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Tourist differentiation: Developing a typology for the winter sports market

Abstract

The purpose of this paper was to develop a typology for winter sports tourists deriving from the behavioural characteristics of British skiers and snowboarders. The paper also aimed to ascertain whether differences in the characteristics and behaviour of skiers and snowboarders were identifiable, and consequently whether the market could be meaningfully segmented based upon the sport participated in. Segmentation was data driven with results collected through an online questionnaire targeting members of British ski clubs and online forums. Data collection took place during the 2011-2012 winter season, where 926 responses were collected, 831 of which were appropriate for use. Six segments were identified using factor-cluster analysis: après scene, relaxation seekers, anything goes, enthusiasts, and jet set enthusiasts. It was also determined that three core motivations - social motivations, sport motivations and relaxation motivations - characterise the British winter sports market. Sport type was ascertained to be influential as a criterion in segmenting winter sports tourist, where discrepancies were identified between the skiers and snowboarders in terms of motivation and behaviours affecting destination choice and buying behaviour. Theoretical and practical implications for ski industry were discussed, most notably in relation to the packaging of winter sports holidays and destination marketing.

Key words: *tourism; sport; typology; segmentation; motivation; decision-making; UK*

Introduction

The most recent economic recession has had significant effect on the British winter sports market and despite the expected recovery following the 2011/2012 season (Crystal Ski, 2011); vulnerability of the ski industry to economic conditions is undeniable. After a period of sustained growth the British ski industry has seen decline since its peak during the winter of 2007/2008 with the number of British tourists participating in winter sports falling from 1,227,000 in 2007/2008 to 894,700 in 2011/2012 (Crystal Ski, 2012). The ski industry is not solely affected by fluctuations in economic health. Many barriers to participation are identifiable among the non-skiing population, including: inter-personal, intra-personal and structural constraints (Hinch & Jackson, 2000; Hudson, 1998). Additionally, having greater susceptibility than other forms of leisure travel to climate change (Scott, 2005), uncertain snowfall provides another barrier to participation of existing skiers (Gilbert & Hudson, 2000). As such the winter sports industry is increasingly competing with other forms of activity based special-interest tourism (Gratton, 1990) including diving (Tabata, Weiler & Hall, 1992) and adventure tourism (Trauer, 2006).

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Demand changes internal to the ski industry are also evident, where ski resorts are becoming increasingly reliant on snowboarding for financial sustainability (Makens, 2001). In the USA a 40% decline in alpine skiing was recorded between 1996 and 2006, over this same period a 40 % increase in snowboarding was identifiable (Won, Bang & Shonk, 2008). It has been noted that there are currently more than 18.5 million snowboarders worldwide, an increase of 385% between 1988 and 2003 (Thorpe, 2012). Although skiing still dominates the market, projections show the proportion of mountain users snowboarding may exceed conventional skiers in the future (Scott, 1995). This recent growth of snowboarding has been largely attributed to increasing media coverage, particularly since the introduction of the Winter X Games, for extreme sports, in 1997 and the inclusion of snowboarding in the Winter Olympics since 1998 (Heino, 2000; Thorpe, 2012).

As tourism products in the global market become increasingly diverse, understanding factors affecting tourist destination selection or product choice is imperative (Godfrey, 1999). In the context of the ski industry where differing motivations and changes in demand are evident, greater understanding of factors influencing participation is necessary to safeguard the future of the industry. Ski markets have been researched worldwide in an attempt to identify personal and destination attributes which define current and potential markets, yet studies neglect to explore differences in the motivations and resort determinants of skiers and snowboarders. Given recent changes in the structure of demand this paper aims to develop a typology of British winter sports tourists to better understand the motivations, decision making and behavioural characteristics of the winter sports market. Furthermore this study aims to ascertain whether disparities are identifiable between the characteristics of skiers and snowboarders.

'Winter sports' is a generic term that could encompass sports such as downhill skiing, snowboarding, snowshoeing, curling, snowmobiling, ice hockey, ice climbing, sledging and cross-country skiing among others. This paper however is specifically concerned with the ski industry, that is, the travel to mountain regions by tourists in order to participate in the snowsports of skiing and snowboarding. As such, from this point onwards, the term 'winter sports' is only used with reference to skiing and snowboarding.

Literature review

The role of tourist typologies and motivation based segmentation

It is a commonly accepted notion that there is no single tourist type; therefore it is erroneous to group them as a homogenous entity. The perception that tourists seek different experiences when they participate in tourism (Gray, 1970), fuelled attempts to classify tourists, sub-dividing them into supposedly homogeneous sub-groups using typologies based on either socio-demographic segmentation criteria, or socio-psychological variables.

Socio-psychological typologies offer a theoretical approach to market segmentation, initially created based upon variables including the tourist role and sought experiences, the desire for familiarity or originality in their experience (Cohen, 1972, 1979; Mo, Howard & Havitz, 1993; Pearce, 1982; Yiannakis & Gibbson, 1992). Categorising tourists through socio-psychological variables including personality traits helps better understand behaviour. Typologies measuring relationships between tourist behaviour and personality characteristics helps identify the rationale behind participation in varying types of tourism (Plog, 1974; Lepp & Gibson, 2003). To further identify reasons for involvement,

other typologies have been created based on lifestyle and values (Thrane, 1997) interests and beliefs (Davis, Allen & Crosenza, 1988) and cultural confidence possessed by an individual (Graburn, 1983).

Typologies created using factors which influence participation facilitate easy application to marketing problems. Socio-demographic segmentation criteria, including stage in the family life cycle (Fodness, 1992) and age (Anderson & Langmeyer, 1982), identify travel trends including; number of annual trips, trip length, activity type, distance travelled and time of year. Behavioural variables affecting participation and influencing choice, such as cost (Spotts & Mahoney, 1991) distance (Etzel & Woodside, 1982) activities (Moscardo, Morrison, Pearce, Lang & O'Leary, 1996) or destination (Lang, O'Leary & Morrison, 1997), can also be used to further understand decision making choices.

Socio-psychological and socio-demographic typologies attract criticism as typologies are universal in attempting to categorise multiple tourist types, who participate in diverse tourism activities. To successfully segment the market, typologies need to be specific, classifying the tourists of a particular destination (Wickens, 2002), activity, or type of tourism (Mehmetoglu, 2005). This notion of backward segmentation theory is supported by Sirakaya and Woodside (2005) who give credence to 'creating segments starting with travel outcomes rather than starting with demographic characteristics' (Sirakaya & Woodside, 2005, p. 829). To create a more accurate classification, accounting for interpersonal influences in decision making, typologies have been developed amalgamating decision making styles and psychological processes (Decrop & Snelders, 2005), as the way in which decisions are made is an important element for segmentation studies (Bronner & De Hoog, 1985).

