Journal of Cleaner Production 162 (2017) 559–567

Contents lists available at ScienceDirect

Journal of Cleaner Production

journal homepage: www.elsevier.com/locate/jclepro

Sustainable by nature? The case of (non)adoption of eco-certification among the nature-based tourism companies in Scandinavia

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ARTICLE INFO

Article history:
Received 2 February 2017
Received in revised form
18 May 2017
Accepted 7 June 2017
Available online 10 June 2017

Keywords:
Eco-certification
Eco-labelling
Ecotourism
Sustainable tourism
Norway
Sweden

ABSTRACT

This paper investigates the factors associated with the (non)adoption of eco-certification among the nature-based tourism companies in the Scandinavian region. Previous research suggested that the popularity of tourism eco-certification schemes remained limited in the region due to socio-cultural, historical and other specifics. We revisit this query a decade later with the support of nation-wide data from two Scandinavian countries – Norway and Sweden. The quantitative results suggest that such factors as motivations for operating a nature-based tourism business, beliefs about eco-certification effects, economic and demographic characteristics, are associated with the eco-certification adoption. Qualitative insights shed more light on the existing barriers for this sustainability approach in the region. The results suggest that companies with strong beliefs in the positive context (i.e. beliefs that eco-certification is capable to generate higher income, more customers and provide marketing advantage), lifestyle and sustainability-oriented business goals together with favorable organizational context (larger size, higher income and having a female leader) are more likely to invest in an eco-certification scheme.

1. Introduction

A decade ago, in a landmark book *Ecotourism in Scandinavia: Lessons in theory and practice* the leading tourism scholars pondered about the meaning of sustainable and/or ecotourism in the Scandinavian context (Gössling and Hultman, 2006). Their insights suggested that the very idea of an environmentally friendly or ecological tourism (ecotourism), as a new and separate branch of nature-based tourism, was perceived as rather artificial and redundant in the region (e.g. Fredman et al., 2006; Gössling, and Hultman, 2006; Gössling, and Alkimou, 2006; Viken, 2006). Consequently, the adoption rates of eco-certification schemes in Scandinavia (here focusing on Sweden and Norway) has remained very limited. This has been linked to the cultural and historical specifics, such as a strong tradition of outdoor recreation (locally known as *friluftsliv*, or open-air life), which is permeated by the ethos of simple and accessible activities, with minimal disturbance to the environment (Fredman et al., 2006; Sandell and Sörlin, 2008). *Friluftsliv*, closely intertwined with the national identity and traditions of harvesting from nature (hunting, fishing, berry and mushroom picking), arguably, did not leave sufficient ideological space for the concepts of sustainability, eco-tourism, and the accompanying labelling and certification schemes. Nevertheless, the national ecotourism labels such as *Nature's Best* in Sweden and *Norwegian Ecotourism* in Norway have been established.

Since the advance of the sustainability agenda, there has been a proliferation of market-based solutions, such as eco-certification, aiming to 'marry' economy and ecology. The fact that 2017 has been proclaimed by the UNWTO as the International Year of Sustainable Tourism for Development indicates the longevity of this agenda. The tourism industry has spawned myriads of eco-certification schemes over the last two decades (Buckley, 2002, 2012; Dziuba, 2016; Font, 2002). Despite a considerable life-span and extensive research on tourism certification, there has been little agreement on the success of this approach (Buckley, 2012, 2013; Gössling and Buckley, 2016; Karlsson and Dolnicar, 2016). This discussion becomes particularly interesting in the context of Scandinavia, home to some of the most affluent but also the most sustainable societies in the world (SDG, 2016).

