Motivations, perceived risk and behavioural intentions in hard adventure tourism. A natural park case study[1]

Received 13th April 2015
Revised 29th January 2016
Accepted 26th July 2016

Michela C. Mason - Luca Gos - Andrea Moretti

Abstract

Purpose of the paper: *This study on consumer behaviour intends to combine two lines of investigation. First, we examine how different motivation factors in adventure tourism affect behavioural intentions. Secondly, in order to provide a better understanding of behavioural intentions we further explore the differences between the groups of individuals' subjective perception of risk.*

Design/methodology/approach: *A visitor survey was conducted on a sample of hard adventure tourists at the Friuli Dolomiti Alps Natural Park. Factor analysis of motivational items resulted in four dimensions (i.e. nature, risk, contemplation and socialization). In order to discover a relationship between the four motivational factors and the adventure tourists' behavioural intention, a stepwise regression analysis was conducted. Then, using ANOVA and post hoc analysis (Scheffe's test), the existing differences between various levels of risk perception of adventure tourists and their response to behavioural intentions were analysed.*

Findings: *The analysis of motivational factors indicates that "activity related motivations" include four dimensions: nature, risk, contemplation and socialization. The stepwise regression results show that nature is the only motivational factor that affects tourists' behavioural intention.*

Originality/value: *This paper shows that "nature" is the key motivational factor for adventure tourists to revisit a park.*

Practical implications: *The analysis provides a framework suggesting how organizations might usefully implement a marketing strategy. This study encompasses the risk perception as a motivational factor and tries to discuss how this concept can be operationalized in tourism marketing.*

Limitations: *This paper presents two main limitations. Firstly, the cross sectional nature of the data, and secondly, the hypotheses were tested using a sample from a limited area.*

Key words: adventure tourism; perceived risk; behavioural models; natural parks

1. Introduction

Forms of nature based tourism, such as adventure tourism, are considerably increasing in many countries. In America and Europe,

[1] The paper is the result of the collaboration of the authors who are jointly responsible. The text is attributed as follows: paragraphs 1 and 5 to Andrea Moretti; paragraphs 2 and 4 to Michela C. Mason; paragraph 3 to Luca Gos.

adventure tourism accounts for $263 billion with an estimated average yearly increase of 65% from 2009 to 2012 (Adventure Tourism Market Study, 2013).

In Italy adventure tourism is showing a significant growth, thanks to the heterogeneous and rich landscape, including both summer and winter sports and ranging from water to inland activities. According to this general tendency, in 2011 the Italian sector was estimated to have produced 6.3 Billion Euros (National Organisation responsible to measure Sport tourism, Borsa per il Turismo Sportivo, B.T.S.).

As adventure tourism continues to expand over the last years, scholars have increasingly attempted to understand the behaviour of this niche of tourism (Manning, 2011). Adventure tourism is a rather ambiguous and complex concept because of its latent, multidimensional and relative nature. It is characterized by elements of physical and psychological challenge, danger and risk, uncertain outcomes and exploration (Swarbroke *et al.*, 2003). A dependent or incidental relationship with the natural environment and a certain amount of skill and a physical exertion can be also considered as constitutive parts of adventure tourism (Lawton and Weaver, 2001). In this context, there is a need to further investigate some crucial aspects of adventure tourism, such as motivations and perceived risk of adventure recreationists, in order to properly define and meet the needs of this target audience.

In the last years, research has revealed that identifying tourist motivations is often the most constructive and effective way to determine appropriate visitor opportunities. Clarifying how these travel motivations influence tourists' behavioural intention, is fundamental for tourism planners and marketers (Beh and Bruyere, 2007; Li *et al.*, 2010). However, the decision-making process that leads to the consumers' evaluations, choices and behaviours is highly complex, and is also strongly influenced by risks perceptions (Campbell and Goodstein, 2001; Cho and Lee, 2006; Lin and Chen, 2009; Prayag and Jankee, 2013).

The present study focuses on the impact of motivations and risk perception in an adventure tourism setting, analysing specifically their relation with behavioural intention in a natural park. Although wildlife is the major attraction for tourists visiting national parks (Acquah *et al.*, 2015), in this particular setting a recreationist can be involved in recreational activities with inherent elements of physical, emotional or psychological risk, danger or uncertain outcomes, which typically take place within a natural environment (Ewert and Vernon, 2013).

Therefore, the aims of the present research are to extend the knowledge about hard adventure tourists in natural parks and assess their motivation, perceived risk and behavior. The purposes of the study can be summarized as follows: (a) to identify the motivational factors of Italian hard adventure tourists; (b) to explore the relationship between dimensions of motivation and behavioural intentions of Italian hard adventure tourists; (c) to classify different "types" of hard adventure tourists (based on their level of risk perceptions) in order to determine similarities and/or differences in term of their behavioural intentions.

This paper contributes to a theoretical understanding of adventure tourists in a natural park in two ways. It intends to determine the key motivational factors that are important for adventure tourists' decision to visit the park, and to analyse the relationship between these motivational factors and their behavioural intention. Secondly, it aims to test whether different levels of risk perceived by adventure tourists are related to their behavioural intentions or not. This relationship is important because unlike other consumption situations where higher risks deter consumers from repurchasing, in adventure tourism higher risks may be associated with more positive behavioural intentions (Prayag and Jankee, 2013). In addition, this study on consumer behaviour has also theoretical and practical value.

2. Theoretical background

Adventure tourism -that is travelling to explore a "new experience, often involving perceived risk or controlled danger associated with personal challenges, in a natural environment or exotic settings" (Morrison and Sung, 2000, p. 11), has recently grown in popularity as a niche form of nature based tourism. It is characterized, as other nature based forms of tourism, by a dependent or incidental relationship with the natural environment. It should, however, be noted that adventure tourism is differentiated from other types of nature based tourism on the basis of the following three elements: 1) the element of risk in the tourism experience (Ewart, 1989; Hall, 1992; Fennell, 1999); 2) a higher level of physical exertion by the participant (Ewart, 1989); 3) the need for specialized skills to facilitate successful participation (Lawton *et al.,* 2001). Thus adventure tourism is "characterized by its ability to provide the tourist with relatively high levels of sensory stimulation, usually achieved by including physically challenging experiential components" (Muller and Cleaver, 2000, p. 156). Within this type of tourism, mountains, lakes, oceans and the most distant and wildest places represent "escape locations", giving the tourist a feeling of adventure and risk perception as the below mentioned activities in table 1 (Pomfret, 2006).

