; Kim, et al., 2003), wilderness and remoteness (Eagles, 1992; Raadik, et al., 2010; Saleh & Karwacki, 1996), and opportunities for outdoor

activities (Eagles, 1992; Saleh & Karwacki, 1996). Activities such as hiking, biking, hunting, angling and skiing are examples of a popular activities among Norwegian while they are at their second-home (Vaage, 2009). Previous research on pull motivation factors have indicated that several factors attract people to rural mountain areas or, in this case, to purchase a second-home in a rural municipality.

The a priori push-pull model has been shown to be a useful approach for understanding tourist motivations in different contexts. Therefore, it was used in this study as the conceptual framework for motivation. Furthermore, the literature review indicates that some push and pull motivational factors are significant for predicting tourist behaviour in rural mountain areas. Therefore, we examined how six push motivations (*risk taking, contemplation, physical fitness, enjoyment of nature, skill development*, and *social interaction*) and three pull motivations (*hiking opportunities and surroundings, hunting and angling opportunities, and closeness to ski resorts*) affect the intention to purchase three categories of nature based tourism activity products (*learning, adventure, and hunting and angling*) among tourists at their second-homes. We believe that these motivational dimensions and product categories are relevant for a rural mountain area. Clearly, these motivational factors are location-specific, and not all motivation factors affect the intention to purchase all three types of products. However, the overall idea of the study is that these factors are generalisable to other countries and contexts.

3 Method

3.1 Question development and measurement

The questionnaire for this study was developed using the principles from (Dillman, 2000) in spring 2007 in cooperation with the Ål municipality and tourism businesses in that area. The first draft was read and commented on by 12 representatives from various forums (two from the municipality, six students at UMB, two local business persons and two second-home owners). Based on this constructive feedback, we refined the questionnaire and sent it to 15 second-home owners, of whom ten responded. We implemented several minor changes based on the feedback of these ten second-home owners.

We measured the intention to purchase nature based tourism activity products by asking the respondents to rate how interested they were in purchasing 13 such products on a scale from 1 to 7, where 1 indicated “definitely not purchasing the product” and 7 indicated “definitely purchasing the product”. The three main types of nature based tourism activity products were *learning products*, *adventure products*, and *hunting and angling products* (Table 1). We defined *learning products* as tourism products that focus on the transfer of knowledge, either from businesses to customers or between customers. Examples of important learning themes include fauna, biodiversity, outdoor skills, history and culture. The leisure and tourism literature has defined adventure differently depending on the context (Weber, 2001), but these definitions share some degree of uncertainty connected to the outcome of the activity. In this study, we defined *adventure products* as activities that take place in an outdoor area, that are more exciting than contemplative, and that treat the outdoor environment as a setting for the activity rather than as a place to enjoy scenery, plants or animals. Furthermore, *adventure products* are activities that involve the risk of injury or even death (Carnicelli-Filho, Schwartz, & Tahara, 2010), such as kayaking, mountain biking, rafting, kiting and downhill skiing. We defined *hunting and angling products* as activity products that are developed around hunting and angling. These products represent a type of activity that is challenging to categorise as either outdoor recreation or tourism. Angling and hunting are based on limited resources and private rights that can be sold in a market. Across Europe, there are long-standing traditions of landowners, both private and public, selling hunting and angling privileges on their land. Low-priced products (i.e., licences that provide access to angling and hunting) are often regarded as outdoor recreational activities, and other opportunities, which include accommodation and guiding, are regarded as tourism products (Tangeland & Aas, 2011).

We measured push motivation using a reduced version of the recreation experience preference (REP) scale (Driver, et al., 1991; Manfredi, et al., 1996). The respondents used a 1 to 7 scale (where 1 corresponded to “strongly disagree”, and 7 corresponded to “strongly agree”) to rate how strongly 25 items motivated them to engage in nature activities (Table 2). These 25 items were connected to six push-motivational dimensions: *risk taking*, *contemplation*, *physical fitness*, *enjoyment of nature*, *skill development*, and *social interaction*.

The respondents were then asked to rate on a scale of 1 to 7 (where 1 meant “not important” and 7 meant “very important”) the degree to which nine characteristics of the area around the

municipality influenced their decision to have a second-home there (Table 3). These nine characteristics were connected to three pull-motivational dimensions: *hiking opportunities and surroundings*, *closeness to ski resorts*, and *hunting and angling opportunities*. The three pull motivations were defined through discussions with the local authorities and the office of tourism commerce in the region. We also defined these pull motivations using the motivational dimensions identified as important by previous research on destination choice for nature based tourism.

In addition, we asked the respondents demographic questions on age, income, and education, which we used as control variables in the three models.

3.2 Sampling and data collection

To ensure a certain isolation of the study and minimal variation from the unknown variable we limited the data collection to one region. After 1960, cars became common among Norwegian households, which allowed more people to build cabins in the mountains and on the coast (Berg, Julsrud, & Kristiansen, 2003; Jacobsen, 1990). Ål municipality is a typical Norwegian mountain village and has developed in a similar way as many other Norwegian municipalities that are seen as attractive locations for second-homes in a mountain area. Ål municipality was therefore selected as a sample framework for this study. The questionnaire where sent via post to all the private second-home owners registered in the Ål municipality's renovation register (2,058). This procedure ensured that we contacted the individuals who had the most knowledge about the use and users of these second-homes. In the cover letter, the respondents were informed that they could choose to complete the questionnaire on paper or on the Internet. A total of 1128 owners responded (54.8%). The majority of the respondents returned the paper questionnaire (80%), and the remaining owners chose to respond using the online version (20%).

