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Understanding Nature Sports Organizations in Portugal

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Abstract: Although Nature Sports are considered a growing phenomenon around the world, there is a lack of research and data about the organizations that are developing these activities. The purpose of this paper is to characterize the Nature Sports Organizations operating in mainland Portugal. Data was obtained through an online survey questionnaire applied to organizations which promoted Nature Sports in Portugal, both from private and public sectors, and 166 answers were obtained. Three main types of organizations were found based on their legal form and organizational vocation: sport tourism companies, sport clubs, and associations (environmentalists, cultural, sportive, recreational and others) which were further characterized by their organization profile, supply and demand. The results show significant statistical differences between the different types of organizations regarding their age, number of collaborators, and type of activities offered, as also the number and provenience of the practitioners. The data also enclose implications for the Nature Sports policies and Nature Sports Organizations management that will be discussed.

Keywords: Demand, Nature sports, Nature sports organizations, Organization profile, Sport tourism, Sports management, Supply.

1. INTRODUCTION

1.1. Nature Sports and Sport Tourism Connections

Nature Sports are a growing phenomenon in the sport tourism segment. From the new tourism segments the travel related with physical activity and sports is one of the most relevant [1]. Sport tourism is a term that has been adopted in the recent years to describe the leisure travel related with sports [2]. It is a new way of tourism that connects sport with tourism [3]. This in deep relation could be called of *symbiotic relation* [4], representing an expansive and significant area of mutual interest between sports management and tourism development [5]. The importance of this segment is evidenced by the growing attention provided by the tourism and sports industry, and by the development of a range of academic works [6].

Sport tourism is referred as a "(...) leisure-based travel that takes individuals temporarily outside of their home communities to participate in physical activities, to watch physical activities, or to venerate attractions associated with physical activities" [2]. From the three major components of sport tourism it is highlighted the active sport tourism [1], that could be divided in three types of travel [7]: a) the pure sport holiday, such as a trip to go skiing; b) taking advantage of the sport facilities at a holiday destination, although sport is not the primary purpose of the trip; and c) the private sporting holiday, where tourists take part in non-organized sports activities such as snorkelling, kayaking, MTB, and so on. More recently the travel to participate in sport competitions - sport tourism events participation (e.g. games, tournaments, championships), and the travel to prepare for sports competition (e.g. sports preparation internships) were also incorporated in this concept.

Regardless of the type of motivation of the tourists, the touristic experiences include, almost all the time, leisure

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practices available on the touristic destinations that, in general, are called touristic animation [8]. Touristic animation is, beyond other experiences (environmental, cultural, recreational, *etc.*), an experience promoted through the production and presentation of sports [9], including Nature Sports [10]. It is in this perspective that sports is identified as one of the main interests of the touristic experience, highlighting outdoor adventure tourism [11]. This domain represents an intrinsic area related with sport tourism that is founded in the recreational activities that occurs in natural places, most of them classified as sports, such as kayaking, skiing, surfing [5] and mountaineering [12]. Following this idea, several authors [11, 13] state that natural places and sport activities in the nature are clearly a major component of tourism.

Nature Sports are thus a set of sport activities developed in direct contact with nature [14], allowing sustainable development and its conservation [15]. They are performed in different natural places including air (paragliding and hang-gliding, *etc.*), land (MTB, rock-climbing, trekking, *etc.*) and water (kayaking, sailing, surfing, windsurfing, *etc.*). This definition excludes a certain number of practices such garden visits, motorized sports, fishing and golf [16]. These activities impose motor skills that need information decoding, emotional control, and acceptance of a relative risk that is connected with an higher or less environmental uncertainty, whereby the practitioners search for multiple sensations - playfulness, extreme, well-being, discovery, sociability, *etc.* [14].

Nature Sports are being incorporated in the sport tourism sector and this relation between sport and tourism is evident by the economic impacts generated in the touristic destination, visible in all scopes of nature sports practices (associative, business and free or autonomous), because a significant part of them are developed in places away from the area of residence (far from the urban centres), especially in natural places and rural zones, requiring a travel and a tourism consumption (accommodation, food, purchase of services and equipment, *etc.*) [17].

Nature Sports are becoming a potential factor for tourism development, and in this sense they are activities that are integrated in Nature Tourism and Nautical Tourism, two of the ten strategic products of tourism in Portugal [18]. It must be highlighted that Nature Tourism, that includes soft (*e.g.* trekking) and hard Nature Sports (*e.g.* rafting, kayaking, and hiking), induces a market of 22 million of travels by year, with an average annual growth of 7.0% (1997-2004), representing 9% of the total travel made by European population [19]. On the other hand, Nautical Tourism, that includes Nature Sports activities such as surfing, windsurfing, sailing and other nautical sports, represents almost 3 million of travels, representing about 1.2% of the total travels developed by Europeans, with a market growing 8.0 to 10% per year [20]. Globally it is estimated that the Nature Tourism market (including outdoor recreation and Nature Sports) is the tourism sector that presents a higher growth rate for the next decades [21]. It should be mentioned that tourism in Portugal represented 4% of GDP in 2014, generating an income of 10394 million Euros, and a positive touristic balance of 7000 million Euros [22].

These evidences lead to considerer that Nature Sports have had a strong growth, and have been consolidating since the 1970s as one of the most solid groups and with more future in the scope of the new sports [23] and touristic culture. This growth is associated to the gradual appreciation of leisure time outdoors [24], to a greater need for nature contact, to a search for sensations and emotions in a routine and controlled society, and to a demand for new states of consciousness in a secular and desecrated society [25].