Tourists' decision-making processes are complex as decisions are based on perceptions or evaluative judgements (Smallman & Moore, 2010). The decision making process is influenced by internal variables, including motivation (Dann, 1981), and external variables; such as constraints (Woodside & Lysonski,1989; Um & Crompton, 1990), marketing and destination image (Echtner & Ritchie, 1991; Alhemoud & Armstrong, 1996; Sirgy & Su, 2000), cost and exchange rates (Crouch, 1992; Morley, 1994), and group or family member influence (Van Raaij & Francken, 1984; Fodness, 1992; Lee & Beatty, 2002).

Of the internal variables discussed in the tourism literature, motivation is widely recognised as being integral to the tourist decision making process, 'many authors see motivation as a major determinant of tourist behaviour' (Hudson1999, p. 7). Motivation is an important and influential factor in decision making (Crompton, 1979; Dann, 1981). However, differing motivations between individuals and decision making contexts (Witt & Wright, 1992; Uysal & Hagan, 1993) make it important in understanding tourist behaviour. Particularly prominent in the tourism decision making literature is the motivational push and pull model (Crompton, 1979). The notion of motivational push, encouraging tourists to leave home, and motivational pull, drawing them to a particular destination, experience or activity has been developed (Mannel & Iso-Ahola, 1987) and included in motivational theories (Dann, 1981) as the concept of the push-pull model illustrates the intangible and intrinsic desires of the tourist (Kozak, 2001).

The decision making process is useful in categorising tourists as 'travellers can be segmented meaningfully by consumer decision-making variables' (Woodside & Carr, 1988, p. 2). Groups have been segmented based on decision patterns (Hsieh, O'Leary, Morrison & Chiang, 1997), decision making style (Decrop & Snelders, 2005) motivation (Kozak, 2001), perceived benefits (Shoemaker, 1994)

and information search techniques (Fodness & Murray, 1998). It has been found that 'travel decision pattern segmentation is a theoretically and statistically feasible approach to understand and segment travellers' (Hsieh *et al.*, 1997, p. 299) .

Segmentation of winter sports tourists

Travel for participation in sports tourism is becoming increasingly popular (Higham, 2005). As tourist needs affect their motivation for participation, the motivational theories applied to sports tourism are needs based (Maslow, 1943; Murray, 1938). Needs based theories of motivation suggest behaviour is driven by physiological and psychological needs. Psychological needs such as achievement, challenge, self-exploration, mastery of skills, competition and participation are fundamental in the motivation for active sports tourism (Allen, 1982; Iso-Ahola & Allen, 1982; Mills, 1985), and need to be considered in the segmentation of winter sports tourism.

Central to the literature surrounding winter sports tourism is the discussion of motivations influencing participation, factors affecting destination choice, and the segmentation criteria used to identify differing markets. Multiple approaches to tourism motivation are identifiable within winter sports literature, the most common however consider individual needs whilst analysing the influence of psychological characteristics on participation. Many argue primary motivations for involvement in leisure and recreational activities are needs based, with the tourist achieving a sense of belonging, fulfilment or satisfaction by participating in such activities. In studying the motivations of winter sports tourists, research has applied theories such as Maslow's Hierarchy of needs (1970) to see how motivations compare (Mills, 1985). Earlier motivational studies adopted a push-pull approach to motivation, investigating the benefits sought from winter sports tourism, where desire to get away from usual demands was identified as a motivating factor (Boom, 1984), despite the energetic nature of winter sports tourism.

Important motivational concepts found to influence participation and destination choice are factors including: fun, excitement and sense of achievement (Klenosky, 2002). In this means-ends analysis, motivations relating to achievement including ski variety, difficulty and trails, were deemed most important and despite not relating motivation directly to skill level, findings support the argument that skill level affects motivation for winter sports tourism (Richard, 1996). Within psychological motivations for participation a competence mastery component has been presented by several authors (Beard & Ragheb, 1980; Iso-Ahola, 1980; Gratton, 1990) who believe stimulation seeking behaviour is increasing and affecting demand for activity based, and special interest tourism (Gratton, 1990). Stimulation seeking as a crucial motivation for winter sports is investigated by Richard (1996) who empirically tested the importance of simulation in tourism motivation.

Non-participation in winter sports is well documented throughout the literature (Klenosky, Gengler & Mulvey, 1993) as understanding reasons for non-participation enhances understanding of those who do participate (Hudson, 2000). Non-participants commonly perceive winter sports as dangerous, difficult to learn and physically demanding (Gilbert & Hudson, 2000; Williams & Fidgeon, 2000; Williams & Lattey, 1994; Won *et al.*, 2008). Non-participation has also been attributed to cost (Jackson, 1993; Williams & Basford, 1992). This barrier is particularly common among young families who are often concerned about the additional costs associated with winter sports holidays (Williams & Fidgeon, 2000). Studies comparing those who participate in winter sports against those who do not, found constraints

of participation fall into three categories; intra-personal, interpersonal and structural (Hudson, 1998). Economic factors are the main constraints for both groups, with snow conditions the only variable of more concern for existing skiers and snowboarders than those who do not participate (Carmicheal, 1992; Richard 1996).Constraints for existing winter sports tourists are structural rather than inter or intra personal, suggesting cost is a mechanism for utilisation to generate interest among the existing winter sports market. In targeting those who choose not to participate in winter sports, perceptions of risks associated with winter sports need to be changed (Williams & Fidgeon, 2000). Hudson (2000) notes images portraying high risk situations may attract the existing market, and simultaneously deter the non-participating population.

Within the body of winter sports tourism literature, attention has been given to variables influencing destination choice. It is commonly agreed that there are three key components that determine destination choice; snow conditions, overall cost, non-ski related activities and facilities at the destination. Quality snow conditions are the key factor in destination choice for frequent and skilled participants (Carmichael, 1992; Richard, 1996; Godfrey, 1999), and the variety of the terrain also plays an essential role (Godfrey, 1999). This argument is supported by Richards (1996) who found the next most important attribute affecting destination choice were terrain diversity and piste quality. Although studies focus on UK winter sports tourists, Dickson and Faulks (2007) who examined overseas participation by Australians found the same evidence, with the reliability of snow followed by availability of powder snow were the most important aspects in choosing the country, availability of off-piste areas and advanced terrain subsequently affecting resort choice.

Facilities and activities available in resort can influence choice (Konu, Laukkanen & Komppula, 2011) particularly for those with families, or non-participating members within their group (Wickers, 1994). Resorts that have made capital investments to provide alternative activities may benefit (Rowan, 1989). Non-skier, and after-ski activities, services and facilities such as shopping, dining, nightlife, tour operator services and the opportunity to participate in other recreational activities can determine choice (Richard, 1996; Hudson & Shephard, 1998; Williams & Fidgeon, 2000; Matzler, Fuller, Renzl, Herting & Späth, 2008). Atmosphere, accessibility and proximity of accommodation are also influential (Richard, 1996). In addition a number of other factors may influence resort choice depending upon the market. Dickson and Faulks (2007) identified the availability of off snow activities and evening entertainment was insignificant to overseas Australian skiers and snowboarders. This contradicted research on American and Swiss customers, for whom off-snow experiences was an important part of their trip (Dickson & Faulks, 2007). Ski destination choice is certainly affected by cost; however the impact of price is likely to be felt most strongly in terms of the initial decision to participate (Richard, 1996). Price influences destination choice, and distance travelled, rather than resort choice as resorts within individual countries are often similarly priced. It has been identified that although cost is the largest constraint for groups of winter sports tourists (Hudson, 1998) beginners are more price sensitive, and will often opt for less costly resorts such as Austria and Bulgaria, whereas intermediate and advanced skiers and snowboarders may be more willing to pay the premium for varied terrain in French or Swiss resorts, or travel further afield to North America for optimal conditions (Richard, 1996).