3.3 Demographics

The ages of the second-home owners were relatively high: 57% were between 46 and 64, and 26% were 65 or older. Less than one percent of second-home owners were under age 26. The average household income was 167,275 USD (898,000 NOK). The educational level among the second-home owners in the sample was also high: only one of four did not have a university degree and almost half (46%) had studied for more than three years at a university. In the Norwegian population over 16 years, only one-fourth had studied at university (SSB,

2010). Half of the second-home owners had two people in the household, and one-third of the respondents lived in a household consisting of three to five persons.

3.4 Non-response bias test

Using a questionnaire with a response rate that is not extremely high raises concern regarding non-response bias. Even with a fairly high response rate (as in this study), this source of error may exist (Needham & Vaske, 2008). We tested for non-response bias by comparing the early and late responses with a T-test as recommended by Armstrong and Overton (1977). The non-response bias test showed no significant differences for the variables in question.

3.5 Data treatment

We performed all the statistical analyses using SPSS 18 and applied Cronbach's alpha analyses to test for reliability (i.e., "item total correlation" and "alpha if item deleted"). Conventionally, a good alpha score is between 0.7 and 0.8 (Bryman & Cramer, 2001). We did not accept scores lower than 0.6, which indicates a weak consistency. In addition, we deleted all items with an "alpha if item deleted" higher than the overall Cronbach's alpha. After the reliability analyses, we constructed composite variables using the mean of the extracted items in each factor (construct). We used OLS regression analyses to test the nine motivation factors' impact on intention to purchase in the three product categories (Hair, Black, Babin, & Anderson, 2010).

4 Analysis and results

4.1 Reduction of items and construct reliability

We deleted three items relating to the intention variables (which are dependent in the three models) because they would have increased the Cronbach's alpha (Table 1). All three observed intention variables had an alpha ranging from 0.81 to 0.90, which indicates good reliability. Two items relating to the "push" constructs were deleted because they would have increased the Cronbach's alpha (Table 2). All of the observed "push" constructs had an alpha ranging from 0.83 to 0.93, which indicates good reliability. None of the items relating to the observed "pull" variables were deleted because they had low "item total correlation" and high "alpha if item deleted" (Table 3). However, two of the constructs had only two items. Two of the constructs had acceptable alphas (0.72 and 0.83) that indicated acceptable reliability. The

hunting and angling opportunities construct had a low alpha (0.60); however, the decision was made to keep it. The Cronbach's alpha test is strict when only two items are present.

Table 1. Dependent variables: *Learning products, Adventure products and Hunting and angling products*

	Mean ¹ (SD)	Item total correlation	Alpha if item deleted	Cronbach's alpha
Learning products (Depend1)	2.83 (1.58)			.90
Activity products where I can learn about nature and animals	3.18 (1.96)	.86	.86	
Activity products where I can learn about handling dangers in the mountains	3.00 (1.81)	.83	.87	
Activity products where I can learn about unspoiled nature	2.62 (1.68)	.78	.88	
Activity products where I can learn about outdoor skills	2.49 (1.63)	.75	.89	
Guided tours where I can learn about local culture and history	3.97 (1.94)	.61	.92^a	Deleted
Adventure products (Depend2)	2.05 (1.34)			.81
Activity products including kayak paddling or canoeing	2.33 (1.69)	.66	.75	
Activity products including mountain biking	2.05 (1.56)	.67	.75	
Activity products including white water rafting	2.01 (1.55)	.78	.73	
Activity products including kiting	1.76 (1.45)	.65	.76	
Downhill skiing	3.30 (2.25)	.38	.87^a	Deleted
Hunting and angling products (Depend3)	1.94 (1.55)			.82
Small game hunting including guiding, coursing, food and/or accommodation	2.05 (1.75)	.74	.66	
Big game hunting including guiding, coursing food and/or accommodation	1.81 (1.50)	.74	.69	
Angling including guiding, coursing food and/or accommodation	2.42 (1.88)	.55	.88^a	Deleted

¹ Scale: 1= "definitely not purchasing the product" and 7= "definitely purchasing the product"