1.2. Evolution of the Legal Framework for Nature Sports in Portugal

The Portuguese government, recognizing the importance of the touristic activities that are developed in natural places, following the Resolution of the Council of Ministers in 1996 [26], created the Portuguese Nature Tourism Programme – PNTP [27]. PNTP is part of a set of international political guidelines directed to the sustainable development of natural areas. In the particular case of tourism, it aims to promote the recovery and conservation of the natural and cultural patrimony supported in four vectors: i) nature conservation; ii) local development; iii) qualification of the touristic offer, and; iv) diversification of the touristic activity. One year later the Nature Tourism Juridical Regime [28] was published, establishing the legal framework for Nature Tourism initiatives, exclusively in the Portuguese Protected Areas Network (PPAN), aiming to promote and affirm the values and potentialities of these areas.

Recognizing the importance of sports activities developed in nature places and their potentialities for the Nature Tourism development, the government created the Nature Sports Programme in Protected Areas [29]. The programme aims to ensure the regulation of the environmental animation in the modalities of animation, environmental interpretation and nature sports in the protected areas. This law also refers the obligation to elaborate a Nature Sports Charter in each protected area, which is an attempt of structuring and at the same time conditioning the places of practice, regarding spatial and temporal dimensions, to take into account the environmental problems and impacts.

The articulation between sports and other related sectors, particularly with environment and tourism, was also defined by the Portuguese Sports Law [30] and more recently by the Physical Activity and Sports Law [31], addressing the Nature Sports sector. With the growth of the touristic animation (including Nature Sports) segment, the government established for the first time the legal framework for these activities in 2000 [32]. Almost a decade after, noting that the law was outdated, a new juridical regime was created, that defines the access and exercise conditions for the touristic animation companies and maritime-touristic operators [10]. This law gathers the rules for accessing the activity regardless the modality of touristic animation performed, and creates the Portuguese Registry of Touristic Animation Agents (PRTAA) that contains an updated list of the agents operating in the market. This law also predicts that the activities included in the touristic animation segment can be undertaken by other associative organizations, as long as they provide the development of these activities in its social object, have non-profit purpose, and develop these activities for their members.

Nature Sports are indeed a complex case in the sports activities supply. These activities are, therefore, involved in the sports sector and simultaneously, when developed in protect areas, involved in the environmental sector, as well as in the tourism sector when accompanied by the travel and tourism consumption, especially in leisure time. In Portugal, according with Cunha [33], there is a complex and conflicting network and most of the times non-complementary with a triple perspective: environmental, sports and touristic. Thus, in accordance to the Portuguese law, NSO comprise clubs and sports societies, and also other legal entities, including commercial companies, and even individual people (e.g. sport tourism companies).

1.3. Research Overview About Nature Sports Organizations

The leisure and recreation industry is indeed important for many countries within the industrialized world [34, 35]. Interestingly, 54 out of the 500 companies that are in the world top are organizations related to the leisure industry [34]. The outdoor recreation industry is a broader industry component of leisure, but it plays a significant role in the economies of developed countries [35]. It has been demonstrated that most companies operating in the sector of sport tourism and Nature Sports are small or micro-companies [35 - 38]. On this regard, it has been reported that these small businesses play very important economic and social roles [35]. These companies have become a major focus of the multi-million dollar tourism industry, as they have provided an important source of foreign income and at the same time have allowed a legitimate embodiment of the aspirations of many individuals, through the generation of self-employment. These companies are also an important source of change and innovation, by creating new forms of revenue and new tax revenues.

Literature related with research on sports organizations is still scarce [34] and this is even more significant when related with organizations that promote Nature Sports. However, some studies about NSO were developed in several European countries, during the last decade [36 - 44], mostly centered in the analysis on the market of the sport tourism companies that promote Nature Sports.

Studies in Spain [36, 44] analyzed Nature Sports supply of the companies operating in Cataluña, including also the characterization of the demand and the social diffusion of these activities. These studies reported that the companies are almost all micro and small companies, with an offer composed mainly by rafting, MTB, horse riding, trekking, canyoning, and free-flight. The demand is mainly composed by young males between 25-34 years, from the region of Cataluña.

The study developed by Bouhaouala [37] about the sport tourism companies stands out in France. This research conducted in the area of Vercors was developed under the scope of the micro-mentalities, allowed a segmentation of managers and small and micro-companies, highlighting four typologies of entrepreneurships: i) independent enthusiast; ii) independent entrepreneur; iii) administrative manager; iv) patrimonial conservative. Each of these segments differs in management strategy, organizational choice and strategic orientation. Also in France, Paget, Mounet and Guilhon [42] developed a study to characterize the micro-companies of the sport and tourism services, identifying also the managers' strategies. Results show that companies from sport and tourism present identical profile to the other companies described in the management sciences.

In Portugal several studies were conducted about the touristic animation organizations [38, 40, 41, 43, 45]. Main results show that companies are almost all micro-companies, with a recent period of operation, mainly since 2000, directing their service generally to the national market, and with scarce qualification of the human resources. Activities of both public and private organizations are very similar despite the different scope of operation according to the law in

force.