Early studies of winter sports tourism focus on the United States market, where market research was deemed an important component of resort development. Studies analysed demand through market

segmentation by skier and resort characteristics concentrating on economic or population variables such as socio demographic characteristics and cost (Mills, Couturier & Snepenger, 1986). Segmentation research has grown considerably since and, as such, the market has been segmented through many different criteria. Destination has been employed as a segmentation criterion, to distinguish between the behavioural patterns of local and destination winter sports tourists (Perdue, 2004). Similarly segmentation has been carried out based upon distance travelled (Goeldner, 1978). More recently segmentation studies have looked at behavioural segmentation to develop classifications based on travel motives (Dolnicar & Leisch, 2003) and visit frequency (Mills, Couturier & Sneperiger, 1986; McKinsey & Company, 1989; Lewis & Wild, 1995; Perdue, 2004; Tsidsou, 2006). Studies have employed personality based segmentation to identify characteristics of specific markets (Mueller & Peters, 2008). Additionally segmentation of ski tourists has also been conducted according to lifestyle characteristics (Matzler, Pechlaner & Hattenberger, 2004) or customer type (Füller & Matzler, 2008). The more traditional approach of demographic segmentation has also been successful in identifying different skier types, where Joppe, Eliot and Durand (2013), identified that distinctive characteristics of the Quebec ski market were revealed based on age, gender and family composition.

Although authors such as Boom (1984), identified that skill level affected individual needs, the under emphasis of segmentation based upon skill had been noted in the past (Fernald, 1986). Since, skill level and experience have been recognised as influential factors in determining skier characteristics (Richard 1996; Thorpe, 2012). Recent studies by Thorpe (2009, 2010, 2012), indicate that culture of contemporary snowboarding is highly fragmented. It is identified that those who participate in winter sports do so with varying abilities and levels of commitment. This gives credence to the further investigation of skill level, as it may be influential in determining the behaviour and motivations of skiers and snowboarders.

Thus far little research has been conducted segmenting winter sports tourists based upon the sport participated in. Hallmann, Feiler, Müller and Breuer (2012), identified that activity based segmentation presents differences in perceived experiences, when researching those engaged in alpine skiing, cross country skiing, snowboarding, sledging and hiking. Furthermore, in a study using a narrower selection of sports activities, differences were identified between skiers and snowboarders in terms of destination choice (Won et al., 2008). Snowboarding was a new practice, initiated in the 1960's, which offered resistance to skiing culture (Heino, 2000). The differences between skiers and snowboarders are well documented in terms of culture, dress, personality and demographics, where participants are "separated by age, fashion, etiquette, lingo and per capita income" (Wulf, 1996, p. 69).

Having noted growth in snowboarding participation (Thorpe, 2009, 2012), research identifying key characteristics of the snowboarding market may be integral to winter sports growth. Although this market represents a smaller segment, resorts are adapting to facilitate changing market needs. 'The growth and impulse for innovation in the winter sports business is coming from snowboarding rather than conventional skiing' (Hudson, 2000, p. 15). It is particularly important to consider the differences between the requirements of skiing and snowboarding. As such European resorts are 'making a special effort to attract families with snowboarding children, by building special snowboard parks, complete with half pipe jumps' (Hudson, 2000, p. 16). If destinations are to appeal, investment in facilities including terrain parks is necessary, as they play a crucial factor in resort choice for this market segment. Whilst investigating personality traits of freestyle snowboarders, Mueller and Peters (2008), identified resort

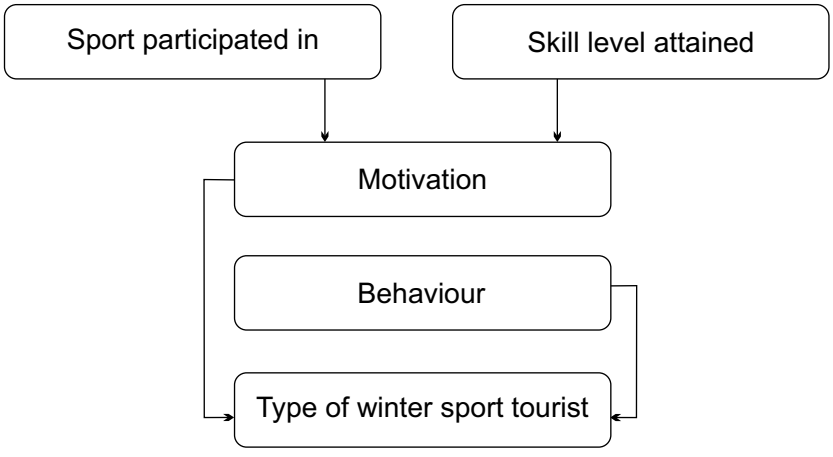
products in need of improvement – most notably fun parks, events and contests – in order to cater for this market. Snowboarding represents a core market of youthful participants (Won *et al.*, 2008), ski resorts have recognised the importance of targeting this market in order to maintain demand (Vaske, Dyar & Timmons, 2004). Therefore, market segmentation using skier and snowboarder profiles could provide more valuable information in terms of marketing (Won *et al.*, 2008).

In recent years, two studies on the segmentation of British winter sports tourists, based on skill, have been carried out. Lewis and Wild (1995) developed a typology of British winter sports tourists in French resorts combining skill level and experience with behavioural and attitudinal aspects such as skier type, frequency, equipment buying behaviours and ski terrain. Secondly Richard (1996) carried out a study based on skilled consumption and British Ski holidays, arguing that if skilled consumption grows, it should have an important influence on the structure of the global ski market. Neither of these studies considered the influence of sport participated in thus, it is important to distinguish between skiers and snowboarders.

Conceptual framework

In developing a typology for the British winter sports market, consideration of the motivations affecting decision making is particularly important, as these directly influence behavioural characteristics. The conceptual framework for this study (Figure 1) highlights the role of both skill level and sport, in influencing motivation for participation and consequent behaviour. It is proposed that tourists can be segmented based on their motivations for participation, which will be influenced by their choice of sport and current skill level. Research differentiating between the motivations of skiers, snowboarders, or those who cross between both activities is yet to be undertaken. In terms of market segmentation differentiation between the two activities may lead to an identification of contrasting motivations and behavioural attributes which affect destination choice and consumer decision making, and therefore need to be considered within a typology of the British winter sports market.