^a Deleted because a lower alpha than alpha if deleted

Table 2. Independent push motivation variables

	Mean ¹ (SD)	Item total correlation	Alpha if item deleted	Cronbach's Alpha
Risk taking (Push1)	2.66 (1.41)			.91
Experience the thrill of speed	3.02 (1.69)	.80	.89	
I get to experience the excitement because the task is challenging	3.04 (1.68)	.78	.90	
The equipment allows for experience of speed	2.48 (1.62)	.80	.89	
Taking calculated risks	2.37 (1.62)	.69	.91	
Experience adventure in a nature area	2.40 (1.57)	.83	.88	
Contemplation (Push2)	6.27 (.89)			.90
Getting away from the hustle and bustle	6.42 (.97)	.74	.89	
Change from daily routine	6.33 (.98)	.79	.88	
Have time to think about life	5.95 (1.27)	.74	.89	
I find peace and quiet	6.38 (.98)	.75	.88	
Getting away from every daily life	6.26 (1.04)	.80	.87	
Physical fitness (Push3)	6.02 (1.05)			.88
Exercise	6.13 (1.47)	.62	.88	
Full body workout	6.07 (1.13)	.83	.83	
Taking care of my own health	6.13 (1.08)	.74	.85	
Become completely exhausted	5.75 (1.36)	.72	.85	
Nature is perfect as a gym	6.00 (1.31)	.69	.86	
Enjoyment of nature (Push4)	6.13 (.97)			.85
Experience peace and quiet in nature	6.43 (.98)	.71	.81	
Experience fellowship with nature	6.00 (1.25)	.76	.79	
Experience the landscapes and moods of nature	6.36 (.99)	.77	.79	
Enjoy flora and fauna	5.72 (1.38)	.61	.87	
Skill development (Push5)	4.45 (1.52)			.90
I'm getting better at coping with various outdoor skills	4.48 (1.56)	.82	.85	
I can develop different outdoor skills	4.43 (1.59)	.87	.80	
I feel they have control over the body	4.76 (1.60)	.73	.93^a	Deleted
Social interaction (Push6)	5.54 (1.28)			.78
Being with family	5.99 (1.35)	.67	.66	
Being with friend	5.11 (1.60)	.73	.59	
Being with others who likes to perform same activities as me	4.80 (1.80)	.50	.83^a	Deleted

¹ Scale: 1 = "strongly disagree" and 7 = "strongly agree"

^a Deleted because a lower alpha than alpha if deleted

Table 3. Independent pull motivation variables

	Mean (SD)	Item total correlation	Alpha if item deleted	Cronbach's Alpha
Hiking opportunities and surroundings (Pull 1)	5.20 (1.21)			.72
Hiking opportunities	6.22 (1.27)	.57	.66	
Good access to cross country ski trails	6.03 (1.45)	.53	.66	
Access to the wild and unspoiled nature	5.03 (1.80)	.44	.69	
Second-home is located in a child friendly area	4.39 (2.06)	.45	.69	
Good conditions for cycling	4.30 (1.99)	.50	.67	
Closeness to ski resorts (Pull 2)	2.58 (1.73)			.83
Local ski resorts	2.64 (1.88)	.71	a	
Other ski resorts in the region	2.51 (1.85)	.71	a	
Hunting and angling opportunities (Pull 3)	3.05 (1.75)			.60
Hunting opportunities	2.28 (2.00)	.43	a	
Angling opportunities	3.82 (2.12)	.43	a	

¹ Scale: 1 = "not important" and 7 = "very important"

^a Two items only – alpha if deleted not relevant

Table 4 presents the Pearson correlation coefficients and show that, overall, the three intention-to-purchase dependent variables were significantly and positively related to all the variables, although *adventure products* and *hunting and angling products* were not significantly related to *contemplation* and *enjoyment of nature*.

Table 4. Pearson correlation coefficients for the observed dependent and independent variables

	1	2	3	4	5	6	7	8	9	10	11	12
1. Depend1	1	.428**	.320**	.213**	.135**	.180**	.128**	.192**	.227**	.278**	.151**	.178**
2. Depend2		1	.439**	.375**	.055	.120**	-.036	.145**	.072*	.188**	.255**	.098**
3. Depend3			1	.173**	.044	.104**	.022	.098**	.078*	.105**	.149**	.285**
4. Push 1				1	.099**	.260**	.022	.424**	.197**	.250**	.274**	.159**
5. Push 2					1	.472**	.524**	.355**	.419**	.321**	.058	.142**
6. Push 3						1	.407**	.466**	.364**	.356**	.086**	.141**
7. Push 4							1	.419**	.285**	.278**	-.037	.190**
8. Push 5								1	.343**	.300**	.124**	.247**
9. Push 6									1	.324**	.148**	.142**
10. Pull 1										1	.260**	.265**
11. Pull 2											1	.218**
12. Pull 3												1

* = Correlation is significant at the 0.05 level. ** = Correlation is significant at the 0.01 level.

A descriptive analysis showed that of the three intention variables, *learning products* had the highest mean (M = 2.83 on a seven-point scale; SD = 1.58), followed by *adventure products* (M = 2.05; SD = 1.34) and *hunting and angling products* (M = 1.94; SD = 1.55) (Table 1). All three product categories had a relatively high standard deviation, which indicates that there were large variations among the respondents in their intention to purchase products in the three categories. We defined the respondents with a score above 3.5 (mean value on the seven-point scale) for intention to purchase as potential buyers. One-third of the second-home owners had an intention to purchase *learning products*, and one-sixth had an intention to purchase *adventure products* and/or *hunting and angling products*.

The *contemplation* factor was the most important push-motivation factor (M = 6.27 on a seven-point scale) and the most salient across the respondents. It had a standard deviation of .89, which indicates that the individual mean scores were closer to the sample mean than those of the other factors (i.e., there was greater consensus among the sample; Table 2). This factor was followed by *enjoyment of nature* (M = 6.13; SD = .97), *physical fitness* (M = 6.02; SD = 1.05), and *social interaction* (M = 5.54; SD = 1.28). The two least important push-motivation factors in the sample were *skill development* and *risk taking* (M = 4.45 and M = 2.66). However, these factors had the highest standard deviations (SD = 1.52 and SD = 1.41) among the push-motivation factors, which indicates that the respondents varied the most in ranking the importance of these two factors.