1.4. Scope and Objectives

Although Nature Sports are considered a growing phenomenon around the world, there is a lack of research and data about the organizations that are developing these activities, and even more about organization from the non-commercial sector. The main purpose of this paper is to provide structured information about NSO in Portugal, especially about their supply and demand, addressing the following key-questions:

1. Which NSO are operating in Portugal? What is the general profile of each type of NSO?
2. How is the supply of NSO composed? Which are the differences in the supply between the different types of NSO?
3. Who demands Nature Sports in NSO? Are there any demand differences between the different types of NSO?
4. What are the main perspectives for the growth of the sector? Which activities are presenting a major growth perspective? Which activities have more potentiality to be developed in the different scopes?

2. METHODOLOGY

2.1. Selected Nature Sports

Based on the analysed studies [46, 47] and the Portuguese law [29] 47 distinct activities that could be included in the scope of Nature Sports were identified, and were considered to be part of this study. However, some were excluded, according to the following criteria: i) those which aren't practiced in direct contact with nature (*e.g.* bungee jumping); ii) those which are going against the values of the nature conservation, as the motorized sports (*e.g.* motocross); iii) those which are complementary to the core activities (*e.g.* camping), iv) those which are developed under the scope of others (*e.g.* observation of fauna and flora); v) those which are variants or specialties of core activities (*e.g.* cross country or downhill that are specialties of MTB); vi) those which do not have enough expression in the Portuguese territory (*e.g.* hidrospeed). Thus, 23 activities were identified to be part of this study: 1) equestrian activities; 2) bodyboarding; 3) MTB; 4) kayaking; 5) canyoning; 6) rock-climbing; 7) caving; 8) skiing; 9) kitesurfing; 10) scuba diving; 11) mountaineering; 12) orienteering; 13) trekking; 14) rafting; 15) rowing; 16) skimboarding; 17) snowboarding; 18) surfing; 19) archery and crossbow; 20) sailing; 21) free flight; 22) windsurfing; e 23) multi-activities (*e.g.* adventure running; adventure challenge, *etc.*).

2.2. Selected Nature Sports Organizations

NSO that performed Nature Sports activities in mainland Portugal during 2010 were the study object of this work. To select the organizations to be considered, the following criteria were used: 1) Companies registered in the PRATA, and analysed in the online version in <https://rnt.turismode-portugal.pt/ConsultaRegisto.aspx>; 2) Sports clubs and associations (environmental, cultural, sports, recreation, *etc.*) registered in one or more Sports Federations or Promoting Sports Associations, that are ruling the Nature Sports activities; 3) Practitioners clubs registered in the Portuguese Registry for Clubs and Sports Federations (PRCSF). According to that analysis, 1479 NSO were identified as promoters of Nature Sports in 2010, in mainland Portugal.

2.3. Questionnaire, Sampling, Data Collecting and Processing

This study used an online survey by questionnaire applied to managers from organizations based on the mainland territory of Portugal, between September and December of 2011, that was called NSO Questionnaire - 2011 (NSOQ2011). Built based on the works of Betrán and Betrán [36] and Viñuelas, Betrán and Plantalamor [44], the questionnaire was composed of five sections, including: the general profile of the organisation; the characterisation of their supply regarding Nature Sports; the characterization of their demand and; the socio demographic characteristics of the respondents. The final questionnaire was composed of a total of 56 questions, with some excluded by previous answers, and the answering time was estimated to be 20 minutes average. The questionnaire was validated by pre-testing application and expert examination [48].

The NSO sample used in this study was defined according to the following criteria: a) representativeness by type of NSO, considering the four types of organizations defined; b) representativeness by the 23 Nature Sports activities defined; c) representativeness by NSO headquarter, considering the 18 districts of mainland Portugal. A total of 166 valid surveys were considered, which correspond to a sample of 11% of the total number of NSO.

Legal form and organizational vocation was used to segment the NSO. The segments obtained were then named according to organizational vocation and characterized in terms of general profile, and supply and demand characteristics. Four main types of organizations were found: sport tourism companies; sport clubs; practitioners clubs and; associations (environmentalists, cultural, sportive, recreational and others).

Statistical analysis were performed using IBM SPSS (version 20) and statistical significance was set at $p < 0.01$, $p < 0.05$ and $p < 0.10$. Results were presented by descriptive statistics using means and standard deviations for continuous variables, and percentages for nominal and ordinal variables. Measures of association were based on the chi-square, estimating the degree of association between variables through the Contingency Coefficient and Cramer's V, as described in Marôco [49]. Adjusted residuals, in the standardized form, were used to identify cells in the contingency table with significantly different behaviours from expected behaviours between variables. To explain the relationship between the categories of the variables, the residuals of less than -1.96 or greater than 1.96 were used [50].

3. RESULTS AND DISCUSSION

3.1. General Profile of Nature Sports Organizations

Based on the results obtained by the NSOQ2011, 166 organizations were inquired and of that, 74 (44.6%) are companies, and 92 (55.4%) belong to the associative movement. From the companies, 59 (35.5%) are sport tourism companies, from which 28 (16.9%) have recognition of their activities as Nature Tourism, and 15 (9.0%) belong to other types of companies from sports, tourism and other sectors. On the other hand, from the associative movement, 28 (16.9%) are sports clubs, 4 (2.4%) are formed as practitioners clubs, and 60 (36.1%) are associations (environmentalist, cultural, sports, recreational and others). The companies are mostly constituted as limited companies (47.3%), and sole proprietors (24.3%). Sports clubs are all constituted as non-profit associations, as well as associations, except 2 which are cooperatives. Practitioners clubs, according to the legislation in force [51], are unincorporated associations.