In Scandinavia, there has been relatively little comprehensive empirical data on this topic, especially pertaining to the perspective of nature-based tourism (hereafter NBT) businesses. The research

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http://dx.doi.org/10.1016/j.jclepro.2017.06.060
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on NBT has primarily focused on the tourist demand and relied on convenience sampling (Fredman and Tyrväinen, 2010; Lundmark and Müller, 2010; Margaryan and Fredman, 2016). As a result, little has been known about the certification adoption among the NBT companies. Drawing on previous research on the adoption of voluntary sustainability schemes in tourism (e.g. Bansal and Roth, 2000; Berghoef and Dodds, 2013; Delmas and Gergaud, 2014; Kennedy, 2014; Mair and Jago, 2010; Revell et al., 2010; Sampaio et al., 2012; Vernon et al., 2003), we look at the associated factors and barriers of this approach in the Scandinavian context. The aim of this paper, therefore, is to understand the factors associated with the (non)adoption of eco-certification among the NBT companies by looking at Norway and Sweden. We contribute to better understanding of this sector through a first of its kind region-wide survey. While having certain geographic and socio-economic differences, Norway and Sweden have overpowering similarities in terms of shared history, heritage, culture, economic development, traditions of outdoor recreation, environmental policies and attitudes towards nature in general. In this paper we treat the Scandinavian Peninsula as one region.

2. Eco-certification in tourism: what, why and for whom?

Propelled by the growing demand for the integration of sustainability principles into all forms of production coupled with neoliberal agendas, eco-certification was welcomed as a promising market-based solution to the global environmental problems, a self-regulating alternative to state regulation (Buckley, 2012). Certification can be defined as '*a voluntary procedure that assesses, audits and gives written assurance that a facility, product, process or service meets specific standards. It awards a marketable logo to those that meet or exceed baseline standards*' (Honey and Rome, 2001, p. 5). Eco-certification and eco-labelling are, therefore, sequential and non-identical concepts. In this paper we use the term 'eco-certification' to refer to both the certificate and the respective label.

Since the demand for the sustainable products has been growing, eco-certification was developed as a mechanism through which providers achieve certain performance standards as well as gain a competitive edge (Jamal et al., 2006). As of today, there are 465 ecolabels in 199 countries within 25 industry sectors (www.ecolabelindex.com). Despite this global propagation, it remains highly questionable whether eco-certification has had any significant impact on the markets and resource use practices on the ground (e.g. Buckley, 2012, 2013; Cucculelli and Goffi, 2015; Dziuba, 2016; Gössling and Buckley, 2016; Karlsson and Dolnicar, 2016). Proliferation of eco-certification schemes has also been linked to the absence of any effective legal, economic or technological regulations (Gössling and Buckley, 2016). Within this neo-liberal logic, sustainability has become framed as a business opportunity and a marketing advantage, which raises concerns regarding market failures, lack of attention towards social complexities, commodification of nature for capitalistic profit or shifting environmental responsibility to the level of an individual consumer (Hultman and Säwe, 2016; Jamal et al., 2006). In our article we demonstrate some of the related limitations of this sustainability approach.

2.1. Eco-certification in tourism

Ecotourism has undergone significant mainstreaming and institutionalization within the last three decades (Jamal et al., 2006). In the beginning of the 21st century, there was already more than one hundred sustainable tourism certification schemes, including more than fifty tourism-related ones available across the EU (Buckley, 2002; Dziuba, 2016; Font, 2002). Multiple sets of ecotourism criteria have been developed, specified e.g., in the Mohonk Agreement, the International Ecotourism Society, or European Ecotourism Labelling Standard.

Ecotourism and the accompanying certification schemes have been, however, subject to critique and skepticism. This ranges from questioning the very philosophical underpinnings of this approach discussed above to the technical challenges of its implementation. Challenges associated with adapting international tourism certification standards to the local specifics, effectiveness, efficiency and multiple other concerns have been vocalized (Haaland and Aas, 2010; Medina, 2005; Wen and Ximing, 2008). Buckley (2013) has argued that the expansion of tourism eco-certification schemes will continue even without any significant impact, since it is based not on the market realities but rather on the political games played by the civic and corporate advocates. In one way or another, the popularity of this approach does not seem to wane neither in developing nor developed countries despite relatively low market penetration.