Among the pull-motivation factors, *hiking opportunities and surroundings* was the most important reason for having a second-home in a rural mountain municipality (M = 5.20 on a seven-point scale; SD = 1.21), followed by *hunting and angling opportunities* (M = 3.06; SD = 1.75) and *closeness to ski resorts* (M = 2.58; SD = 1.73) (Table 3). All three pull-motivation factors had a relatively high standard deviation, indicating that there were large variations in the sample.

4.2 The effect of push and pull factors on the intention to purchase nature based tourism activity products

This paper studied the impact of *risk taking*, *contemplation*, *physical fitness*, *enjoyment of nature*, *skill development*, *social interaction*, *hiking opportunities and surroundings*, *hunting and angling opportunities*, and *closeness to ski resorts* on tourists' intentions to purchase

three types of nature based tourism activity products (*learning products, adventure products and hunting and angling products*) during visits to their second-homes. Age, income and educational level were used as control variables. The model was tested using an OLS regression model, and the results are presented in Table 5.

Table 5. Push and pull factors effect on intention to purchase nature based tourism activity products¹

Independent variables:	Dependent variables		
	Learning products	Adventure products	Hunting and angling products
	Beta ²	Beta ²	Beta ²
Push			
Risk taking	.100 ***	.273 ***	.086 **
Contemplation	-.029	.001	-.028
Physical fitness	.036	.023	.060
Enjoyment of nature	.041	-.059	-.013
Skill development	.012	.001	-.013
Social interaction	.115 ***	-.030	.013
Pull			
Hiking opportunities and surroundings	.159 ***	.099 ***	-.001
Closeness to ski resorts	.058 *	.117 ***	.047
Hunting and angling opportunities	.084 **	.001	.252 ***
Control variable			
Age	-.007	-.182 ***	-.065 **
Income	.008	.098 ***	.151 ***
Education	-.065 *	.047	-.078 **
	R ² _{Adj.} : .119	R ² _{Adj.} : .219	R ² _{Adj.} : .126
	Sig. F: .00	Sig. F: .00	Sig. F: .00
	Df=12	Df=12	Df=12
	N = 965	N = 965	N = 960

¹ All three models was tested in a OLS regression

² Standardized Coefficients

³ P-value (* 10 %, ** 5 %, *** 1%)

Two of the six push-motivation factors had a significant effect on the intention to purchase at least one of the three categories of nature based tourism activity products (Table 5). *Risk taking* had a significant positive effect on the intention to purchase all three product types: *learning* ($\beta = 0.10$, $p < 0.01$), *adventure* ($\beta = 0.23$, $p < 0.01$), and *hunting and angling* ($\beta = 0.09$, $p < 0.01$). *Social interaction* had a positive effect on the intention to purchase *learning products* ($\beta = 0.12$, $p < 0.01$). *Contemplation, physical fitness, enjoyment of nature, and skill development* did not influence the intention to purchase any of the three product types.

All three pull-motivation factors influenced the intention to purchase nature based tourism activity products. *Hiking opportunities and surroundings* had a positive effect on the intention to purchase both *learning products* and *adventure products* ($\beta = 0.16, p < 0.01$ and $\beta = 0.10, p < 0.01$). *Closeness to ski resorts* had a positive effect on the intention to purchase both *learning products* and *adventure products* ($\beta = 0.06, p < 0.10$ and $\beta = 0.12, p < 0.01$). *Hunting and angling opportunities* had a positive effect on the intention to purchase both *learning products* and *hunting and angling products* ($\beta = 0.08, p < 0.05$ and $\beta = 0.25, p < 0.01$).

All three demographic control variables influenced the intention to purchase nature based tourism activity products. Age had a negative effect on the intention to purchase *adventure products* and *hunting and angling products* ($\beta = -0.18, p < 0.01$ and $\beta = -0.07, p < 0.05$). The intentions to purchase *adventure products* and *hunting and angling products* were positively affected by income ($\beta = 0.10, p < 0.01$ and $\beta = 0.15, p < 0.01$). Education had a negative effect on the intentions to purchase *learning products* and *hunting and angling products* ($\beta = -0.07, p < 0.10$ and $\beta = -0.08, p < 0.05$).

As a whole, the model, with six push-motivation factors, three pull-motivation factors and three demographic variables, explained 11.9% of the variation in intention to purchase *learning products*, 21.9% of the variation in intention to purchase *adventure products*, and 12.6% of the variation in intention to purchase *hunting and angling products* (Table 5). The VIF (variance inflation factor) values varied from 1.1 to 1.7 and gave no indication of multicollinearity problems in the three models. The correlation matrix in Table 4 shows no indication of multicollinearity problems, and all the correlations among the independent variables are below 0.52.

5 Discussion

This study's results indicate that the second-home market segment is a diverse group of tourists. There were large variations in the intention to purchase nature based tourism activity products during second-home visits. The most popular product category was *learning products*, which one-third of the second-home owners intended to purchase. This finding is in line with Tangeland and Aas (2011), who found that learning was an important experience attribute connected to nature based tourism activity products and sought by all household

types. *Adventure products* and *hunting and angling products* tied for second place; one out of six second-home owners intended to purchase these products while staying at their second-homes. The regression analyses showed that both push and pull motivation variables and the demographic characteristics of the second-home owners influenced their intentions to purchase nature based tourism activity products.