The majority of the NSO surveyed are based in the coastal districts of the country, particularly in Lisbon (15.7%), Setubal (12.7%), Oporto (10.2%) and Faro (9.0%), representing almost half (45.4%) of the NSO surveyed. They have in general a regional (36.7%) or national (30.1%) preferential territorial space of operation, emphasizing however the sports clubs (60.7%) that have a higher tendency for the national territorial scope.

Considering the NSO foundation year, until the year 2011 (year of response), the average age of NSO is 14 years (± 15.4), in average initiated in the year 1997. However some differences between NSO were observed. Sports clubs are traditionally the most ancient organizations (the oldest one was founded in the year 1893). It is noted that half (50.0%) of these NSO were created until the year 1979, highlighting a higher tendency between all NSO for the foundation of sports clubs until that date. Associations began to arise mainly in the years 1980s, verifying a positive trend towards the creation of such organizations (60.0% of associations were created in these two decades) in that decade and in the following one. Companies are the most recent NSO. They began to emerge mainly in the year 2000, since when 71.4% of the analysed companies were created. It should also be noted that 41.6% of the companies were created from the year 2005, thereby recording a positive trend for their creation, and a negative trend for the establishment of sports clubs and associations, in that period. All practitioners clubs were created from the year 2000, because of the entrance in to force of the law that established this type of organizations only in the year 1997.

NSO have an average of 1.6 (± 4.2) full-time and 2.6 (± 6.1) part-time employees. Companies are the NSO that have the highest average of full-time (2.9 ± 5.4) and part-time (3.9 ± 7.2) employees. The majority of the companies have just one (33.8%) or two (20.3%) full-time employees, and just 5.6% have 10 or more. It was also noted that 18.9% of the companies don't have full-time employees. The data show thus that most of the companies are microenterprises, since 94.5% has less than 10 full time employees. It should also be evidenced that most (83.7%) of the NSO from the associative movement (clubs and associations) don't have full-time employees.

3.2. Supply Analysis

Considering the results of the questionnaire, it is noted that the NSO offer is very diverse, taking into account the different types of organizations (Table 1). Analysing the data, companies have the highest number of Nature Sports activities supplied of all NSO, with an average of 4.5 (± 4) activities. Only 27.0% developed just one activity, and 17.8% developed 10 or more activities (maximum 17). Associations ($M=3.1 \pm 2.2$) are in the middle of the sports clubs and companies, regarding Nature Sports activities supply. It is noted that 25.0% of the associations presented a supply based in only one, and none of the associations offered more than 10 Nature Sports activities. Sports clubs have a greater

tendency to develop fewer Nature Sports activities ($M=2.2 \pm 1.9$) than the associations and companies, as more than half (57.1%) of these developed only one Nature Sports activity. All practitioners' clubs develop only one Nature Sports activity regarding their legal status.

Table 1. Nature sports organizations supply.

| | 1 | 2 | 3 | 4 | Total | Pearson Chi-square |
|--|------|------|-------|------|-------|-----------------------|
| % | | | | | | |
| Main Organizational Scope (%) | | | | | | 70.540* |
| Courses and/or practitioners training | 33.8 | 7.1 | 25.0 | 13.3 | 21.7 | |
| Framed by technicians | 41.9 | 7.1 | 0.0 | 23.3 | 28.3 | |
| Train and competition | 2.7 | 50.0 | 0.0 | 18.3 | 16.3 | |
| Challenges and events organisation | 14.9 | 32.1 | 50.0 | 31.7 | 24.7 | |
| Others | 6.8 | 3.6 | 25.0 | 13.3 | 9.0 | |
| Main Type of Technicians Training (%) | | | | | | 32.235* |
| No training | 2.7 | 0.0 | 75.0 | 20.0 | 10.2 | |
| Old practitioners | 5.4 | 17.9 | 25.0 | 10.0 | 9.6 | |
| Technical courses | 36.5 | 3.6 | 0.0 | 33.3 | 28.9 | |
| Coach courses | 29.7 | 46.4 | 0.0 | 16.7 | 27.1 | |
| Physical education or sports degree | 14.9 | 17.9 | 0.0 | 15.0 | 15.1 | |
| High education specialization in Nature Sports | 5.4 | 7.1 | 0.0 | 0.0 | 3.6 | |
| Services Development (%) | | | | | | 30.410* |
| Segmentation criteria | 63.9 | 29.6 | 50.0 | 39.7 | 49.1 | |
| General public without segmentation | 18.1 | 7.4 | 50.0 | 13.8 | 15.5 | |
| Specialized demand | 6.9 | 14.8 | 0.0 | 17.2 | 11.8 | |
| Beginner demand | 9.7 | 29.6 | 0.0 | 22.4 | 17.4 | |
| Others | 4.1 | 21.4 | 0.0 | 10.0 | 9.0 | |
| Main Promotion Channels (%) | | | | | | 28.360 |
| Internet site | 63.4 | 56.0 | 75 | 49.1 | 57.3 | |
| E-mail | 4.2 | 24.0 | 25 | 26.3 | 15.9 | |
| Newsletters | 7.0 | 4.0 | 0.0 | 3.5 | 5.1 | |
| Mouth to mouth | 18.3 | 4.0 | 0.0 | 8.8 | 12.1 | |
| Others | 7.1 | 12.0 | 0.0 | 12.3 | 9.6 | |
| Main Distribution Channels (%) | | | | | | 9.776 |
| Direct distribution | 45.2 | 26.1 | 0.0 | 38.2 | 38.7 | |
| Internet | 50.7 | 69.6 | 100.0 | 60.0 | 58.1 | |
| Others | 4.1 | 3.6 | 0.0 | 1.7 | 3.0 | |

Segments names: 1) Companies; 2) Sports clubs; 3) Practitioners clubs; 4) Associations.