Figure 1
Conceptual framework



Methodology

This study aimed to identify whether motivation for participation could be employed as a segmentation criterion for the British winter sports market, whilst, investigating the role of skill level and sport chosen, in determining tourist type. Research was conducted over a two month period from December to January during the 2011/2012 winter season, generating 926 responses, of which 831 were usable. As identification of common characteristics between groups of skiers was essential in achieving study aims, a cross sectional quantitative design to research was adopted. This approach facilitated tests between independent and dependent variables (Lewin, 2005) allowing recognition of existing relationships dependent on skill level, group type, age and sport.

A questionnaire was employed, specifically targeting those known to participate in winter sports tourism. Key variables to be included in the questionnaire were drawn from the literature reviewed. Variables rating the importance of relaxation (Boom, 1984), fun and achievement (Klenosky, 2002), and competence mastery (Gratton, 1990) were included to identify motivations for involvement in winter sports. As skier characteristics influence motivation (Richard, 1996), variables identifying skill level and experience were included. Skier characteristics were also said to influence equipment buying behaviour (Lewis & Wild, 1995), visit frequency (Tsidsou, 2006), and variety of destinations (Thorpe, 2012) therefore these variables were incorporated. Variables were included to consider how aspects such as lifestyle and customer type (Matzler *et al.*, 2004; Füller & Matzler, 2008) influence behaviour, and how group size and group type affect destination choice (Wickers, 1994). Destination choice was also found to be influenced by cost, (Hudson, 1998; Richard, 1996) therefore the variety of destinations travelled and the importance of cost were considered key in identifying skier type. Facilities in resort, particularly après ski activities (Matzler *et al.*, 2008), were included as variables. It was also determined that variables such as snow quality (Carmichael, 1992; Richard, 1996; Godfey, 1999), reliability (Dickinson & Faulks, 2007), variety of terrain (Godfey, 1999) and piste quality (Richards, 1996) should be tested in the questionnaire. Variables were grouped into three key groups: travel trends (group size, group type, trip frequency, destination), skier characteristics (skill level, preferred terrain, equipment buying behaviour and sport), and demographic characteristics (age, and holiday spend). To maximise responses and aid subsequent analysis closed questions were employed (Lewin, 2005). A pilot study of the preliminary questionnaire was conducted using a sample of 10 respondents, who had previously participated in winter sports. Ambiguities in layout, terminology and content were highlighted and adaptations were made.

In conducting primary data collection to target the British winter sports market online self-completion questionnaires were used. Conducting research online not only provided practical benefits in terms of cost (Buchanan & Smith, 1999; Yun & Trumbo, 2000; Wright, 2005), time (Llieva, Baron & Healey, 2002), and geographical constraints (Garton, Haythornwaite & Wellman, 2003; Taylor, 2000), but also provided the additional benefit of access to a larger and more diverse sample (Hewson, Laurent & Vogel, 1996; Buchanan & Smith, 1999). Furthermore use of online data collection enabled specific populations to be targeted, where access may have been difficult using more traditional methods (Smith & Leigh 1997; Fox, Murray & Warm, 2003). In addition, online communities allow access to people who share interests and attitudes regarding an issue, problem, or activity (Wright, 2005) alluding to their use as a tool for researching the market of a specific sport.

As skiers represent a relatively small proportion of the UK population (Richard, 1996); previous studies of the UK ski market have found it unviable to collect data from a representative sample. Therefore it was deemed appropriate that information in this study was gathered from those known to have an interest in skiing. Three avenues were consequently utilised in questionnaire distribution; firstly the survey link was directly posted onto UK ski and snowboard forums (66.63% of responses), secondly UK based organisations catering for the winter sports market were approached and then chose to endorse the link themselves on social media sites (15.12 % of responses), and thirdly to target a wider demographic, UK ski clubs were approached by email and asked to forward the survey to their members (18.25% of responses).

Sampling

Data was collected from those known to have an interest in skiing, leaving some members of the population with no chance of selection (the non-ski population). Practical difficulties were posed in the enumeration of all British tourists who do ski, alluding to the use of non-probability sampling. With the sample being selected for a definite purpose and to target a particular group non-probability sampling in this instance was appropriate, where probability sampling would not have been permitted (Babbie, 2005; Lewin, 2005; Asthana & Bhusan, 2007). Accidental sampling was used, where the most available and convenient sample was taken (Guilford & Fruchter, 1973).

A significant sample was required to facilitate principle component and cluster analysis therefore data collection was conducted at the start of the 2011/2012 winter season where interest in winter sports and forum activity was deemed to be highest due to the anticipation of impending trips. Due to economic and geographical restrictions the sample was collected online through UK based ski and snowboard forums (Snowboard Club UK, Snowheads, J2Ski, Gone Boarding, Alpsnbach, Freeskeeing and Dark Summer Magazine), social media sites of organisations catering for those with non-ski an interest in winter sports (Westbeach UK and British Universities Snowsports Council), as well as all listed UK ski clubs.

Limitations exist both in the use of internet based research, and adopting accidental sampling design. Most obviously in conducting internet research the sample is immediately bias, restricting participantion to internet users (Fox, Murray & Warm, 2003). Authenticity of responses can in turn be questioned where it is assumed all respondents originate from the UK, participate in winter sports and provide honest responses. Likelihood of contribution by non-skiers is reduced with the survey targeting a specific audience. It would appear only those who participate in winter sports monitor forums, subscribe to winter sports organisations on social media and have ski club membership yet it is possible that foreign respondents with an interest in winter sports may have completed the survey. As certain individuals are more likely than others to complete an online survey systematic bias is caused (Thompson, Surface, Martin & Sanders, 2003; Wright, 2005), yet these problems of bias are not unique to online survey research and are in fact common among all forms of self-completion questionnaires. Limitations however can be found in using accidental sampling as not only does the researcher have little control over the representativeness of the sample, causing a strong possibility of bias (Gravetter & Forzano, 2009), but it is also impossible to evauate the quality of the sample in terms of its representativeness of the population (Anderson, Sweeney & Williams, 2005). If more time were

available, quota sampling could have been used to generate a specific number of participants for each sport, an even split between skill levels and fair representation of all age groups. Although the results of this study will be unable to represent the wider population non-probability sampling methods can produce useful data when collected and interpreted under the right conditions (Cochran, 1977) particularly in exploratory research (Bernard, 2000).

Analysis

Factor-cluster analysis has been adopted in previous segmentation studies (Galloway, 2002; Petrick, 2005; Lee, Lee, Bernhard & Yoon, 2006; Konu, Laukkanen & Komppula, 2011) alluding to the use of principle component analysis and K-means cluster analysis to categorise cases into homogeneous segments. SPSS facilitated analysis in six stages, beginning with descriptive analysis to gauge the sample profile. Having explored data characteristics, relationships between variables were then cross-tabulated and chi squared applied giving an indication of significant relationships. The third stage encompassed principle component analysis where to condense 25 variables, varimax rotation was used reducing variables into 9 factors. Fourthly, K-means clustering categorised 597 cases into 6 segments. ANOVA testing was then applied identifying statistical disparities whilst F-statistics ascertained pertinent variables differentiating the segments. Finally clusters were cross-tabulated against independent variables to determine characteristics; chi squared was then reapplied determining the significance of these characteristics.