Inside the macro-area of adventure tourism, it is possible to identify activities along a continuum ranging from "soft" to "hard" adventure wherein the levels of risk, skill and exertion increase from a minimum to a maximum level. Although highly subjective, this classification overlaps adventure tourism with other types of nature based tourism (e.g. ecotourism) in some soft adventure activities such as wildlife watching, safari and trekking (Lawton and Weaver, 2001). The category of "hard" or "pure" adventure activities includes activities of high personal risks and dangers and the production and the delivery of adrenaline activities (Kane and Tucker, 2004). They differentiate from all the others nature based activities by allowing practitioners to experience speed, high physical exertion or a combination of these factors, that result in a risk perception or in an adrenaline rush feeling for the tourist practicing them.

Tab. 1: Conventional and contemporary adventure tourism activities

Land based		Water based	Air based	Mixed (land/water/air)
Abseiling	Mountaineering[a]	Body boarding	Ballooning	Adventure racing
Backpacking [a]	Orienteering	Windsurfing	Bungee jumping	Charity challenges
Bicycling	Quad biking	Canyoning	Cliff jumping	Conservation expeditions
Caving	Scrambling	Cruise expeditions	Gliding	Cultural experiences
Climbing[a]	Skiing[a]	Kayaking	Hang-gliding	Gap year travel
Dog sledding	Snowboarding	Sailing	Micro-lighting	Hedonistic experiences
Hiking[a]	Snow mobiling	Scuba diving	Paragliding	Spiritual enlightenment
Hunting	Snow shoeing	Snorkeling	Parachuting	Wildlife watching
Horseback riding	Via Ferrata a	Surfing	Skydiving	
Safaris-Jungle exploring	Wilderness a experiences	Water skiing		
Motorcycling		White water rafting		
Mountain biking		Windsurfing		

[a] Backpacking, climbing, hiking, mountaineering, skiing, via Ferrata and wilderness experiences are all mountaineering-related activities.

Source: Adapted from Pomfret, 2006.

Nowadays, existing empirical studies on motivations of adventure tourists seem to need more in-depth research in order to improve the identification of adventure tourists' motivations (Schneider and Vogt, 2012).

Motivation is "the process that accounts for an individual's intensity, direction, and persistence of effort toward attaining a goal" (Robbins, 2003, p. 155) or "the need that drives an individual to act in a certain way to achieve the desired satisfaction" (Beerli and Martín, 2004, p. 626). Another definition is the one proposed by Pizam, Neumann, Reichel, (1979), which refers to travel motivation as "the set of needs which predispose a person to participate in a touristic activity" (Pizam *et al.*, 1979, p. 195). As motivation can be defined the driving force behind all behaviours (Fodness, 1994; Gnoth 1997; Prebensen *et al.*, 2013), while research on motivation can be fundamental for understanding the reasons for participating in adventure tourism (Ross and Iso-Ahola, 1991).

Thus, motivation is a critical variable for explaining tourist behaviour. It has been employed as a fruitful criteria for segmentation in a large number of studies and in different settings including natural parks (e.g. Kerstetter *et al.*, 2004; Rid *et al.*, 2014; Tangeland *et al.*, 2013). Buckley presented a meta-analysis of adventure tourists' motivations for participating in tourism activities (Buckely, 2012). Some of these are known to be relaxation, to see different places, to discover new cultures, to swim, etc. Nearby them,

there are some other reasons like to feel rush, thrill or the enjoyment of risk. These latter elements can also be accepted as core ingredients of tourism for participants' motivation. Adventure by definition involves elements of risk that are extremely attractive to adventure tourists. We argue for the thesis that risk perception (Beck, 1992) is a combination of thrill and excitement. This definition comes very close to the concept of "rush" that is defined by Buckley as simultaneous experience of thrill and flow that is a more complex construct (Csikszentmihalyi, 1990). They are "associated with the successful performance of an adventure activity at a high level of skill" (Buckley, 2012, p. 963).

In tourism literature several studies indicate that motivation influence the following consumption behaviour such as behavioural intentions (Prayag and Grivel, 2013; Schofield and Thomson, 2007). Behavioural intentions have been defined as the "degree to which a person has formulated conscious plans to perform or not some specified future behaviours" (Warshaw and Davis, 1985, p. 214). Willingness to repurchase and recommending the tourism service to others are the two main elements that characterized behavioural intentions (Chi and Qu, 2008; Del Bosque and Martín, 2008; Ryu, Han, and Kim, 2008).

Following the approach of the behavioural model proposed by Needham and Rollins for nature based tourism (Needham and Rollins, 2009) deriving from the experience based management (Manfredo *et al.*, 1983) we postulate that adventure tourists are engaged in certain activities in a specific setting in order to fulfil their specific motivations and to realize benefits or outcomes (Acquah *et al.*, 2016). Thus, we investigate the relations between motivations and the response to them (i.e. behaviour) in a particular setting (i.e. a natural park) of tourism where particular activities (i.e. hard adventure activities) are practiced. Specifically, we analyse the risk perception as part of the key motivational factors in adventure tourism and how different levels of perceived risk are associated with the various high adventure tourism activities and their relation with the behavioural variables.

3. Methodology

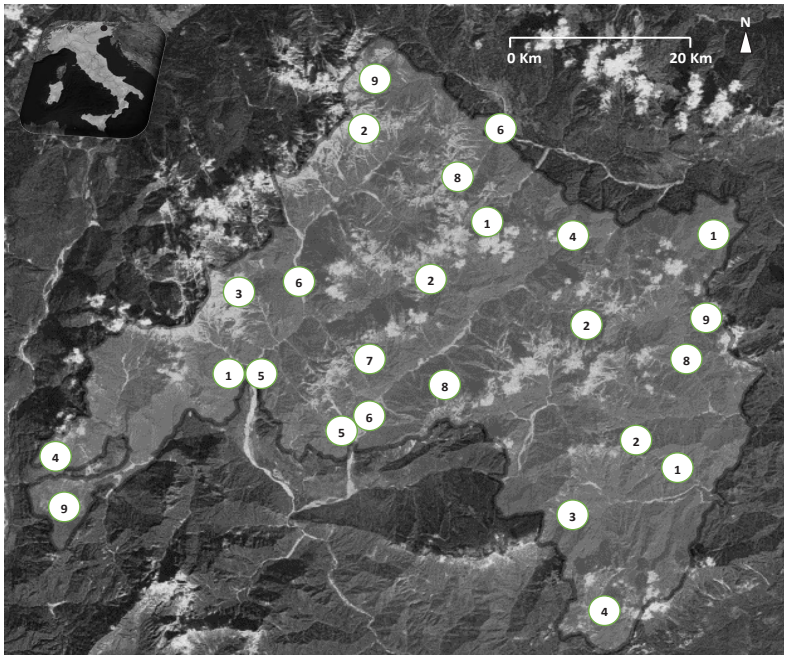
Data collection was performed at the *Friuli Dolomiti* Alps Natural Park in spring 2014. This park is located in the western mountain zone dominating the upper plain of *Friuli Venezia Giulia* region (North East of Italy). The area extends over 36,900 hectares and it is characterized by the wilderness of its large valleys surrounded by the Dolomites. This is a protected area that extends in the Friuli-Venezia Giulia region, from the province of Pordenone to the province of Udine, including also Valcellina and the upper valley of river Tagliamento (see Figure 1). The area is characterized by a high degree of "wilderness", given by the absence of connecting roads. Among the captivating features of its landscape is the huge variety of plants and animals that enhances its attractiveness for outdoor enthusiasts.