*Significant at the 0.01 level;

From the obtained data it is noted that MTB (44.0%) was the Nature Sports activity offered by more NSO, followed by trekking (37.3%). When analysing the offer by type of NSO it is noted that kayaking (40.5%) was, in 2010, the main activity offered by the largest number of companies, followed by trekking (39.2%). Regarding sports clubs offer, sailing (32.1%) stands as the Nature Sports activity promoted by more of this organizations, followed by MTB, kayaking and multi-activities (all offered by 28.6% of sports clubs). All practitioners clubs are MTB clubs. MTB (51.7%) was also the Nature Sports activity supplied by more associations, followed by trekking (46.7%).

Considering the three more developed Nature Sports activities by each NSO, in 2010, kayaking (26.5%) was the activity promoted more frequently by the largest number of organizations, followed by MTB (24.7%) and trekking (24.7%). Companies' analyses show that surfing (35.7%) and kayaking (32.9%) were the Nature Sports activities supplied by more companies. Surfing (51.1%) is also the most supplied activity by the companies that present mostly an international market, followed by kayaking (36.4%). Sailing (25.0%), MTB (25.0%), and multi-activities (25.0%) were the activities supplied more frequently by the highest number of sports clubs. MTB (38.3%) and trekking (38.3%) are the Nature Sports activities supplied more frequently by the higher number of associations.

Analysing the NSO supply profile, it is observed that almost half (47.6%) of the inquired organizations have a Nature Sports complementary activity, from which we can highlight that 60.0% of the companies have a

complementary offer. Accommodation (29.7%) and photography (29.7%) are the major activities supplied by more companies, while the bar service corresponds to the most important complementary offer for both sports clubs (28.6%) and associations (13.3%).

The majority of sports clubs organize their activities through training and competition (50.0%) and by the organization of challenges and events (32.1%), suggesting their competitive scope. Most of the Nature Sports activities of the associations are developed through the organization of challenges and events (31.7%) and by supervised activities by guides and instructors (23.3%). It is noted that most of the companies chooses to present their activities by the direction and supervision of guides and instructors (41.9%) and by the development of training courses (33.8%).

Regarding NSO technician training, 89.8% of the organizations state that their technicians have specific training in the Nature Sports activities domain. The majority of companies' technicians have training through technical courses (39.7%). The training of the sports clubs technicians is mostly developed through coach courses (50%) while the technicians from associations are trained mainly by technical courses (44.2%).

Most NSO stated that they select the supply of Nature Sports activities based on segmentation criteria (experience level, gender, age, socio-economic profile, *etc.*). Interestingly, sports clubs are the type of NSO that mostly provide activities for beginners (29.6%). Regarding marketing strategy, most companies use services customization (95.9%) as their main strategy followed by policy discount for groups (91.9%), and complementary activities offer (75.7%).

3.3. Demand Analysis

NSO present a differentiated demand, regarding the number of practitioners by typology of organizations (Table 2). Almost half (47.4%) of the companies have maximum 500 customers in 2010, and 23.0% of companies places the number of customers in the range of 501-1000; 50.0% of sports clubs have a maximum of 100 practitioners and 21.4% between 101-250 practitioners; 53.3% of associations have a maximum of 100 practitioners. Companies are therefore the NSO with the largest number of customers (practitioners). However, most NSO indicate that the number of practitioners stalled (57.2%).

The frequency of demand is much lower in companies, with the majority (50.0%) looking for activities with company's once a year, and only 20.3% have a frequently demand (more than once a month). Sports clubs are the NSO that have higher demand, since about half (42.9%) stated that their practitioners perform activities very often (at least once a week). The practitioners regularly seek activities in associations at least once a year (36.7%) or more than once per month (31.7%).

The practitioners belong mostly (60.8%) to the group of 18 to 35 years old, in all type of NSO. In sports clubs the participation by age is almost similar between the groups of less than 18 years (35.7%) and 18-35 years (39.3%). Concerning gender, the prevalence of male practitioners is evident in 74.1% of NSO. The gender differences are even more evident in sports clubs where participation is mostly composed of males (92.8%), and less difference are registered in the companies (female prevalence is 32.5% in companies).

The NSO stated that, in general, the practitioners who seek their services for the first time are beginners (51.8%), or have an intermediate level of experience (22.9%). No differences were found between the different types of NSO.

The geographical origin of the practitioners of sports clubs and associations is essentially restricted to the regional (50.0% and 46.7% respectively) or local territory (25.0% and 28.3% respectively). For companies, the origin of practitioners is mainly national (37.8%), and regional (32.4), although the international universe is considerable (24.3%).

The NSO respondents claim that the search for their activities/services is inconstant (75.0%), which suggests the seasonality of Nature Sports. However, the seasonality of the demand is more pronounced in the companies as 90.5% stated that the activities are inconstant throughout the year, while for associations the Nature Sports activities demand is less seasonal since nearly 40% of organizations states that the demand remains constant during all the year.