Results and analysis

Profile of respondents

Of the 831 respondents, skiing is the predominant sport with 65.7% stating they ski as opposed to the 23.7% who snowboard. In terms of age the 25-44 groups accounted for 53.1%, while the age of respondents ranged from 15 to over 65. 68.3% were under 45. A split between advance and intermediate level respondents is evident, suggesting that the sample is representative of more experienced winter sports tourists; with 408 advanced, 398 intermediate and 24 beginners. Trip frequency gives further evidence of 'Enthusiasts' being well represented, with 94.3% of 918 respondents taking at least one trip a year, 54.5% of respondents taking multiple trips and 7.6% for whom skiing is a lifestyle choice.

Cross-tabulation and chi squared were utilised in identifying important associations within the data set, testing 5 independent variables; 'Skill level', 'Sport', 'Age', 'Group size' and 'Group type' against 43 observed variables. Examination of the chi squared tests enabled the extraction of key trends within the data sample, from which further analysis established the suitability of a typology of the British winter sports market. Variables including skill level and sport were found to have greater impact on dependent variables than group size or group type, supporting the notion of skilled consumption (Richard, 1996) and giving credence to the exploration of differences between British winter sports tourists based upon the sport in which they participate. Given the significance of skill level and sport variables in the initial chi squared tests, attention was focused on analysing these further.

The significance between skill level and dependent variables was tested, identifying the importance of skill in affecting destination choice, trip frequency equipment buying behaviour. Trip frequency is

shown to differ dependent on skill level (Table 1) whereby the number of respondents taking multiple trips increases as skill progresses, and those at advance level are more likely to make skiing a lifestyle choice (p = 0.000). Alongside frequency, skill level has also proved to affect destination choice (Table 2) with advance level winter sports tourists traveling further afield to Canada (p = 0.000), the United States of America (p = 0.000), Asia (p = 0.000) and New Zealand (p = 0.000). Skill level also influences equipment buying behaviour (Table 3) with ownership, quality and quantity of skis/snowboards increasing with skill level (p = 0.000). Ownership of multiple sets of skis/snowboards increasing with skill suggests use of terrain will show greater variation. This hypothesis is confirmed where off-piste skiing (p = 0.000), freestyle (p < 0.05), and use of 'other' terrain (p < 0.005) become more prominent with experience (Table 4). The demographic profile of beginner, intermediate and advanced winter sports tourists, is also deemed to be significant, whereby experience increases with age (p = 0.000).

Table 1
Skill level and frequency

Skill level	Occasional		Annual		Multiple		Lifestyle		Total	
	N	%	N	%	N	%	N	%	N	%
Beginner	8	33.3	8	33.3	6	25.0	2	8.3	24	100.0
Intermediate	29	7.3	175	44.2	186	47.0	6	1.5	396	100.0
Advanced	7	1.7	84	20.6	262	64.2	55	13.5	408	100.0
Total	44	5.3	267	32.2	454	54.8	63	7.6	828	100.0

Pearson Chi-Sq = 135.877, Df = 6, Sig = 0.000

Table 2
Skill level and destination visits

Skill level	Europe		Canada		USA		Asia		New Zealand		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Beginner	21	87.5	2	8.3	0	0.0	1	4.2	0	0.0	24	100.0
Intermediate	392	98.5	75	18.8	53	13.3	3	0.8	5	1.3	398	100.0
Advanced	400	98.0	117	43.4	152	37.3	27	6.6	34	8.3	408	100.0
Total	813	98.0	254	30.6	205	24.7	31	3.7	39	4.7	830	100.0

Europe: Pearson Chi-Sq = 13.663, Df = 2, Sig = 0.001; Canada: Pearson Chi-Sq = 62.891 Df = 2, Sig = 0.000; USA: Pearson Chi-Sq = 70.182, Df = 2, Sig = 0.000; Asia: Pearson Chi-Sq =19.341, Df = 2, Sig = 0.000; New Zealand: Pearson Chi-Sq = 23.752, Df = 2, Sig = 0.000;

Table 3
Skill level and equipment

Skill level	Borrow		Rent		Own		Own high end		Own multiple		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Beginner	0	0.0	11	45.8	11	45.8	1	4.2	1	4.2	24	100.0
Intermediate	2	0.5	96	24.1	193	48.5	67	16.8	40	10.1	398	100.0
Advanced	2	0.5	27	6.6	81	19.9	128	31.4	169	41.5	407	100.0
Total	4	0.5	134	16.2	285	34.4	196	23.6	210	25.3	829	100.0

Pearson Chi-Sq = 205.637, Df = 8, Sig = 0.000

Table 4
Skill level and terrain

Skill level	On piste		Off-piste		Freestyle		Other		Total	
	N	%	N	%	N	%	N	%	N	%
Beginner	23	95.8	5	20.8	5	20.8	0	0.0	24	100.0
Intermediate	388	97.5	200	50.3	83	20.9	12	3.0	398	100.0
Advanced	356	87.5	357	87.5	116	28.4	32	7.9	407	100.0
Total	767	92.5	562	67.7	204	24.6	44	5.4	829	100.0

On Piste: Pearson Chi-Sq = 29.578, Df = 2, Sig = 0.000; Off-Piste: Pearson Chi-Sq = 152.696, Df = 2, Sig = 0.000; Freestyle: Pearson Chi-Sq = 6.427, Df = 2, Sig = 0.040; Other: Pearson Chi-Sq = 10.861, Df = 2, Sig = 0.004

The importance of sport (skiing vs snowboarding) is influencing both equipment buying behaviour and use of terrain. Associations can be made based on sport and use of terrain (Table 5) with participation in both off-piste (p = 0.000) and freestyle skiing (p = 0.000) more common among snowboarders than skiers and higher still among those who participate in both sports. The null hypothesis between equipment buying behaviour and sport can also be rejected (p = 0.000) with rental higher among skiers, increased ownership among snowboarders, and multiple ownership prominent among those participating in both sports (Table 6). It is important to note the relationship between sport and skill level with snowboarders being the least experienced of the three groups and those participating in both sports the most experienced (p = 0.000). In addition to experience, age is shown to differ dependent on sport whereby snowboarding appeals to a younger market than those who participate in skiing (p = 0.000). Furthermore, snowboarders are less likely to travel with children (p = 0.000). Activities participated in again differ between sports with nightlife for instance being more popular among snowboarders (p = 0.000).

Results signify the appropriateness of developing a typology for the British winter sports market, where disparities can be seen between the respondent of different sports and skill levels in terms of destination choice and group type the activities participated in as well as motivations for travel.