For example, the morphology of the mountains of the area, the rains and the particular carbonate rocks such as limestone and dolomite, make the park attractive for canyoning and rafting.

Since adventure tourists seek recreation experiences that differ from those available through other outdoor activities (Berns and Simpson, 2009) the present paper in order to avoid overlapping with other tourism types (e.g. ecotourism) focuses on a sample of adventure tourists selected on the basis of their participation to hard adventure.

As showed in figure 1, nine hard adventure activities were chosen for the aim of the present research (i.e. Trekking; Wilderness hiking; Mountain climbing; Mountain biking; Rafting; Canyoning; Hang Gliding; Downhill bike and Orienteering).

Fig. 1: the study area



Legend	**N°**
Trekking	1
Wilderness hiking	2
Mountain climbing	3
Mountain biking	4
Rafting	5
Canyoning	6
Hang Gliding	7
Downhill bike	8
Orienteering	9

Source: Authors' data and calculations

Self-administered questionnaires were used in this study. The core part of the questionnaire involved motivations for the hard adventure tourists' participation. A number of 317 tourists were randomly selected in the sample from a large population of hard adventure tourists of the Friuli Dolomiti Alps Natural Park. The sampling procedure was a systematic sampling, one every three hard adventure tourists (Mason and Moretti,

2015). This method selects elements from an ordered sampling frame; it is functionally similar to simple random sampling, because each element in the population has a known and equal probability of selection (Bowerman *et al.*, 2004). Nevertheless in the present paper hard adventure tourists were sampled in a specific context (i.e. a natural park), thus generalizability to larger settings can only be ensured on the basis of replication across different contexts, subjects, stimuli, and responses (Dipboye, 1990; Lynch, 1982). The sample size is in line with those used by other adventure tourism studies (e.g. Giddy and Webb, 2015). The researcher collected all data personally during holiday periods. The survey questionnaire consists of three parts: part 1 addresses motivations; part 2 deals with the perception of risk; part 3 deals with general characteristics (socio-demographics). All scale items were measured through a 7-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (7). The sample characteristics are summarized in Table 2. Data were analyzed through descriptive statistics (mean score and standard deviations), factor analysis, stepwise regression and ANOVA. Furthermore, a Scheffe post hoc procedure was carried out in order to determine whether the different levels of adventure tourists' risk perception differ or not in their response to the five behavioural variables.

4. Results

The general sociodemographic characteristics of tourists interviewed is presented in Table 2. The sample was equally distributed by gender (49.8% male and 50.2% women). Tourists were predominantly relatively young: 71.92% were between 19 and 29 years old, 0.63 % under 19, 8.2% between 30 and 39 years old, 8.83% between 40 and 49, 7.89% between 50 and 65 and only 2.53% around 65 or older. Tourists in the sample showed high levels of education on average, as 64.35% of respondents had a high school degree, 32.18% a college degree or higher and only 2.84% had a junior high school level of instruction.

Tab. 2: Sociodemographic profile of respondents

Socio-demographic variables of survey respondents (N=317)			
		Percentage	No.
	Gender		
Male		49.80%	158
Female		50.20%	159
	Age		
Less than 19		0.63%	2
19-29		71.92%	228
30-39		8.20%	26
40-49		8.83%	28
50-65		7.89%	25
65 and above		2.53%	8
	Educational level		
Primary school		0.63%	2
Junior high school		2.84%	9
Senior high school		64.35%	204
University or above		32.8%	102

Source: Authors' data and calculations

The motivational items were defined according to the literature on leisure motivation and specifically to the Recreation Experience Preference (REP) scale that was developed within the experiential approach, to measure what motivates people to perform activities in natural areas (Manfredo *et al.*, 1996). Means and standard deviation of the items motivation were also reported to determine which of the motivations were the most important ones (table 3).

Tab. 3: Mean score and standard deviation of the motivation items

Motivation items	Source	Mean	Standard deviation
To enjoy natural resources	Kim *et al.* (2003)	5,47	1,608
Experience peace and quiet in nature	Tangeland *et al.* (2013)	5.15	1.587
To appreciate beautiful natural resources	Kim *et al.* (2003)	5.57	1.282
Experience fellowship whit nature	Tangeland *et al.* (2013)	5.30	1.381
Experience the landscape and moods of nature	Tangeland *et al.* (2013)	6.29	1.044
To be where things are natural	Manfredo *et al.* (1996)	5.34	1,462
To be close to nature	Manfredo *et al.* (1996)	6,17	1,006
To enjoy the natural scenery	Manfredo *et al.* (1996)	4.65	1.633
To enjoy fauna and flora	Tangeland *et al.*(2013)	5.29	1.549
To have thrills	Manfredo *et al.* (1996)	3.76	1.776
To experience excitement	Manfredo *et al.* (1996)	4.66	1.770
To experience in the paced nature of things	Manfredo *et al.* (1996)	3.10	1.567
To feel exhilaration	Manfredo *et al.* (1996)	3.38	1.763
To take the risks	Manfredo *et al.* (1996)	4.94	1.569
To change dangerous situations	Manfredo *et al.* (1996)	5.90	1.192
To rest and relax	Beerli and Martín (2004)	3.77	1.683
To get away from the hustle and the bustle	Tangeland *et al.* (2013)	5.66	1.377
To change from daily routine	Tangeland *et al.* (2013)	3.93	1.581
To have time to think about life	Tangeland *et al.* (2013)	3.57	1.636
To find peace and quiet	Tangeland *et al.* (2013)	3.43	1.682
To get away from everyday life	Tangeland *et al.* (2013)	4.03	1.664
To have a time for natural study	Kim *et al.* (2003)	5.09	1.581
To have enjoyable time with family/friends	Kim *et al.* (2003)	5.17	1.437
To be with others who enjoy the same things you do	Manfredo *et al.* (1996)	5.09	1.429

Note: Individuals were asked to indicate their level of agreement on a 7-point Likert scale ranging from 1-strongly disagree to 7-strongly agree.