2.2. Factors associated with adoption of eco-certification in tourism

The majority of studies on eco-certification have focused on the consumer behavior perspective, while relatively less attention has been paid to the factors influencing the producers' decisions to participate in such schemes, especially in the field of tourism (Sampaio et al., 2012). In the existing literature, studying business motivations to explain participation in the voluntary sustainability initiatives has been a popular approach (Berghoef and Dodds, 2013; Delmas and Gergaud, 2014; Kennedy, 2014; Sampaio et al., 2012). Strong environmental engagement among small tourism firms has been related to their environmental sensitivity (values), desire to learn (personal goals) as well as beliefs about the general context and the ability to achieve their goals (Sampaio et al., 2012). Adoption of eco-certification has been found to relate to such motivations as improving competitiveness (cost savings, marketing), legitimation (regulatory or social compliance) and environmental responsibility, while personal goals and the general context also played an important role (Bansal and Roth, 2000; Revell et al., 2010). Mair and Jago (2010), in their study of the tourism event sector, identified several internal and external motivations for corporate greening (e.g. gaining financial benefits, competitive advantage, complying with regulations, enhancing image or responding to stakeholder pressure). Vernon et al. (2003) found that among the tourism micro-firms the strongest motivation for the environmental engagement was reducing costs, while eco-considerations were expected to be financially justified.

The business motivations of micro-firms, which dominate the tourism sector in general and the Scandinavian one in particular, are complex, heterogeneous, vary over time and cannot be explained solely within a rational utility-maximization framework (Sampaio et al., 2012; Thomas et al., 2011). The individual specifics, i.e. values and concerns of individual entrepreneurs, are not simply part of a general decision-making context but represent motivations in themselves (Mair and Jago, 2010). Font et al. (2016b) argue that smaller tourism entrepreneurs are driven to act sustainably by the motives of cost reduction, social legitimation as well as lifestyle preferences. Considerable literature has accumulated on lifestyle entrepreneurs, i.e. the owner-managers of usually micro-firms, mainly guided by certain lifestyle values and goals rather than profit maximization and growth (Andersson Cederholm and Hultman, 2010; Ateljevic and Doome, 2000; Lundberg and Fredman, 2012; Lundberg et al., 2014; Sampaio et al., 2012; Thomas et al., 2011; Tzschentke et al., 2008). Lundberg et al. (2014) suggest that the identity of a NBT entrepreneur is often incompatible with profit and growth orientation, prioritizing such non-economic goals as living close to nature, being authentic,

sustainable and responsible. The insights on eco-certification from other related fields, such as organic farming, suggest that size of a company, education and gender of an entrepreneur are related to willingness to adapt an eco-certification (Domeij, 2007; Storstad and Bjørkhaug, 2003). The most common reasons for not participating tend to be related to limited financial resources, low demand, lack of time or skills (Bois, 2015; Mair and Jago, 2010; Sampaio et al., 2012).

2.3. Eco-certification in Scandinavia

Scandinavia typically includes Norway, Sweden and Denmark.[1] In this paper we focus on Norway and Sweden, which share many similarities in terms of geography, landscape, socio-economic, cultural and historical characteristics, as well as, importantly, traditions of outdoor recreation and the right of public access.[2] Unlike these two countries, Denmark is densely populated, dominated by cultural landscapes and does not have the same right of public access, which makes its NBT context rather different.

When talking about the eco-certification in the region, special attention should be paid to the overall challenges associated with transplanting the normative concepts of sustainability and eco-friendliness to the local tourism practices. It has been argued that the term 'ecotourism' has never had a breakthrough in the region, perceived as a rather redundant and alien concept, since the local traditions of NBT and *friluftsliv* already correspond to the definition of ecological and sustainable (Viken, 2006; Fredman et al., 2006). Consequently, the popularity of eco-certification in the Scandinavian tourism sector remains rather limited while environmental awareness and performance of this sector might de facto be rather high (Gössling, 2006; Haaland and Aas, 2010). Solid empirical evidence, however, has been lacking.