Table 5
Sport and terrain

Sport	On piste		Off-piste		Freestyle		Other		Total	
	N	%	N	%	N	%	N	%	N	%
Skier	508	93.2	330	60.4	66	12.1	32	5.9	545	100.0
Snowboarder	178	90.4	158	80.2	102	51.8	6	3.1	197	100.0
Both	82	93.2	75	85.2	38	43.2	6	6.9	88	100.0
Total	768	92.5	563	67.7	206	24.8	44	5.3	830	100.0

On Piste: Pearson Chi-Sq = 1.71, Df = 2, Sig = 0.413; Off-Piste: Pearson Chi-Sq = 39.639, Df = 2, Sig = 0.000; Freestyle: Pearson Chi-Sq = 140.167, Df = 2, Sig = 0.000; Other: Pearson Chi-Sq = 2.794, Df = 2, Sig = 0.247

Table 6
Sport and equipment

Sport	Borrow		Rent		Own		Own high end		Own multiple		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Skier	2	0.4	119	21.8	194	35.5	126	23.1	105	19.2	546	100.0
Snowboarder	1	0.5	7	3.6	77	3.9	54	27.6	57	29.1	196	100.0
Both	1	1.1	7	8.0	17	19.3	15	17.0	48	54.5	88	100.0
Total	4	0.5	133	16.0	288	34.7	195	23.5	210	25.3	829	100.0

Pearson Chi-Sq = 83.901, Df = 8, Sig = 0.000

Principle component analysis

25 significant variables were selected for use in principle component analysis. In this application the aim of principle component analysis was to reduce variables for subsequent use in cluster analysis, therefore an orthogonal solution using varimax rotation was adopted. To ensure practical and statistical significance factor loadings under 0.40 were suppressed, the majority of factor loadings, at above 0.50 (Table 7) suggested practical significance (Hair, Anderson, Tatham & Black, 1998). The 25 items generated a factor solution of 9 factors with eigenvalues greater than 1, which represented 53.688% of total variance between the variables. To determine the appropriateness of factor analysis the Bartlett test of Sphericity was applied (P = 0.000), testing the presence of correlations among variables. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was also applied (KMO = 0.704), quantifying the degree of inter correlations and the appropriateness of factor analysis as 'middling' (Hair *et al.*, 1998).

Factor 1 incorporated five key snow sports related variables, including; equipment buying behaviour, use of off-piste terrain, importance of terrain, frequency of trips and the use of freestyle terrain (9.033% of variance). Factor 2 integrated social variables including; the importance of après ski in determining resort choice, participation in nightlife, as well as the importance of socialising and events as motivations for travel (8.049% of variance). Factor 3 combines activity variables; such as participation in ice skating, tobogganing and sightseeing as well as the importance of non-ski facilities in determining resort choice (6.530% of variance). Factor 4 is composed of motivation variables; the importance of getting away, relaxation, and exercise in determining motivation for travel (6.161% of variance). Factor 5 groups destination variables including the USA, Canada and Asia as destinations visited (5.355% of variance). Factor 6 incorporates cultural activity variables including dining out and shopping as activities participated on winter sports holidays (5.037% of variance). Factor 7 consists of sport variable; the importance of developing skills in the motivation for a trip (4.721% of variance). Factor 8 combines group type variables; whether the group travelled with includes children and group size (4.468% of variance). Finally factor 9 consists of European resort variables that is those for whom Europe is a destination (4.333% of variance).

Table 7
Factor analysis of characteristics: Component matrix

Variables		Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9
Snow	Equipment	-0.726								
	Off-piste	0.713								
	Terrain	0.614								
	Frequency	-0.570								
	Freestyle	0.454								
Social	Après		0.742							
	Nightlife		0.714							
	Socialise		0.577							
	Events		0.400							
Activities	Ice skating			0.623						
	Tobogganing			0.602						
	Sightseeing			0.574						
	Non-ski			0.533						
Motivation	Get away				0.742					
	Relax				0.740					
	Exercise				0.558					
Destination	USA					0.689				
	Canada					0.540				
	Asia					0.526				
Cultural	Dining out						0.768			
	Shopping						0.542			
Sport	Develop skills							0.732		
Group type	Children								0.702	
	Group size								-0.626	
European resorts	Europe									0.805

Cluster analysis

To detect respondents with similar characteristics a K-means cluster analysis was conducted using the 9 factors as composite variables. K-means cluster analysis was chosen over hierarchal clustering due to its usefulness in grouping large sample sizes and cases with similar characteristics (Hair, Anderson, Tatham & Black, 1998). K-means clustering divides data into the number of clusters specified therefore the most meaningful solution needed to be found. Cluster solutions varying from 2-8 were tested, however a 6 cluster solution was deemed the most appropriate in terms of significance.

Table 8 displays the 6 cluster solutions and the results of ANOVA tests. ANOVA results show 8 of the 9 factors make a significant contribution to the cluster process at $p < 0.001$, with one factor significant at $p < 0.05$. F-statistics show the factors/variables which differentiate the groups most significantly. European resort variables are deemed most important in differentiating respondents where F = 218.857, followed by social variables, where F = 138.623. Snow variables were also significant at F = 87.284. Destination (F = 8.656), Motivation (F = 6.801), Cultural (F = 6.156), Activity (F = 4.590) and Sports variables (F = 2.431) have less affect. This identifies that European, social and snow variables can be used to differentiate between the behavioural characteristics of British winter sports tourists.

Cluster 1, accounts for 14.6% of sample respondents, to whom social aspects of winter sports holidays are of highest value, tending to travel in larger groups and participating in non-ski activities, snow variables are less important to these respondents. With social variables the most differentiating factor among this cluster, it was named 'Après scene'.

Cluster 2, represents the smallest number of respondents (1.7%) where relaxation is important in their motivation to travel, this group are frequent winter sports tourists with high quality equipment, social aspects are unimportant and respondents travel in smaller groups. The importance of cultural activities and sightseeing is also evident suggesting the importance of the vacation aspect of the trip. This group does not travel to European resorts, however low importance of other destination variables identifies the prominence skiing in the UK among this market. With relaxation and vacation variables differentiating this cluster it was labelled 'Relaxation seekers'.

Cluster 3 represents 15.1 % of respondents, where socialising, getting away, developing skills and exercise are central motivations. Although respondents travel in larger groups and social motivations are prominent, differentiation can be made between Cluster 1 and Cluster 3 where the latter are more likely to travel with children and non-ski activities are less important. Traveling far afield is not a defining characteristic of this group however the use off-piste and freestyle terrain is prominent suggesting sport motivations are also central. Socialising is important, but the lack of interest in events and nightlife suggest socialising is engaged in on piste resulting in the name 'Social skiers'.

Cluster 4 represents the largest group of respondents at 25.6% who have been named the 'Anything goes'. These respondents tend to travel in smaller groups, to European resorts where non-ski activities and motivation variables are important and social and snow variables are less important.

Cluster 5 represents 21.9% of respondents, for who snow variables are most important. This group has been appropriately named 'Enthusiasts', as this group is less concerned with social, cultural and non-ski activities. Groups tend to be smaller and with far afield destinations unimportant, this group can

be identified as part of the European market. Exercise is also important as a motivation in this cluster supporting the notion that participation in the sport is the main focus for the trip.