Source: Authors' data and calculations

To examine the dimensions underlying the motivation factors a principal component factor analysis with varimax rotation was undertaken. The 24 motivation factors items yielded four factors with eigenvalues greater than one (table 4). The first factor loaded on nine items and was called "Nature". The second factor was named "Risk Perception" and loaded heavily on six items. The third factor called "Contemplation" loaded on six items. The final factor labelled as "Socialization" loaded on three items. The Kaiser-Meyer-Olkin statistic that measures sampling adequacy for the motivation scales was 0.883. As shown in table 4 these four motivation dimensions accounted for 60.86% of explained variance.

Similar to other studies (e.g., see Saayman and Dieske, 2015; Buckely, 2012), nature, risk, contemplation and socialization emerged as the most relevant motivational factors to bring adventure tourists to protected areas.

Tab. 4: Motivation factors

Motivation factor	Factor 1	Factor 2	Factor 3	Factor 4
Motivation Item	Nature	Risk	Contemplation	Socialization
To enjoy natural resources	0.764	0.138	0.056	0.134
To experience peace and quiet in nature	0.735	0.064	0.125	0.254
To appreciate beautiful natural resources	0.727	0.099	0.223	-0.013
To experience fellowship whit nature	0.713	0.008	0.149	0.306
To experience the landscape and moods of nature	0.704	0.029	0.298	-0.029
To be where things are natural	0.692	0.014	0.247	-0.065
To be close to nature	0.661	0.083	-0.028	0.394
To enjoy the natural scenery	0.643	0.300	0.027	-0.073
To enjoy fauna and flora	0.616	0.365	-0.116	0.234
To have thrills	0.121	0.846	0.121	0.076
To experience excitement	0.174	0.824	0.158	0.012
To experience in the paced nature of things	0.236	0.787	0.120	0.120
To feel exhilaration	0.115	0.743	0.146	0.124
To take the risks	0.127	0.699	0.283	0.060
To change dangerous situations	-0.065	0.642	0.195	0.353
To rest and relax	0.005	0.353	0.717	0.061
To get away from the hustle and the bustle	0.236	0.176	0.710	0.165
To change from daily routine	0.089	0.147	0.692	0.386
To have time to think about life	0.322	0.139	0.597	-0.196
To find peace and quiet	0.037	0.495	0.514	0.120
To get away from everyday life	0.386	0.138	0.467	0.269
To have a time for natural study	0.157	0.154	0.101	0.787
To have enjoyable time with family/friends	0.149	0.170	0.306	0.742
To be with others who enjoy the same things you do	0.466	0.335	-0.045	0.494
Eigenvalue	5.082	4.356	2.889	2.280
Variance Explained	21.174	18.150	12.039	9.499
Cumulative Variance	21.174	39.325	51.364	60.863
Cronbach's Alfa	0.884	0.889	0.808	0.744
Grand Mean Of Factor	5.542	3.685	4.469	5.306
Keiser Meyer Olkin statistic			0.883	

Source: Authors' data and calculations

Regarding behavioural intention, descriptive statistics were used to evaluate mean and standard deviation. Moreover, exploratory factor analysis, using principal component methods with varimax rotation, was used to summarize the five behavioural items in order to run the regression analysis. Table 5 and 6 provide statistics information, including the mean, standard deviation for the dependent variable behavioural intention as well as the results of the factor analysis.

Tab. 5: Mean scores, standard deviations and factor loading of the five intended behaviour variables

Behavioural variable	Source	Mean	Standard deviation
I would spread positive word-mouth about this park	Maxham 2001	5.74	1.21
I will recommend this park to friends/relatives	Maxham 2001	4.84	1.78
I intend to revisit the park	Huang & Hsu 2009	5.62	1.28
I desire to revisit the park	Huang & Hsu 2009	5.52	1.31
If my friends were looking for a park to visit, I would tell them to try this park	Maxham 2001	5.43	1.43

Note: Means were derived from a 7-point Likert scale ranging from 1-strongly disagree to 7-strongly agree.

Source: Authors' data and calculations

Tab. 6: Results of factor analysis

Behavioural variable	Factor Loading
I would spread positive word-mouth about this park	0.876
I will recommend this park to friends/relatives	0.576
I intend to revisit the park	0.938
I desire to revisit the park	0.954
If my friends were looking for a park to visit, I would tell them to try this park	0.915

	Eigenvalues	Per cent of variance	Alpha coefficient	Grand mean of Factor	Keiser Meyer Olkin statistic
Behavioural variable	3.726	74.516	0.889	5.43	0.831

Source: Authors' data and calculations

To identify which of the four tourists' motivation factors (predictive variables) is more related to respondents' behavioural intentions (dependent variable) we used a stepwise multiple linear regression. The stepwise regression starts with no candidate predictive variables in the model, testing the addition of each variable using the R-squared test, adding the variable that improves the model the most. After each step in which a variable is added, all candidate variables in the model are checked to see if their significance has been reduced below the tolerance level. If a no significant variable is found, it is removed from the model. Table 7 contains the results of the regression. As can be seen in the table only the motivation factor named "nature" contributed to the dependent variable, suggesting that this is the only factor ($\beta = 0.596$; $p < 0.001$)[2] to face adventure tourists' behavioural intention.

[2] Technically, p values cannot equal 0. Some statistical programs do give you p values of .000 in their output, but this is likely due to automatic rounding off or truncation to a preset number of digits after the decimal point. So, consider replacing "p = .000" with "p < .001," since the latter is considered more acceptable and does not substantially alter the importance of the p value reported. And p always lies between 0 and 1; it can never be negative.