NSO point to the mountain sports (mountaineering, MTB, rock-climbing, *etc.*) as the group of Nature Sports activities with greater growth prospects (69.3% indicate their growth), while air sports (Paragliding, hang gliding, *etc.*) are the group with a lower growth prospects in the future. However, the majority (63.9%) of NSO referred that the sector in general will grow over the next 10 years.

3.4. Respondents Characteristics

Respondents of this questionnaire are managers of the respective NSO, of which 86.8% (144) are male, with 39.6 (\pm 9.6) years of age average. Most (55.5%) of them have higher academic qualifications, and just 6.0% have less than the 12th grade. A great part (75.7%) of the companies respondents says that their main professional occupation is developed in the NSO, while almost all (91.3%) the respondents from the other organizations (associative movement) develops their main professional activity in other organizations, and the work develop in their NSO is for the most part voluntary (67.9%).

Table 2. Nature sports organizations demand.

| | 1 | 2 | 3 | 4 | Total | Pearson Chi-square |
|--------------------------------|------|------|------|------|-------|-----------------------|
| % | | | | | | |
| N Practitioners (%) | | | | | | 40.236* |
| ≤ 50 | 9.5 | 32.1 | 50 | 28.3 | 21.1 | |
| 51-100 | 12.2 | 17.9 | 0 | 25 | 17.5 | |
| 101-250 | 14.9 | 21.4 | 50 | 8.3 | 14.5 | |
| 251-1000 | 33.8 | 25 | 0 | 28.3 | 29.5 | |
| 1001-4000 | 17.6 | 3.6 | 0 | 8.3 | 11.4 | |
| 4000-7000 | 2.7 | 0 | 0 | 1.7 | 1.8 | |
| ≥ 7001 | 9.5 | 0 | 0 | 0 | 4.2 | |
| Growth Tendency (%) | | | | | | 6.947 |
| Increased | 10.8 | 10.7 | 0.0 | 6.7 | 9.0 | |
| Decreased | 12.2 | 17.9 | 50.0 | 23.3 | 18.1 | |
| Stagnated | 59.5 | 53.6 | 50.0 | 56.7 | 57.2 | |
| Oscillated | 17.6 | 17.9 | 0.0 | 13.3 | 15.7 | |
| Age (%) | | | | | | 26.330* |
| < 18 | 8.1 | 35.7 | 0.0 | 13.3 | 14.5 | |
| 18-35 | 67.6 | 39.3 | 25.0 | 65.0 | 60.8 | |
| 36-50 | 24.3 | 25.0 | 75.0 | 16.7 | 22.9 | |
| > 51 | 0.0 | 0.0 | 0.0 | 5.0 | 1.8 | |
| Gender (%) | | | | | | 34.935* |
| > 75% female | 1.4 | 0.0 | 0.0 | 0.0 | 0.6 | |
| 50-75% female | 31.1 | 7.1 | 0.0 | 16.7 | 21.1 | |
| 50-75% male | 56.8 | 60.7 | 25.0 | 36.7 | 49.4 | |
| > 75% male | 6.8 | 32.1 | 75.0 | 40.0 | 24.7 | |
| Don't know/ Don't answer | 4.1 | 0.0 | 0.0 | 6.7 | 4.2 | |
| Experience Level (%) | | | | | | 14.886* |
| Beginners | 59.5 | 46.4 | 0.0 | 48.3 | 51.8 | |
| Intermediate | 16.2 | 17.9 | 75.0 | 30.0 | 22.9 | |
| Advanced | 1.4 | 7.1 | 0.0 | 5.0 | 3.6 | |
| Varied level | 23.0 | 28.6 | 25.0 | 16.7 | 21.7 | |
| Geographical Origin (%) | | | | | | 40.485* |
| Local | 5.4 | 25.0 | 25.0 | 28.3 | 17.5 | |
| Regional | 32.4 | 50.0 | 75.0 | 46.7 | 41.6 | |
| National | 37.8 | 25.0 | 0.0 | 25.0 | 30.1 | |
| International | 24.3 | 0.0 | 0.0 | 0.0 | 10.8 | |
| Frequency (%) | | | | | | 28.761* |
| Just once | 2.7 | 0.0 | 0.0 | 1.7 | 1.8 | |
| Several times not regular | 20.3 | 3.6 | 0.0 | 6.7 | 12.0 | |
| Once a year regular | 50.0 | 35.7 | 25.0 | 36.7 | 42.2 | |
| > 1 time/month | 20.3 | 17.9 | 50.0 | 31.7 | 24.7 | |
| All weeks | 6.8 | 42.9 | 25.0 | 23.3 | 19.3 | |

Segments names: 1) Companies; 2) Sports clubs; 3) Practitioners clubs; 4) Associations

*Significant at the 0.01 level; *significant at the 0.05 level; * significant at the 0.10 level

The analysis of the professional group from those who didn't develop their main professional activity in the NSO

shows that both companies and associative movement respondents belongs mostly to high qualified jobs: 33.3% are senior managers in public administrations or in companies, 17.0% belong to intellectual or scientific professions, and 21.6% are technicians or professionals from intermediate level.

The average number of hours dedicated to the organization is very different between respondents of companies and from the other organizations. Half (50.0%) of the respondents from business organizations dedicated more than 40 hours per week (18.9% spends from 50 to 60 hours, and 14.9% over 60 hours), while the majority (67.7%) of associative movement respondents says that they dedicated less than 20 hours per week to their organizations. Respondents in general (66.2%) claim that their main function in their NSO is mainly management function, while 26.6% says that their function is essentially technical.