The final cluster, also representing 21.9% of respondents is the 'Jet set enthusiasts'. This group again is concerned with snow variables however destination is of greater importance than in cluster 5. Furthermore social aspects and dining out are important giving evidence of the 'Vacation' aspect of the trip. This is also reflected in their motivation to travel whereby exercise and getting away are important motivations. Group size tends to be smaller and less likely to include children.

Table 8
Cluster analysis categories of British winter sports tourists

Variables	Après scene N= 87 14.6%	Relaxation seekers N= 10 1.7%	Social skiers N=90 15.1%	Anything goes N=48 25.6%	Enthusiasts N=131 21.9%	Jet set enthusiasts N=131 21.9%	F	Sig.
Snow variables	0.85	-0.26	-0.41	0.78	-0.59	-0.55	87.284	0.000
Equipment	2.99	3.80	3.59	2.89	3.97	4.18	39.513	0.000
Off-piste	1.46	1.40	1.21	1.57	1.14	1.14	23.428	0.000
Terrain	5.98	2.6	2.95	4.86	2.30	2.51	162.602	0.000
Frequency	2.41	3.00	2.77	2.27	2.83	2.88	19.305	0.000
Freestyle	1.70	1.90	1.68	1.90	1.75	1.63	6.534	0.000
Social variables	-1.34	0.14	-0.40	0.58	0.82	-0.31	138.623	0.000
Après	3.62	6.20	6.39	7.06	7.36	4.98	186.420	0.000
Nightlife	1.33	2.20	1.70	2.17	2.16	1.58	42.244	0.000
Socialise	1.34	1.70	1.31	1.72	1.92	1.52	20.155	0.000
Events	2.25	2.50	2.54	2.59	2.61	2.43	5.748	0.000
Activity variables	0.03	-0.15	0.25	-0.31	0.07	0.09	4.590	0.000
Ice skating	2.59	2.70	2.68	2.77	2.77	2.72	2.158	0.057
Tobogganing	2.54	2.80	2.56	2.42	2.62	2.56	2.545	0.027
Sightseeing	2.37	1.70	2.48	2.42	2.77	2.26	4.057	0.001
Non-ski	7.52	6.60	7.60	7.60	7.20	7.53	11.194	0.000
Motivation variables	0.22	0.34	-0.06	-0.33	0.27	-0.03	6.801	0.000
Get away	1.76	2.00	1.74	1.84	1.72	1.56	8.419	0.000
Relax	1.67	1.70	1.98	1.97	1.97	1.91	4.430	0.001
Exercise	2.08	1.90	1.71	1.78	1.60	1.53	1.643	0.147
Destination variables	-0.04	0.43	0.34	0.08	0.11	-0.44	8.656	0.000
USA	1.84	1.90	1.74	1.84	1.72	1.56	7.461	0.000
Canada	1.78	1.60	1.71	1.78	1.60	1.52	6.127	0.000
Asia	1.98	2.00	1.99	1.97	1.97	1.91	2.737	0.019
Cultural variables	-0.01	-0.36	0.26	0.14	0.07	-0.37	6.156	0.000
Dining out	1.60	1.50	1.70	1.65	1.72	1.46	4.088	0.001
Shopping	2.01	1.60	2.27	2.15	2.33	2.12	6.153	0.000

Table 8 **Continued**

Variables	Après scene N= 87 14.6%	Relaxation seekers N= 10 1.7%	Social skiers N=90 15.1%	Anything goes N=48 25.6%	Enthusiasts N=131 21.9%	Jet set enthusiasts N=131 21.9%	F	Sig.
Sports variables	-0.12	-0.03	-0.18	0.22	-0.01	-0.03	2.431	0.034
Develop skills	1.51	1.20	1.41	1.68	1.54	1.55	3.224	0.007
Group variables	-0.22	0.23	-1.05	0.17	0.15	0.49	37.784	0.000
Children	1.76	1.70	1.66	1.68	1.78	1.90	5.214	0.000
Group size	3.31	1.80	4.07	1.88	1.72	1.77	128.495	0.000
European resort variables	-0.04	6.16	-0.13	-0.14	-0.10	-0.09	218.857	0.000
Europe	1.00	2.00	1.00	1.00	1.00	1.00	-	-

Cluster characteristics by sport

Segmentation by snow sport has yet to be investigated, yet as identified in this study (Table 9) is significant in determining and grouping skier characteristics ($p < 0.005$). Skiers as a population are well represented in those clusters where socialising is a key determinant (Après scene and Social skiers). They are also prominent as the Anything goes group where vacation aspects are central in motivating trips. Comparatively snowboarders are more evident in the enthusiast market and are classified into Clusters where snow related variables are key determinants (Enthusiast and Jet set enthusiast). The importance of destination to this group is also evident with a higher number of snowboarders being classified as Jet set enthusiasts, who travel further afield to participate. Respondents who participate in both sports show a cross over, motivated by the social aspects of the trip, yet are still snow enthusiasts belonging to the Social skier, Enthusiast and Jet set enthusiast categories.

Table 9
Cluster analysis characteristics

Characteristics		Après scene N= 87 14.6%		Relaxation seekers N= 10 1.7%		Social skiers N=90 15.1%		Anything goes N=48 25.6%		Enthusiasts N=131 21.9%		Jet set enthusiasts N=131 21.9%		Chi Sq	Sig.
		N	%	N	%	N	%	N	%	N	%	N	%		
Sport	Skier	60	15.3	6	1.5	62	15.9	115	29.4	76	19.4	72	18.4		
	Snowboarder	17	11.8	4	2.8	17	11.8	25	17.4	38	26.4	43	29.9	25.511	0.004
	Both	10	16.7	0	0.0	11	18.3	7	11.7	16	26.7	16	26.7		
Skill Level	Beginner	7	46.7	1	6.7	0	0.0	5	33.3	2	13.3	0	0.0		
	Intermediate	48	16.6	3	1.0	40	13.9	98	34.1	58	20.2	40	13.9	65.665	0.000
	Advance	32	10.9	6	2.0	49	16.7	45	15.3	71	24.1	91	31.0		
Age	15-24	33	35.9	0	0.0	18	19.6	17	18.5	11	12.0				
	25-44	36	10.9	8	2.4	41	12.4	84	25.4	72	21.8	90	27.2	70.506	0.000
	45-64	15	9.4	2	1.3	25	15.7	46	28.9	44	27.7				
	65+	2	16.7	0	0.0	6	50.0	1	8.3	2	16.7	1	8.3		

Conclusion and recommendations

This paper developed a typology for winter sports tourists based upon the behavioural characteristics of the British winter sports market. The study set out to determine appropriate segmentation criteria, whilst undertaking data collection from key stakeholder groups to establish whether a typology was suitable. Having created a six-fold typology it was noted that sport is influential in determining behavioural characteristics. Three motivations for participation in winter sports were identified and presented crucial factors in differentiating between groups of British winter sports tourists. This added to previous research on the determinants of destination choice among winter sports tourists and also highlighted new criteria in segmenting this market.