Tab. 7: Regression analysis results [a]

	Non Standardized Coefficient B	Standardized Coefficient β	*t*-value	Sig.
Constant	6.241	-	4.749	0.000***
Nature	0.491	0.596	13.158	0.000***
Values	Durbin-Watson	R^2	Adjusted R^2	
	1.984	0.355	0.353	

[a] dependent variable behavioural intention.
* p significant at 0.05 level; ** p significant at 0.01 level; *** p significant at <0.001 level.

Source: Authors' data and calculations

In a nutshell, it can be said that the "nature" motivation factor only had a significant relationship with behavioural intention. This seems to be partially in contrast with previous studies showing that, adventure tourists use outdoor natural environments as a setting for excitement-based recreation rather than appreciation of nature (e.g. Buckley, 2010). However, it must be pointed out that only few studies on adventure tourism have linked behaviour with nature and landscape elements, despite the most significant aspect of the tourism experience remaining the visual one (Giddy and Webb, 2015). In such perspective, adventure activities would not be considered as tourism without the unique location as its background (Urry and Larsen, 2011).

These findings call for a more in depth examination of risk perception, considered in literature as the key motivational factor for commercial participation in adventure tourism and specifically, its relationship with behavioural intention.

In table 8 descriptive statistics are provided simply as a way to characterize tourists' risk perception related to their participation in the different "hard" adventure tourism activities that we have considered in the present study. The table shows a low discrepancy between the perception of risk and the objective risk that is related to each activity. Specifically, it appears that hang gliding was differentiated as the most risky activity followed by mountain climbing and canyoning. No big differences were observed for the other types of activities, although, on relative basis orienteering was ranked as the least risky activity and trekking as the second lowest one.

Tab. 8: Perceived level of risk for tourism activities

Perceived level of Risk for tourism activities	Mean	Standard Deviation
Trekking	1.85	1.37
Wilderness hiking	1.88	1.27
Mountain climbing	4.17	1.52
Mountain biking	2.89	1.40
Rafting	2.10	1.22
Canyoning	3.51	1.58
Hang Gliding	5.06	1.85
Downhill bike	2.16	1.28
Orienteering	1,30	1,01

Source: Authors' data and calculations

Regarding risk perception, the percentage of responses to the given seven-point Likert scale was grouped as "Low Risk" when the classification was 1 or 2 (N = 112), "Medium Risk", when the classification was 3 or 4 (N = 119) and "High Risk", for classifications from 5 to 7 (N = 85).

The results of ANOVA tests reveal that all five items contributed to differentiating the three risk perception clusters. In addition, the Scheffe post hoc tests were employed to examine any differences between clusters with respect to each of the factors. The results of the Scheffe tests show that statistically significant differences were found between clusters, thus supporting the fact that distinct clusters had indeed been identified (i.e. low risk perception, medium risk perception, high risk perception).The results are presented in table 9. The results show that a low risk perception seems to be associated to stronger tourists' positive word of mouth and a stronger intention to revisit the park.

Since we are investigating hard adventure tourists who are involved in hard activities that require a high level of skill, personal competence and control in a given situation (i.e. high level of self-efficacy), we have to consider that their perceived self-efficacy influences the perceptions of circumstantial risk (Yates and Stone 1992; Bandura and Wood 1989). These subjects believe that they are very competent, they perceived more opportunities and fewer risks. Thus, these hard adventure tourists' high levels of perceived self-efficacy can decrease the perceptions of circumstantial risk.

Tab. 9: ANOVA and post-hoc test

Behavioural Intention Items	Low Risk	Medium Risk	High Risk	F-ratio	Sig. Level
I would spread positive word-mouth about this park	5,99***	5,45***	5,88	7,89	0,000***
I will recommend this park to friends/ relatives	5,10*	4,59*	4,64	3,16	0,044*
I intend to revisit the park	5,84**	5,37**	5,64	4,94	0,008**
I desire to revisit the park	5,76**	5,28**	5,44	5,13	0,006**
If my friends were looking for a park to visit, I would tell them to try this park	5,73**	5,16**	5,08	6,68	0,001***

* p significant at 0.05 level; ** p significant at 0.01 level; *** p significant at <0.001 level.

Source: Authors' data and calculations

5. Conclusions

This study on consumer behaviour examined a sample of Italian nature based tourists (i.e. hard adventure tourists) visiting a natural park. In Italy there is an admirable research on ecotourism (Anselmi, 2010; Galli and Notarianni, 2002; Montanari, 2009; Pencarelli and Splendiani, 2010), but there is still a lack of investigation on adventure tourism. The present contribution focuses on the analysis of three main aspects of adventure

tourism (i.e. motivations, perceived risk and behavioural intentions) to understand more about this phenomenon in Italy.

Effective marketing strategies for the promotion of adventure tourism settings (i.e. natural parks) are generally based on the analysis of tourists' motivations as driving forces in travel behaviours (Bradley *et al.*, 1997; Cini *et al.*, 2013; Raj, 2004; Um, Crompton, 1990). In line with this view, important findings from this study are discussed. First, the analysis of motivation factors in relation to participation of hard tourism adventure activities provides evidence that "activity related motivations" is a multi-dimensional phenomenon comprising four distinct motivational factors (i.e. Nature; Risk Perception; Contemplation and Socialization). Second, the findings do not completely support the proposition that adventure tourists use outdoor natural environments as a setting for excitement-based recreation rather than their appreciation of nature (like the recreationists). More specifically, the stepwise multiple linear regression results show only one positive significant relationship between motivational factor and tourists' behavioural intention, i.e. the "nature". Our results suggest there is a demand for high adventure activities focusing on "nature" themes. This finding appears in line with the "responsible" approach of nature-based tourism (of which adventure tourism can be considered a particular kind): in nature-based tourism, tourist motivations are increasingly concentrating around sensitivity for nature, and for local culture and landscape (Del Chiappa, Grappi, Romani, 2009). We showed that the natural environment is the key motivational factor in order to revisit the park and to spread a positive word of mouth. Hence, it is necessary to promote adventure tourism focused on the natural environment.

Finally, ANOVA analysis showed that the different levels of adventure tourists' risk perception differ in their response to the behavioural variables. More specifically, a low risk perception seems to be associated to stronger tourists' positive word of mouth and intention to revisit the park. Also, we found that tourists who express a low risk perception are associated to a stronger behavioural intention. Perception of risk is an important component in the tourists' behavior, but in hard adventure tourism activities, which involve high-risk and skills, our study pointed out that there is a statistically significant relationship between the level of risk perception (in particular low risk) and behavioral intention.