DISCUSSION AND CONCLUSION

This paper presents a general analysis of the supply and demand of the organizations that are promoting Nature Sports in Portugal, an area with little empirical research conducted until now. Four typologies of NSO were identified: companies (tourism, sports, *etc.*), sports clubs, practitioners clubs and associations (environmental, cultural, sports, recreational and others). However, it should be noted that we collected just 4 responses for practitioners clubs, and so the results of these organizations are limited.

The organizations are localized mostly on the main coastal districts of the country. This may be explained by the asymmetries of the resident population, mostly in the interior districts [52], and it has consequences in the evident asymmetries for the sports activities dissemination in the country [53].

Most organizations surveyed have a regional or national territorial scope to develop their activities highlighting, however, a greater tendency of sports clubs to the national territorial scale of operation. The data shows the potential of Nature Sports to tourism, which usually is developed in the natural or rural areas, often far from major urban centres, potentiating the consumption and consequently the local economy where the Nature Sports activities are developed.

Sports clubs are the most ancient NSO. They are all non-profit associations, and the most specialized organizations regarding Nature Sports activities supply, as most of them perform just one Nature Sports activity. Due to their traditional vocation based in the formal competitive sport, sports clubs develop Nature Sports activities mainly by training and competition, and by challenges and events organizations. As a consequence, they have less seasonality than the other types of NSO, and a more frequent participation by their practitioners. In this way, they are positioned in the ascetic and competitive organizational model presented by Pociello [54].

The associations are younger than sports clubs and older than companies. They are almost all non-profit associations, excepting two that are cooperatives. The associations' activities are presented by technicians (guides/instructors) such as in companies, and by organizations of challenges and events such as in sports clubs. This data indicates that the associations have an organizational pattern presenting a much wider organizational spectrum and thus a more enlarged supply than the sports clubs, allowing their members to have a more eclectic Nature Sports practice, ranging from the formal to the non-formal scope. There are evidences of an evolution that occurred in the sports associative movement, perceiving the lack of adaptation by sports clubs to the new and growing sports demand that search for a non-formal and non-competitive practice, the associations, present a different Nature Sports activities supply, related with a hygienist, hedonistic and adventurous form of doing sport, as already described in other studies [55].

Most managers of sports clubs and associations don't have their main professional occupation in the NSO, generally doing voluntary work, despite their big commitment with it. Almost all associative movement managers are young males, with high education level and high qualified professions.

The increasing sports activities commercialization, and Nature Sports in particular, is closely associated with the growth of leisure and tourism industry, especially by new tourism segments that arise associated with the growing demand for active holidays [1]. This is mainly because sports clubs focused mainly on the values of effort, competition and technique learning, failing to meet the expectations resulting from the leisure sports field [42]. Thus, several sport commercial structures emerged, established to meet the needs expressed, commercializing their products with emphasis on playful, accessible and unrestricted sports practices [42, 55, 56]. The business creation process followed a logic that began with the discovery of sports activities, reinforced later by the emergence of an increasingly dynamic market [57]. This process emerged in the late 1980s to the mid-1990s, due to the favourable socioeconomic conditions for development of Nature Tourism [44, 57], and to the commitment of local and regional government bodies regarding

socio-economic development (job creation, local population maintenance, *etc.*), and by the increased demand for new forms of tourism [57].

The companies operating in the Nature Sports sector in Portugal are mostly constituted as limited companies, and sole proprietors. They are mainly microenterprises, with a recent and familiar foundation, as already pointed in other works [35, 36, 42]. They present a high seasonality on demand, a high number of Nature Sports activities in their offer, and consequently a little specialized supply, that could be explained by attempting to combat seasonality. The majority of the companies also offer complementary activities, centred mainly in accommodation and photography. Companies seem to be the organizations that are best adapted to the changing demand for Nature Sports. Although the education was not initially a target for entrepreneurs [55], this appears to be changing, as evidenced by the increasing supply of courses/training for practitioners. This is so obvious that most companies that are offering surfing as the main developed activity have cumulatively a surf school inscribed in the respective federation. Almost all the managers of the companies are young males, have their main work in the companies, and have a high commitment towards the organizations, dedicating more than 40 hours per week to them.

The training of the Nature Sports technicians is different depending of the type of NSO. Despite that, all NSO have few technicians with high education in general sports or in Nature Sports. The training of human resources and their technical and human skills are, in this sector, a critical point for NSO success, as evidenced by Martin and Palakshappa [35]. The definition of minimal competence for Nature Sports technicians to increase the quality of these agents should be subject to regulation, to contribute to improved safety and quality of Nature Sports services.

The main divulgation and distribution channels used by NSO are internet-based. This data shows that all types of NSO are adapting their management and marketing procedures to the new technologies, and thus to the new habits of consumption and to the profile of the demand.