Findings from this study support previous research on motivation among tourists and recreationists, which concluded that *contemplation*, *physical fitness*, *enjoyment of nature*, *skill development*, and *social interaction* are important motivations that push people to perform outdoor activities (e.g. in Beh & Bruyere, 2007; Kim, et al., 2003; Luo & Deng, 2008; Mehmetoglu, 2007; Raadik, et al., 2010; Skår, et al., 2008). *Risk taking* has been identified as an important dimension of motivation in several studies (e.g. in Beh & Bruyere, 2007; Kim, et al., 2003; Luo & Deng, 2008; Skår, et al., 2008). Nevertheless, this study found that *risk taking* was the least important motivation factor for the second-home owner segment as a whole. These findings indicate that second-home owners have diverse needs and wants during their stays at their second homes.

We had assumed that all six push-motivation factors would impact purchase intention. However, we found that only *risk taking* and *social interaction* had an effect on purchase intentions among the surveyed second-home owners ($P < 0.10$). We found that *risk taking* had a positive impact on purchase intentions for the three types of nature based tourism products studied in this paper. Bentley and Page (2008) argued that it is important to distinguish between actual risk and perceived risk. It has been assumed that the risk of an outcome is a part of the motivation to participate in activities that can be linked to risk. However, previous research has indicated that, for many people, the actual risk is not an important influence on their participation in such activities (Weber, 2001). Cater (2006) found that people engaging in adventure tourism activities are motivated by the experience of fear and thrills (perceived risk) rather than by actual risk. It has also been shown that experiencing and controlling fear is the central motivation for participation in adventure activities (Carnicelli-Filho, et al., 2010). Based on the five items defining the *risk* motivation factor in this study, we might assume that the people who are motivated by risk were more likely to spend money on activities in general. This observation implies that attracting risk seekers increases the opportunities to offer nature based activity products in an area. *Social interaction* was positively related to *learning products*, but not to the other two product categories. Being with family and friends

can be linked to products that provide knowledge about different animal species and wilderness survival, for example. Both *adventure products* and *hunting and angling products*, as defined in this study, are product categories with a low social orientation.

We found no evidence that *contemplation*, *physical fitness*, *enjoyment of nature*, or *skill development* had an effect on the purchase intentions of second-home owners ($P > 0.10$). A feasible explanation for this finding is connected to the close relationship between outdoor activities and nature based tourism activity products. The core activity is independent of the context in which it is performed (Tangeland & Aas, 2011). Therefore, we can assume that the needs and wants that create these push motives – *contemplation*, *physical fitness*, *enjoyment of nature*, and *skill development* – can be satisfied by performing the activity in a free outdoor context or in a commercial tourism context and therefore they do not create a desire to purchase these activity products. It was unexpected to find that *skill development* had no effect on the intention to purchase *learning products*. This result may indicate that the second-home owners believed that they could develop their skills by performing activities on their own or in a commercial context. Our findings imply that people seeking *contemplation* can achieve this goal by remaining in their second-home and not participating in commercial activities.

We found relatively large variations in importance among the three pull motivation factors. The differences can be partially explained by the level of generality of content between the constructs. The pull factor *hiking opportunities and surroundings* is a general motivation that many people share. However, the other two pull factors, *hunting and angling opportunities* and *closeness to ski resorts*, are more specialised, and their importance depends on more specific outdoor recreational interests. Therefore, it was not surprising that these two pull motivations were less important for the sample as a whole. The large standard deviations for the two pull-motivation factors, *hunting and angling opportunities* and *closeness to ski resorts*, indicate that there was a large variation in the sample. This study assumed that people's motives for having a second-home at a specific location also affect their intention to engage in various activities during visits to those homes. As expected, all three pull-motivation factors influenced the second-home owners' intentions to purchase nature based tourism activity products. All three pull-motivation factors had a positive effect on the intention to purchase *learning products*. The intention to purchase *adventure products* was positively influenced by *hiking opportunities and surroundings* and *closeness to ski resorts*.

Only the pull-motivation factor *hunting and angling opportunities* had an effect on the intention to purchase *hunting and angling products*.

Our review of the tourism motivation literature indicated that tourists' intentions and behaviour are usually influenced by more than one motive and that the sum of push and pull motivations determines what tourists do (Funk & Bruun, 2007; Klenosky, 2002; Prebensen, 2006). This study clearly showed that second-home owners' purchase intentions for nature based tourism activity products were influenced by several motivational dimensions simultaneously and varied between product categories. Furthermore, we showed that three of the motivation factors (*risk taking, hiking opportunity and surroundings, and closeness to ski resort*) had a significant effect on intentions to purchase in more than one of the product categories. This finding indicates that tourists believe that a need can be fulfilled by consuming different product categories. This finding is in line with previous research on motivation and behaviour among tourists that argued against a one-to-one relationship between motives and behaviour (Prebensen, 2006). We therefore argue that Bagozzi (1992) oversimplified the concept of motivation by including only one general motivation dimension, desire, in the theory of self-regulation. When attempting to predict the behaviour of tourists by using the theory of self-regulation model one needs to include both push and pull motivation factors in the model.