In addition, these findings offer several managerial implications for both private and public adventure tourism providers. An organization needs to evaluate the individual ability of adventure tourists in order to ensuring low risk perceptions instead of still retaining "the intense emotional component that comes from adventure" (Holyfield, 1999, p. 3). They need to specialize on one market of adventure tourism, such as beginners and advanced, and tailor their service in a tight integration of naturalistic fruition and adventure activities. In the Italian context these activities are mostly left to the free initiative of single individuals.

The development of synergies between the public and private sector can be powerful drivers for increasing adventure tourism potential. Many case studies concerning Italian tourist systems (e.g., Barile *et al.*, 2007; Della Lucia *et al.*, 2007; Silvestrelli and Bellagamba, 2007; Sciarelli *et al.*, 2007;

Della Corte *et al.*, 2007; Cerquetti, *et al.*, 2007, Rossi, *et al.*, 2007, Bonel *et al.*, 2005, Baccarani, *et al.*, 2007) have emphasized how systems (except for the Dolomiti case, and, to some extent, also Lake Garda) generally present competitive structural weaknesses, mainly related to the relationships between the private and public sector, and interfirm cooperation (Della Corte *et al.*, 2007). Moreover, risk-based adventure tourism provides bright potentials especially if it is centered on the correct use of natural resources.

It is worth to note that, all the activities that can be performed within a park must respect all its local characteristics (i.e. natural, anthropological, landscaping, historical, and cultural characteristics) in order to preserve the desired territorial identity (Menguzzato, 2013; Barile and Golinelli, 2008).

As with any study, this study has various limitations, which provide future research opportunities for others to explore the adventure tourists' behaviour. The study is limited to a specific Italian destination (i.e. a natural park) furthermore the analysis and the measure should be replicated in different contexts in order to test their adaptability to different adventure tourism destinations. Another important limitation is the cross-sectional nature of the data. Future research should explore these relationships over time.

References

ACQUAH E., DEARDEN P., ROLLINS R. (2016), "Nature-based tourism in Mole National Park, Ghana", A*frican Geographical Review*, vol. 35, n. 1, pp. 1-17.

ADVENTURE TRAVEL TRADE ASSOCIATION (2013), Adventure tourism market study.

ANSELMI F.A. (2010), "Ecoturismo: caratteristiche e potenzialità di sviluppo in Italia", *Rivista italiana di economia demografia e statistica*, vol. 64 n. 1-2, pp. 15-22.

BACCARANI C., BRUNETTI F., COBELLI N., ROSSATO C., SIMEONI F., UGOLINI M., VIGOLO V. (2007), "Verona sistema turistico locale? Un itinerario nel turismo del capoluogo scaligero tra realtà consolidate e potenzialità inespresse", in Sciarelli S., *Il management dei sistemi turistici locali. Strategie e strumenti per la governance*, Giappichelli, Torino, pp. 411-435.

BANDURA A., WOOD R. (1989), "Effect of perceived controllability and performance standards on the self- regulation of complex decision making", J*ournal of Personality and Social Psychology*, vol. 56, pp. 805-814.

BARILE S., GOLINELLI G. (2008), "Modalità e limiti dell'azione di governo del territorio in ottica sistemica", in Barile S., *L'impresa come sistema. Contributi sull'Approccio Sistemico Vitale (ASV)*, Giappichelli, Torino, pp. 243-268.

BARILE S., GOLINELLI M.C., NIGRO C., LIGUORI M., TRUNFIO M. (2007), "I sistemi turistici locali e l'organizzazione turistica regionale: il quadro normativo di riferimento", in Sciarelli S., *Il management dei sistemi turistici locali: strategie e strumenti per la governance*, Giappichelli, Torino, pp. 85-111.

BECK U. (1992), *Risk society: Towards a new modernity*, Sage, London.

BEERLI A., MARTÍN J.D. (2004), "Tourists' characteristics and the perceived image of tourist destinations: a quantitative analysis - A case study of Lanzarote, Spain", *Tourism Management*, vol. 25, n. 5, pp. 623-636.

BEH A., BRUYERE B. (2007), "Segmentation by visitor motivation in three Kenyan national reserves", *Tourism Managemen*t, vol. 28, n. 6, pp. 1464-1471.

BERNS G.N., SIMPSON S. (2009), "Outdoor recreation participation and environmental concern: A research summary", *Journal of Experiential Education*, vol. 32, n. 1, pp. 79-91.

BONEL E., MORETTI A., RISPOLI M., TAMMA M. (2005), "I prodotti culturali in una prospettiva economico-manageriale", *Economia Della Cultura*, vol. 15, n. 4, pp. 497-511

BOWERMAN B.L., O'CONNELL R.T., ORRIS J.B. (2004), *Essentials of business statistics*, McGraw-Hill/Irwin, pp. 848.

BRADLEY J.C., WALICZEK T.M., ZAJICEK M. (1997), "Relationship between demographic variables and environmental attitudes of high school students", *Journal of Natural Resources Life Science Education*, vol. 26, n. 2, pp. 102-104.

BUCKLEY R. (2010), "Communications in adventure tour products: Health and safety in rafting and kayaking", *Annals of Tourism Research*, vol. 37, n. 2, pp. 315-332.

BUCKLEY R. (2012), "Rush as a key motivation in skilled adventure tourism: Resolving the risk recreation paradox", *Tourism Management*, vol. 33, n. 4, pp. 961-970.

CAMPBELL M.C., GOODSTEIN R.C. (2001), "The moderating effect of perceived risk on consumers' evaluations of product incongruity: preference for the norm", *Journal of Consumer Research*, vol. 28, n. 3, pp.439-449.

CERQUETTI M., FORLANI F., MONTELLA M., PENCARELLI T. (2007), "I Sistemi Turistici Locali nelle province di Pesaro e Urbino e Macerata", in Sciarelli S. (a cura di), (2007), *Il management dei sistemi turistici locali: strategie e strumenti per la governance*, Giappichelli, Torino, pp. 315-351.

CHI C.G.Q., QU H. (2008), "Examining the structural relationships of destination image, tourist satisfaction and destination loyalty: An integrated approach", *Tourism Management,* vol. 29, n. 4, pp. 624-636.

CHO J., LEE J. (2006), "An integrated model of risk and risk-reducing strategies", *Journal of Business Research*, vol. 59, n. 1, pp.112-120.