Custer analysis extracted three motivations for participation in winter sports; sport motivations, where desire to participate in the sport is the strongest, social motivations, where intention to socialise is integral to both motivation for travel and activities participated in, and finally vacation motivations, where desire to relax precedes other interests. Furthermore the findings increase understanding of the factors differentiating groups of British winter sports tourists. The study has shown the most significant difference to be between those who do or do not choose Europe as a destination identifying two distinct markets. A domestic market can be identified where UK ski areas are preferred by those who do not ski in Europe. The study also found social variables to be influential in distinguishing between groups with the motivation for and participation in social activities defining two of the clusters. Furthermore snow variables distinguished groups highlighting an enthusiast market.

The study findings add to a growing body of literature on destination choice determinants in winter sports. Previous work on the British winter sports market undertaken by Richard (1996) and Godfrey (1999) suggested that snow conditions and terrain were most important in influencing destination choice among skilled and frequent participants. These findings correspond where snow conditions are deemed to be the most influential factor for frequent participants; however skilled participants indicated that the quality and variety of the ski area was of greater importance when selecting a resort. As skilled participants engage in winter sports most frequently, the ability of resorts to attract and retain the custom of this core group will be dependent on their ability to create variety within the ski area.

Previous studies have segmented ski tourists based on socio demographic characteristics (Mills, Couturier & Snepenger, 1986), destination, (Perdue, 2004) distance travelled (Goeldner, 1978), skill level (Richard 1996), behavioural motivations (Dolnicar & Leisch, 2003), customer type (Füller & Matzler, 2008), lifestyle characteristics (Matzler *et al.*, 2004) and visit frequency (Tsidsou, 2006). The findings from this study make contribution to the current literature presenting the sport participated in as suitable segmentation criteria.

The findings go some way towards enhancing understanding of the differences in the behavioural attributes of skiers and snowboarders. The results demonstrated disparities in the use of terrain, equipment buying behaviour, demographic profile, group type, destinations visited and motivations for participation. Destination choice determinants including cost, terrain variety and accommodation were again shown to vary. Cluster analysis results are of particular significance where the social aspect of a trip is of more concern to skiers, whilst taking the sport to the extreme in terms of terrain and destination is more important to snowboarders.

Managerial and marketing implications for the industry can be derived from the results of this study. Three key recommendations have been proposed:

1. **Adopt a motivation based approach to marketing:** Findings indicate that the packaging and promotion of winter sports holidays could be adapted to target specific groups where sport motivations, social motivations and vacation motivations were identified.

   Marketing using social motivations: Social motivations were found to be important in two cluster groups and particularly influential among skiers. Imagery used in promotion should focus on large groups of friends and families both on piste and off, enjoying the après ski facilities within the resort. This marketing should be targeted primarily at skiers but include all demographic groups. For destinations with an already lively après atmosphere, it is suggested that this aspect of the resort should be developed and packaged to increase occupancy. Resorts should promote music events and contests to engage the social skiers. An effort should be made to attract large groups through the offer of group rate lift passes, ski rental and accommodation discounting.

   Marketing using sport motivations: Sport motivations were found to be particularly important to snowboarders and those who participate in both sports. Sports motivations should largely be used to target the enthusiast market. Imagery should focus on promoting extreme aspects of the sport, depicting freestyle skiers and snowboarders. Images need to highlight snow quality and diversity of terrain; they should also showcase off piste trails, terrain parks and race courses. Images should focus on the quality of the ski area and how it allows the individual to push boundaries and develop new skills. To appeal to this market, resorts should seek endorsement from professional skiers and snowboarders. Resorts should aim to feature in snow sports magazine photo shoots and professional videos. Furthermore, hosting competitions such as the Winter X Games will help resorts gain recognition from the enthusiast market.

   Marketing using vacation motivations: Vacation motivations were important to two distinct markets the relaxation seekers and the anything goes tourist. High end resorts both in Europe and further afield, should focus on targeting the relaxation seekers by promoting luxury facilities within the resort area. Resorts should focus on marketing partnership with luxury resorts to encourage stay, spa and ski packages. Imagery should focus of couples, quiet pistes and relaxing après ski activities including spa treatments, outdoor jacuzzis and quality dining experiences. On the other end of the scale, resorts with a family atmosphere and activity infrastructure in place should focus on attracting the anything goes tourist. Although they enjoy the skiing, their holiday is about much more than making the most of snow conditions. Promotion should target families and demonstrate that within the resort there is something for everyone. Resorts should promote ski schools and kids clubs and snow related entertainment including tobogganing and ice skating through the packaging of a family fun pass. In promotion material a large emphasis should be placed on family enjoyment, both on and off the piste.

2. **Develop the UK domestic ski market:** Findings indicate that a solely domestic market exists in the UK. Scottish resorts need to target and expand this market in order to maximise their turnover. Scottish resorts should encourage the 'staycation' in order to package UK ski tourism. As uncertain snowfall affect Scottish resorts, they will need to invest in snowmaking technology. Uncertain snow conditions put these resorts at a disadvantage to their European neighbours, as such they will

need to focus on last minute packages for short stays and weekend breaks. Domestic resorts should introduce loyalty schemes, offer frequent visitor discounts and promote bring a friend schemes to increase visitation. It will be essential to gather data from their customers in order to build a mailing list, through which, they can promote weekend breaks and weekday lift pass deals. It will also be essential that domestic resorts partner with nearby accommodation providers and transport links to increase their accessibility.

3. **Encourage an enthusiast market:** The study found that the enthusiast clusters are the most desirable customers for resorts to attract. These frequent participants are less price conscious and more willing to travel further afield for the right experience. Destinations with diverse and challenging terrain offer should try to engage this market offering unique experiences or the opportunity to develop new skills. Resorts should expand their product by offering heli-skiing, avalanche survival courses, freestyle and freeride master classes and running backcountry expeditions. Partnerships with organisations providing these services may be crucial to attract this valuable market.

As the most important limitation of the study lies in the use of accidental sampling where control over the representativeness of the sample was reduced, developing this research using quota sampling could be beneficial. Increasing the validity of the study particularly by ensuring fair representation of beginner winter sports tourists and the over 65's who were probably underrepresented in this sample would help further the understanding of behavioural characteristics based on skill and age.

This research has highlighted areas in need of further investigation; notably the exclusively domestic ski market. The research also gives plausibility for future segmentation studies using sport, particularly in the investigation of differences in behavioural motivations and psychologies of skiers and snowboarders.

While not necessarily a true representation of the British winter sports market, the findings provide insight in to the differing motivations and behavioural characteristics of British winter sports tourists. Evidence demonstrates clear distinctions between the behavioural characteristics and motivations of skiers and snowboarders. Segmentation by sport allows for the identification of specific needs, which can be applied to marketing specific destinations or resorts dependent on attributes such as quality snow conditions -of greater importance to snowboarders -variety of terrain -important to those who participate in both sports - and quality of après ski facilities -which have been shown to be of greater importance to skiers. This could have further implications for the industry, informing resort development and marketing strategies and possibly counteracting the declining market trends.

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