All three demographic control variables (i.e., age, income and educational level) had a significant effect on the intention to purchase in all three product categories. The negative effect of age on purchase intentions may indicate the presence of a generation effect. Younger people are, to a large extent, willing to pay for nature activities that are often available for free. Not surprisingly, income had a positive effect on the intention to purchase *adventure products* and *hunting and angling products*. A higher income tends to increase spending power. Previous studies of tourists who purchase nature based tourism products have found a higher educational level among this group than the average population (Holden & Sparrowhawk, 2002; Mehmetoglu, 2005; Meng & Uysal, 2008; Meric & Hunt, 1998). We expected that educational level would have a positive effect on the intention to purchase nature based tourism activity products, especially *learning products*. We were therefore surprised to find that educational level had a negative effect on the intention to purchase *learning products*. Educational level also had a negative impact on the intention to purchase *hunting and angling products*. One likely explanation for this finding is that activities such as

angling and hunting are more popular in rural areas in Norway, where the educational level is lower than it is in urban areas in Norway.

6 Conclusion

This study aimed to investigate the potential in the second-home market segment for nature based tourism activity products. We examined how motivation and demographic variables affect second-home owners' intentions to purchase nature based tourism activity products. The findings from this study have significant theoretical and practical implications for nature based tourism in particular and tourism in general.

There were large variations among second-home owners' intentions to purchase nature based tourism activity products. However, the results indicate that the second-home tourist constitutes an important market in rural areas for nature based tourism activity products. Suppliers in areas with large numbers of second-homes should regard the owners of these second-homes, along with their family members and friends, as potential customers. Of the three product categories investigated in this study, the most popular was *learning products*. There were small differences in the intentions to purchase *adventure products* and *hunting and angling products*, which were tied for second place. This result is consistent with those of Tangeland and Aas (2011), who identified learning as one of the central experience attributes for nature based tourism activity products.

The results from this study provide valuable information about the potential customers for these three types of nature based tourism products in rural areas. Second-home owners' intentions to purchase nature based tourism activity products were influenced by both psychographic and demographic variables. We found that two push-motivation factors (*risk taking* and *social interaction*) and three of the pull-motivation factors (*hiking opportunities and surroundings*, *closeness to ski resorts* and *hunting and angling opportunities*) had an positive effect on purchase intentions among second-home owners. Furthermore, second-home owners' age, income and educational level influenced their intentions to purchase nature based tourism activity products. These results clearly indicate that second-home owners in rural areas are a complex group of tourists with different needs and wants that they wish to satisfy during visits to their second-homes. Thus, it is rational to conclude that the second-home market consists of several sub-market segments that can be identified using leisure motivations and demographic variables as the core segmentation criteria. By

developing products tailored to satisfy the needs and wants of the selected market segments will most likely increase businesses turnover, as it will increase purchase intention and hopefully purchase behaviour in the targeted sub-segments within the second-home market.

These findings are also of interest for policymakers in rural areas. Many rural municipalities aim to strengthen and expand second-home villages. In particular, there have been large investments in winter destinations and ski resorts. However, it is crucial to gather as much information as possible about the owners of second-homes in an effort to satisfy them and to attract new owners. The majority of second-homes are intended to be places for relaxation and vacationing. Therefore, we should focus on the best ways to help this consumer group enjoy themselves. In local economic development programs, there have been numerous attempts to transform free recreational facilities into nature based activity products to be sold in the market (Lunnan, Nybakk, & Vennesland, 2006; Tangeland & Aas, 2011). The findings from this study show that leisure motivations, which are known to affect the choice of outdoor recreation activities, also influence intentions to purchase nature based tourism activity products. Furthermore, this study showed that pull-motivation variables (i.e., reasons to purchase a second-home in a rural area) had a significant effect on the intention to purchase nature based tourism activity products. By understanding what motivates a second-home owner to relax in nature and the nature based tourism products he/she might be motivated to purchase, policymakers can devise better strategies to strengthen and expand second-home villages. For local rural economies to grow, however, visitors must spend money while staying in their second-homes. Policymakers must stimulate the formation of new business establishments in the tourism industry to secure viability in rural areas. Furthermore, tourists may take daily trips from their second-homes to the surrounding areas, meaning that products and services can also be offered within driving distance of a second-home village.

The results of this study should be viewed in light of the following limitations. First, this study was cross-sectional, and it cannot provide absolute conclusions regarding causality. However, the study's results, as supported by theory, were consistent with our assumptions about causality. A similar study should be repeated in the future to determine if the findings are constant over time. Second, the study was conducted prior to the global recession, and this event may have influenced the market for these products. Third, there are large regional differences in second-home owners' recreation experience preferences and willingness to purchase nature based tourism activity products.