CINI F., KRUGER S., ELLIS S. (2013), "A model of intrinsic and extrinsic motivations on subjective well-being: The experience of overnight visitors to a national park", *Applied Research in Quality of Life*, vol. 8, n. 1, pp. 45-61.

CSIKSZENTMIHALYI M. (1990), *Flow: The psychology of Optimal Experience*, Harper & Row Publishers, New York.

DEL BOSQUE I.R., MARTÍN H.S. (2008), "Tourist satisfaction a cognitive-affective model", *Annals of Tourism Research*, vol. 35, n. 2, pp. 551-573.

DEL CHIAPPA, G., GRAPPI, S., ROMANI, S. (2009), "The responsible tourist's behavior: an empirical analysis in Italy", *Paper presented at the 8° International Congress Marketing Trends*, Paris, France.

DELLA CORTE V., MICERA R., SAVASTANO I. (2007), "Il caso della Penisola Sorrentina", in Sciarelli S. (2007), *Il management dei sistemi turistici locali. Strategie e strumenti per la governance*, Giappichelli, Torino, pp. 281-313.

DELLA LUCIA M., FRANCH M., MARTINI U. (2007), "L'identificazione dei Sistemi Turistici Locali mediante il modello del distretto industriale. Il caso delle Dolomiti e del Lago di Garda", in Sciarelli S. (2007), *Il management dei sistemi turistici locali: strategie e strumenti per la governance*, Giappichelli, Torino, pp. 193-219.

DIPBOYE R.L. (1990), "Laboratory vs. field research in industrial and organizational psychology", in Cooper C.L., Robertson I.T. (Eds), *International Review of Industrial and Organizational Psychology*, John Wiley, Chichester, vol. 5 n. 1, pp. 1-34.

EWART A.W. (1989), *Outdoor adventure pursuits: Foundations, models and theories,* Publishing Horizons, Worthington, Ohio.

EWERT A., VERNON F. (2013), "Outdoor and adventure recreation", in Human Kinetics (Ed.), *Introduction to recreation and leisure (2nd ed.)*, Champaign, IL: Human Kinetics, pp. 321-340.

FENNELL D.A. (1999), *Ecotourism: An introduction*, Routledge, London.

FODNESS D. (1994), "Measuring Tourist Motivation", *Annals of Tourism Research*, vol. 21, n. 3, pp. 555-581.

GALLI P., NOTARIANNI M. (2002), *La sfida dell'ecoturismo*, Istituto geografico De Agostini, Novara, pp. 206.

GIDDY J.K., WEBB N.L. (2015), "The influence of the environment on motivations to participate in adventure tourism: The case of the Tsitsikamma", *South African Geographical Journal*, vol. 98, n. 2, pp. 1-16.

GNOTH J. (1997), "Tourism Motivation and Expectation Formation", *Annals of Tourism Research*, vol. 24, n. 2, pp. 283-304.

HALL C. (1992), "Adventure, sport and health tourism", in Weiler B., Hall C. M. (Eds.), *Special interest tourism,* pp. 141-158, Belhaven, London.

HOLYFIELD L. (1999), "Manufacturing adventure: the buying and selling of emotions", *Journal of Contemporary Ethnography*, vol. 28, n. 1, pp. 3-32.

HUANG S., HSU C. (2009), "Effects of Travel Motivation, Past Experience, Perceived Constraint, and Attitude on Revisit Intention", *Journal of Travel Research*, vol. 48, n. 1, pp. 29-44.

KANE M.J., TUCKER H. (2004), *Adventure tourism, the freedom to play with reality, Tourist Studies*, Sage Publications, Thousand Oaks.

KERSTETTER D.L., HOU J.S., LIN C.H. (2004), "Profiling Taiwanese ecotourists using a behavioral approach", *Tourism management*, vol. 25, n. 4, pp. 491-498.

KIM S.S., LEE C.K., KLENOSKY D.B. (2003), "The influence of push and pull factors at Korean national parks", *Tourism Management*, vol. 24, n. 2, pp. 169-180.

LAWTON L., WEAVER D. (2001), "Nature-based tourism and ecotourism", in Faulkner B., Moscardo G., Laws E. (Eds.): *Tourism in the 21st Century; Lessons from Experience*, London and New York, Continuum, pp. 34-48.

LAWTON L., WEAVER D., FAULKNER B., MOSCARDO G., LAWS E. (2001) "Nature-based tourism and ecotourism", *Tourism in the twenty-first century: reflections on experience*, pp. 34-48.

LI M., CAI L., LEHTO X., HUANG Z. (2010), "A missing link in understanding revisit intention: The role of motivation and image", *Journal of Travel and Tourism Marketing*, vol. 27, pp. 335-348.

LIN L.Y., CHEN Y.W. (2009) "A study on the influence of purchase intentions on repurchase decisions: the moderating effects of reference groups and perceived risks", *Tourism Review*, vol. 64, n. 3, pp. 28-48.

LYNCH J.G. Jr (1982), "On the external validity of experiments in consumer research", *Journal of Consumer Research*, vol. 9, pp. 225-239.

MANFREDO M.J., DRIVER B.L., TARRANT M.A. (1996), "Measuring leisure motivation: A meta-analysis of the recreation experience preference scales", *Journal of Leisure Research*, vol. 28, n. 3, pp. 188-213.

MANFREDO M.J., DRIVER B.L., BROWN P.J. (1983), "A test of concepts inherent in experience based setting management for outdoor recreation areas", *Journal of Leisure Research*, vol. 15 n. 3, pp. 263-283.

MANNING R. (2011), *Studies in Outdoor Recreation: Search and Research for Satisfaction (3rd Edition)*, Corvallis, Oregon State University Press.

MASON M.C., MORETTI A. (2015), "Antecedents and moderators of golf tourists' behavioral intentions: An empirical study in a Mediterranean destination", *EuroMed Journal of Business*, vol. 10, n. 3, pp. 338-359.

MAXHAM J. (2001), "Service recovery's influence on consumer satisfaction, positive word-of-mouth, and purchase intentions", *Journal of Business Research*, vol. 54, pp. 11-24.

MENGUZZATO G. (2013) "La gestione dei sistemi forestali nel Parco Nazionale della Sila", *Sinergie rapporti di ricerca*, n. 37, pp. 111-119.

MONTANARI A. (2009), *Ecoturismo; Principi, metodi e pratiche*, Bruno Mondadori, Milano, Collana: CAMPUS2, pp. 189.

MORRISON M.A., SUNG H.H. (2000), "Adventure tourism", in Jafari J. (eds.), *Encyclopedia of Tourism*, Routledge, New York, p. 11.