The Nature Sports activities demand is composed, in almost all NSO, by male and young (18-35 years) individuals, mainly from mainland territory of Portugal. In general, there is a tendency for increase in the number of practitioners for the group between 18 and 35 years (reaching the highest number of practitioners), compared to the previous group (under 18 years) and then a gradual decrease with increasing age. This data has also been pointed in other similar studies [36, 44]. The results thus evidence participation asymmetries according to gender and age. In sports clubs this is not so obvious, because they have a considerable number of individuals under 18 years (35.7%), almost equal to the group 18-35 years (39.3%), evidencing their vocation for the formation of young practitioners to the competition on formal federated sport. Most practitioners are beginners when they first look for Nature Sports activities. The number of practitioners participating in the different NSO is also diverse: the companies have the highest number of practitioner demand, but with less frequency; the sports clubs have the minor number of practitioners but with the higher frequency of practice. The geographical origin of the practitioners of sports clubs and associations is essentially restricted to the regional territory, in contrast to the national and regional origin in companies. The results reflect the hedonistic tendency of society, associated to higher search for the compromise-free offer of organisations, in contrast to the commitment nature of sports clubs.

NSO managers consider mountain sports (mountaineering, rock-climbing, MTB, *etc.*) the segment with the greatest growth potential, while the aerial sports (hang gliding, paragliding, *etc.*) are considered those with lower growth prospect of the sector. Most organizations also consider that the Nature Sports sector has growth potential over the next 10 years. Analysing the general supply by type of NSO, it is also possible to understand the overall potential of Nature Sports activities and their potential in Portugal. MTB and trekking are the Nature Sports activities that are being offered by more NSO. Contrariwise, skimboarding and skiing corresponds to the Nature Sports activities offered by less NSO, representing thus the activities with less global potential. Kayaking is the activity offered by more companies, sailing by more sports clubs, and MTB by more associations. All practitioners clubs are MTB clubs. In the opposite direction, rowing and skimboarding are the Nature Sports activities with less commercial potential; canyoning, caving, skiing, mountaineering, rafting, skimboarding, and free flight have the less competitive potential; and skiing and windsurfing present the less associative potential. Kayaking is also the Nature Sports activity developed more frequently by the major number of NSO, while surfing is by more companies, MTB, sailing and multi-activities by more sports clubs, and MTB and trekking by most associations, representing thus the higher potential in each scope of practice: commercial, competitive and associative, respectively. Surfing is also the main demanded Nature Sports activity by the international market.

This data also show some problems already detected in this sector [19], despite there is no doubt about the

importance of the small business in the leisure sector and the role that they play in the economy [34], especially in Portugal. The small size of the companies may represent a difficulty, for example, to implement more effective systems of production, innovation and quality improvement, access to advanced technology, quality of human resources, effective marketing formulas, weak negotiation power regarding demand, intermediaries, suppliers, etc. Moreover, the recent creation of most companies does not allow these to accumulate enough experience, technology and know-how to compete internationally, as seen by the small number of companies that present a main supply to the international market, and the small size of the Nature Tourism international demand (4%) [19]. All these factors affect negatively the competitiveness of each company, and finally Portugal as a Nature Sports and Nature Tourism destination.

Despite all, Portugal has a great potential to develop Nature Sports and Nature Tourism, considering its geomorphologic dimension and climatic characteristics that allow the development of a wide range of Nature Sports activities, under optimal conditions, throughout the year. It is not easy to find such a variety and density of specific places to develop Nature Sports activities in such a small area. Portugal has extensive rural areas and natural spaces, with or without special protection (protected areas), as the beach and the sea, several rivers and other aquatic spaces, mountains and cliffs, *etc.* This scenario has been recognized and awarded with the Travel Awards 2011 Prize, in the category of Active and Adventure Tourism, by the Russian National Geographic Travel magazine.

On this regard, this data enclose implications in the Nature Sports policies and NSO management. In order to achieve greater penetration in the Portuguese population (at the level of France, for example), Nature Sports should be developed through a differentiated and articulated offer among all sectors (associative, municipal, educational, business, federated, *etc.*), fitting all segments of the population, in order to eliminate the asymmetries evidenced in the Nature Sports participation, especially by gender and age, but also in the different socioeconomic classes [17]. Regarding NSO management, Chazaud [58] states that a good commercial strategy in the NSO should contain: a product development adapted to the specificity of the market; fixed prices in accordance with the profitability goals and the concurrence fares; a distribution developed through a set of specific tourism operators (travel agencies, touristic operators, reservation centrals, tourism offices); a product promotion settled through different communication methods, about their organization and their events and activities. Moreover, he states that the supply should be constantly renewed and improved with creative contents. The ideal scenario would be when NSO management fulfils these criteria in Portugal.

Data also shows that the specialization appears to be a critical success factor to supply Nature Sports for the international market. The majority of the companies that have mainly an international demand are offering a reduced number of Nature Sports activities, since 50.0% of them have a maximum supply of two Nature Sports activities. According to the data, to compete in the international market, it is important to present a specialized offer regarding Nature Sports activities. Additionally, the offer should be an integrated tourism package that includes accommodation, food, and other complementary services, as already pointed in previous works [19, 20].

To date, few studies analyse the importance of Nature Sports activities to the economy, and its contribution to local development, in Portugal. In the future, it is important to develop studies about Nature Sports impacts, not just in the economic dimension, but also in sociocultural and environmental ones. These studies are important to identify and understand the possible benefits of Nature Sports activities, and their potentialities to structure the territory and to promote local development, providing structured information for the decision-making process by stakeholders.

This study also encloses some limitations, especially because it does not include all possible organizational scopes of practice (*e.g.* educational, military, *etc.*), and because of the low number of respondents from practitioners clubs, which did not allow a proper evaluation of these type of organizations.

CONFLICT OF INTEREST

The authors confirm that this article content has no conflict of interest.

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