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Appendix 1

Questionnaire used in the national survey (Translated to English)

(Paper I)

1. Have you participated in any of the following outdoor activities the last 12 months?

Activity	Yes
Freshwater fishing after Atlantic salmon	<input type="checkbox"/>
Freshwater fishing after Brown trout	<input type="checkbox"/>
Freshwater fishing after Char	<input type="checkbox"/>
Small game hunting	<input type="checkbox"/>
Big game hunting	<input type="checkbox"/>
Backcountry hiking with accommodation	<input type="checkbox"/>
Backcountry skiing with accommodation	<input type="checkbox"/>
Rock climbing	<input type="checkbox"/>
Glacier trekking	<input type="checkbox"/>
White water rafting	<input type="checkbox"/>
Snow kiting	<input type="checkbox"/>
Off-piste skiing	<input type="checkbox"/>

2. Sex

- Male Female

3. Age: _____

4. Marital status

- Single Married/cohabited

5. Children living in household

- No children
 Youngest child 0 – 6 years
 Youngest child 7 – 18 years

6. What is your highest conducted education level?

- Primary school
 Upper secondary/high school
 University (1 – 3 years)
 University (+ 4 years)

7. Size of residence

- Less than 2,000
 Between 2,000 and 100,000
 More than 100,000

8. Are you member of an outdoor recreation organisation?

- Yes No

9. Are you member of an environmental organisation?

- Yes No

10. Do you have access to a second-home?

Yes No

Appendix 2

Questionnaire used among outdoor recreationists

(Translated from Norwegian to English)

(Paper II and III)

1. Have you participated in any of the following nature based activity products during the summer of 2007 (1. May – 31. August)?

Activity	Yes
Organised mountain hike	<input type="checkbox"/>
Arranged fishing in a river or freshwater lake (with or without guide)	<input type="checkbox"/>
Glacier hiking (course/guided tour)	<input type="checkbox"/>
Guided tour in a nature area	<input type="checkbox"/>
Bicycle tour in a nature area	<input type="checkbox"/>
Rock climbing/mountaineering with a guide	<input type="checkbox"/>
Rafting/whitewater kayaking with instructor (course/guided tour)	<input type="checkbox"/>
Horse riding (course/guided tour)	<input type="checkbox"/>
Climbing (course/guided tour)	<input type="checkbox"/>
Hiking between huts with separate baggage transport	<input type="checkbox"/>
Attend an outdoor event, where you had to pay for entrance	<input type="checkbox"/>
Arranged sea fishing (with or without guide)	<input type="checkbox"/>
Downhill bicycling	<input type="checkbox"/>
Kayaking on salt water with instructor (course/guided tour)	<input type="checkbox"/>
Kiting/surfing (course/guided tour)	<input type="checkbox"/>
Caving (course or guided tour)	<input type="checkbox"/>
Safari/wildlife viewing	<input type="checkbox"/>
Kayaking on a freshwater lake with instructor (course/guided tour)	<input type="checkbox"/>
Visiting a wilderness camp	<input type="checkbox"/>
Nature photo (course/guided tour)	<input type="checkbox"/>
Mushrooming (course/guided tour)	<input type="checkbox"/>
Canyoning (course/guided tour)	<input type="checkbox"/>
Off-road bicycling (guided tour)	<input type="checkbox"/>
Via ferrata/ tyrolertraverse/rappelling	<input type="checkbox"/>
Floral study (course/guided tour)	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>
Non of these activities	<input type="checkbox"/>

INFO

If you attended more than one activity, we want you in the rest of the questionnaire should be based on the trip was the most important thing for you.

1.1 What was the most important activity for you? _____

2. How did you experience this activity on a scale of 1 to 5, where 1 means strongly disagree and 5 means strongly agree?

I experienced the activity as....	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
... facilitated	1	2	3	4	5
... several in my travelling companion could participate	1	2	3	4	5
... a group activity	1	2	3	4	5
... organised	1	2	3	4	5
... new knowledge	1	2	3	4	5
... educational	1	2	3	4	5
... challenging	1	2	3	4	5
... exciting	1	2	3	4	5
... physical challenge	1	2	3	4	5
... a family activity	1	2	3	4	5
... time-consuming	1	2	3	4	5
... I needed previous knowledge	1	2	3	4	5
... cultural influence	1	2	3	4	5
... expensive	1	2	3	4	5
... children friendly	1	2	3	4	5
... risk activity	1	2	3	4	5
... mental challenge	1	2	3	4	5
... frightening	1	2	3	4	5

3. How much do you agree on a scale of 1 to 5, where 1 means strongly disagree and 5 means strongly agree, to the following statements motivated you to purchase this activity?

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
The activity is important to me	1	2	3	4	5
It increased the quality of the experience	1	2	3	4	5
I expected a safe experience	1	2	3	4	5
It ensured the quality of the experience	1	2	3	4	5
It improved the quality of the experience	1	2	3	4	5
I wanted to learn more about the activity	1	2	3	4	5
It was easier than organising everything by myself	1	2	3	4	5
It feels safer to be with an instructor than performing the activity by myself	1	2	3	4	5
It was a simpler way to attempt a new activity	1	2	3	4	5
It feels safer than performing the activity by myself	1	2	3	4	5
I wanted to develop myself as a performer	1	2	3	4	5
I wanted to be a better performer	1	2	3	4	5
I did not have enough experience to perform the activity by myself	1	2	3	4	5
I saved time since an organiser did all the practicalities surrounding the activity	1	2	3	4	5
I wanted to meet other people that had the same interest in the activity as I did	1	2	3	4	5
I wanted to meet other people that perform this activity	1	2	3	4	5
I did not know the area and needed a guide with local knowledge	1	2	3	4	5
I identify myself with people that perform this activity	1	2	3	4	5
I wanted to meet new people	1	2	3	4	5
It would have been dangerous to perform the activity by myself	1	2	3	4	5
It was the only way the activity was accessible	1	2	3	4	5
I wanted to be associated with people that perform this activity	1	2	3	4	5
There was a need for special equipment that I did not have	1	2	3	4	5
The equipment was too expensive to buy	1	2	3	4	5