MULLER T.E., CLEAVER M. (2000), "Targeting the CANZUS baby boomer explorer and adventurer segments", *Journal of Vacation Marketing*, vol. 6, n. 2, pp. 154-169.

NEEDHAM M.D., ROLLINS R. (2009), "Social science, conservation, and protected areas theory Parks and protected areas in Canada", *Planning and management*, vol. 3, pp. 135-168.

PENCARELLI T., SPLENDIANI S. (2010), "Il governo delle destinazioni turistiche in una prospettiva di sostenibilità. Profili concettuali ed evidenze empiriche", in *Atti del 9th International Conference Marketing Trends*, Venezia, 21-13 January.

PIZAM A., NEUMANN Y., REICHEL A. (1979), "Tourist satisfaction", *Annals of Tourism Research*, vol. 6, pp. 195-197.

POMFRET G. (2006), "Mountaineering adventure tourists: a conceptual framework for research", *Tourism management*, vol. 27, n. 1, pp. 113-123.

PRAYAG G., JANKEE M. (2013), "Perceived risk, satisfaction and future behaviour of windsurfers: a segmentation perspective", *International Journal of Tourism Policy*, vol. 5, n. 1-2, pp. 19-33.

PREBENSEN N.K., WOO E., CHEN J.S., UYSAL M. (2013), "Motivation and involvement as antecedents of the perceived value of the destination experience", *Journal of Travel Research*, vol. 52, n. 2, pp. 253-264.

RAJ A. (2004), "Tourist behaviour: An introduction", in Raj A. (Ed.), *Tourist behaviour: A psychological perspective*, 3-23, New Delhi, Kaniska.

RID W., EZEUDUJI I.O., PRÖBSTL-HAIDER U. (2014), "Segmentation by motivation for rural tourism activities in The Gambia", *Tourism Management*, vol. 40, pp. 102-116.

ROBBINS S.P. (2003), *Organizational Behavior (10th ed International edition.)*, Upper Saddle River, Pearson Education, Prentice Hall, New Jersey.

ROSS E.I.D., ISO-AHOLA S.E. (1991), "Sightseeing tourists' motivation and satisfaction", *Annals of Tourism Research*, vol. 18, n. 2, pp. 226-237.

ROSSI M., MATARAZZO M., MIGLIACCIO M. (2007), "Dal progetto al prodotto: prospettive di sviluppo del turismo nel Sannio", in Sciarelli S. (a cura di), (2007), *Il management dei sistemi turistici locali. Strategie e strumenti per la governanc*e, Giappichelli, Torino, pp. 353-375.

RYU K., HAN H., KIM T. (2008), "The relationships among overall quick-casual restaurant image, perceived value, customer satisfaction, and behavioral intentions", *International Journal of Hospitality Management*, vol. 27, n. 3, pp. 459-469.

SAAYMAN M., DIESKE T. (2015), "Segmentation by motivation of tourists to the Kgalagadi Transfrontier Park", *South African Journal of Business Management*, vol. 46, n. 1, pp. 77-87.

SCHNEIDER P., VOGT C. (2012), "Applying the 3M Model of Personality and Motivation to Adventure Travelers", *Journal of Travel Research*, vol. 51, n. 6, pp. 704-716.

SCHOFIELD P., THOMPSON K. (2007), "Visitor motivation, satisfaction and behavioural intention: the 2005 Naadam Festival, Ulaanbaatar", *International Journal of Tourism Research*, vol. 9, n. 5, pp. 329-344.

SCIARELLI M., SAVASTANO I., PIRAS A. (2007), "Il caso della città di Napoli", in Sciarelli S., *Il management dei sistemi turistici locali, Strategie e strumenti per la governance*, Giappichelli, Torino, pp. 249-280.

SILVESTRELLI S., BELLAGAMBA A (2007), "Nascita e prospettive del sistema turistico locale "Misa-Esino-Frasassi", in Sciarelli S., *Il management dei sistemi turistici locali: strategie e strumenti per la governance*, Giappichelli, Torino, pp. 221-247.

SWARTHBROOKE J., BEARD C., LECKIE S., POMFRET G. (2003), *Adventure tourism: the new frontier*, Jordan 613 Hill, Oxford, Butterworth-Heinemann.

TANGELAND T., VENNESLAND B., NYBAKK E. (2013), "Second-home owners' intention to purchase nature-based tourism activity products-A Norwegian case study", *Tourism Management*, vol. 36, pp. 364-376.

UM S., CROMPTON J. (1990), "Attitude determinants in tourism destination choice", *Annals of Tourism Research*, vol. 17, n. 3, pp. 432-448.

URRY J., LARSEN J. (2011), *The tourist gaze 3.0*, Sage, London, pp.296.

YATES J., STONE E. (1992), "Risk appraisal", in Yates J. (Ed.), *Risk taking behavior*, Wiley, New York, pp. 49-85.

WARSHAW P., DAVIS F. (1985), "Disentangling behavioral intention and behavioral expectation", *Journal of Experimental Social Psychology*, vol. 21, pp. 213-228.

References from /within the Sinergie Journal

CASARIN F. (2011), "La soddisfazione del turista tra ricerche quantitative e qualitative", *Sinergie*, n. 66, pp. 113-135.

FRANCH M., MARTINI U., INVERARDI P.L.N., BUFFA F. (2011), "Comportamenti e scelte del turista fai-da-te nelle Dolomiti", *Sinergie*, n. 66, pp. 153-180.

GOLINELLI C.M., SIMONI M. (2011), "La relazione tra le scelte di consumo del turista e la creazione di valore per il territorio", *Sinergie*, n. 66, pp. 237-257.

SCIARELLI S., DELLA CORTE V. (2011), "Il comportamento del turista in condizioni di forte incertezza decisionale", *Sinergie*, n. 66, pp. 137-152.

Sitography

http://www.borsaturismosportivo.com

Academic or professional position and contacts

Michela C. Mason
Associate Professor of Management
University of Udine - Italy
e-mail: mason@uniud.it

Luca Gos
Phd Student in Agro-Environmental Sciences
University of Udine - Italy
e-mail: luca.gos@uniud.it

Andrea Moretti
Full Professor of Management
University of Udine - Italy
e-mail: andrea.moretti@uniud.it

sinergie
italian journal of management

ISSN 0393-5108
DOI 10.7433/s100.2016.11
pp. 181-199

CUEIM