4. How much did you pay for this activity? _____

4.1. What was included in the price?

1. Hire of equipment
2. Course
3. Guiding
4. Accommodation
5. Meals
6. Transportation

5. What was the duration of the activity (Number of days)? _____

6. How many did you travel with including yourself? _____

6.1 Who did you travel with?

1. Partner/cohabitant
2. Children younger than 18 years
3. Other family
4. Friends
5. Business

Background

7. Gender: 1. Male 2. Female

8. Age: _____

9. Marital status:

1. Single
2. Couple, but do not live together
3. Married/cohabitant

10. Do you have children? Yes No

If yes:

How many children do you have? _____

Age of youngest child? _____

11. What is your highest ended educational degree?

1. Primary school
2. Upper secondary/high school
3. University (1-3 years)
4. University (+ 4 years)

12. Employment status:

1. Working full-time
2. Part-time employee
3. Not working; Unemployed/ retiree/ student

13. What is your household totally yearly income? _____

Appendix 3

Questionnaire used among second-home owners

(Paper IV)

1. How interested are you in purchasing these activity products on a scale from 1 to 7, where 1 indicated “definitely not purchasing the product” and 7 indicated “definitely purchasing the product” when staying at your second-home?

Activity products including kayak paddling or canoeing	1	2	3	4	5	6	7
Activity products including kiting	1	2	3	4	5	6	7
Activity products including mountain biking	1	2	3	4	5	6	7
Activity products including white water rafting	1	2	3	4	5	6	7
Activity products where I can learn about handling dangers in the mountains	1	2	3	4	5	6	7
Activity products where I can learn about nature and animals	1	2	3	4	5	6	7
Activity products where I can learn about outdoor skills	1	2	3	4	5	6	7
Activity products where I can learn about unspoiled nature	1	2	3	4	5	6	7
Angling including guiding, coursing food and/or accommodation	1	2	3	4	5	6	7
Big game hunting including guiding, coursing food and/or accommodation	1	2	3	4	5	6	7
Downhill skiing	1	2	3	4	5	6	7
Guided tours where I can learn about local culture and history	1	2	3	4	5	6	7
Small game hunting including guiding, coursing, food and/or accommodation	1	2	3	4	5	6	7

How much do you agree to the following statements as a reason for you to engage in outdoor activities on a scale from 1 to 7, where 1 stands for "strongly disagree" and 7 stands for "strongly agree"?

Become completely exhausted	1	2	3	4	5	6	7
Being with family	1	2	3	4	5	6	7
Being with friend	1	2	3	4	5	6	7
Being with others who likes to perform same activities as me	1	2	3	4	5	6	7
Change from daily routine	1	2	3	4	5	6	7
Enjoy flora and fauna	1	2	3	4	5	6	7
Exercise	1	2	3	4	5	6	7
Experience adventure in a nature area	1	2	3	4	5	6	7
Experience fellowship with nature	1	2	3	4	5	6	7
Experience peace and quiet in nature	1	2	3	4	5	6	7
Experience the landscapes and moods of nature	1	2	3	4	5	6	7
Experience the thrill of speed	1	2	3	4	5	6	7
Full body workout	1	2	3	4	5	6	7
Getting away from every daily life	1	2	3	4	5	6	7
Getting away from the hustle and bustle	1	2	3	4	5	6	7
Have time to think about life	1	2	3	4	5	6	7
I can develop different outdoor skills	1	2	3	4	5	6	7
I feel they have control over the body	1	2	3	4	5	6	7
I find peace and quiet	1	2	3	4	5	6	7
I get to experience the excitement because the task is challenging	1	2	3	4	5	6	7
I'm getting better at coping with various outdoor skills	1	2	3	4	5	6	7
Nature is perfect as a gym	1	2	3	4	5	6	7
Taking calculated risks	1	2	3	4	5	6	7
Taking care of my own health	1	2	3	4	5	6	7
The equipment allows for experience of speed	1	2	3	4	5	6	7

2. How important were these nine characteristics of the area around Ål municipality for your decision to have a second-home there on a scale of 1 to 7 where 1 means "not important" and 7 means "very important"?

Access to the wild and unspoiled nature	1	2	3	4	5	6	7
Angling opportunities	1	2	3	4	5	6	7
Good access to cross country ski trails	1	2	3	4	5	6	7
Good conditions for cycling	1	2	3	4	5	6	7
Hiking opportunities	1	2	3	4	5	6	7
Hunting opportunities	1	2	3	4	5	6	7
Local ski resorts	1	2	3	4	5	6	7
Other ski resorts in the region	1	2	3	4	5	6	7
Second-home is located in a child friendly area	1	2	3	4	5	6	7

Background

3. Age:

4. Annual income:

5. Educational level

- a. Elementary school
- b. Upper secondary school
- c. Bachelor degree
- d. Master degree or PhD

6. Number of people in household: _____

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