Since Gössling and Hultman (2006), Björk (1998, 2004) and some notable exceptions (e.g. Haaland and Aas, 2010; Gössling and Buckley, 2016), the follow-up on ecotourism in the region has been scarce, and little is known about the current eco-certification performance, particularly from the perspective of NBT service providers. The biggest tourism-related eco-certification success in Scandinavia so far has been the *Nature's Best* in Sweden, which is Europe's first eco-label that assures the quality of individual tours. It was established in 2002 through the cooperation of Swedish Ecotourism Association, Swedish Travel and Tourism Council and the Swedish Society for Nature Conservation. Swedish Ecotourism Association has a mission to promote the label, educate the actors, create a common marketing channels and networks and develop a national eco-tourism strategy. Currently in Sweden there are 85 tours labeled with this scheme (Nature's Best, 2017). In Norway, a certification scheme for ecotourism companies – *Ecotourism Norway*, was established in 2008 by the GRIP foundation in cooperation with WWF Norway and Innovation Norway (an agency promoting industrial development). From 2011 Innovation Norway took over the certification scheme, and from 2014 – the rural tourism organization HANEN. Around 2010 there were about thirty certified firms, currently twenty (Innovation Norway, 2017). In Norway it is impossible to certify an individual tour, which makes this scheme comparatively more demanding and challenging to enter. Other certification schemes in the Scandinavian tourism industry are the Nordic Swan, Danish Green Key, German Blue Angel, EU Flower, ISO 14001 (mostly accommodation) or KRAV (agricultural production).

Additional insights regarding producers' motivations to adopt an eco-certification may come from other sectors, such as organic farming, which has a longer history in the region. The NBT sector in Scandinavia is dominated by small-scale businesses located in rural regions, which implies parallels between these sectors. It has been suggested that organic farmers' motivations to adopt an eco-certificate stem from the deeper motivations to operate their businesses, particularly relevant to small enterprises. Domeij (2007) finds that the Swedish certified farmers have specific lifestyle priorities in relation to work, such as having an opportunity to work together with friends and family, cooperating with like-minded people, feeling happy and satisfied at work, contributing to something good, being free and independent. In their study of NBT businesses in Sweden, Lundberg and Fredman (2012) found that these entrepreneurs also defined success as having a particular lifestyle, which included such priorities as having fun, feeling good at work or spending time outdoors with their families. Gender is also associated with eco-certification adoption. In Sweden, female-lead farms are more likely to be certified (Domeij, 2007). Female farmers and farmers with higher education were also found to be pioneers in organic farming in Norway (Storstad and Bjørkhaug, 2003).

In order to understand the adoption and non-adoption of eco-certification in Scandinavia, our paper focuses on the following factors: precursors – values and personal goals (lifestyle orientation, environmental sensitivity), mediators – beliefs about the positive context (effectiveness of an eco-certification scheme) and the general organizational context (size of the company, market orientation, gender of the owner-manager). Additional qualitative insight into the barriers preventing eco-certification from gaining a greater popularity is obtained from the qualitative data (respondents' comments).

3. Study methods

This study adheres to the pragmatist principles of mixed methods research design, including both data and methodological triangulation. Our design follows what Creswell (2013) calls 'convergent parallel mixed method design', which presupposes collection of quantitative and qualitative data simultaneously, analyzing each component separately and finally comparing the results to see if findings confirm or disconfirm each other, ideally leading to a synthesis (Fig. 1). Combining these methods allows cross-data validity checks, building on their complementary strengths and non-overlapping weaknesses.

3.1. Questionnaire and measurements

The questionnaires were developed to account for the specifics of each country while maintaining a common outlook and having a set of identical questions, enabling further comparison. Since no comprehensive statistical data existed on NBT before, the questionnaires contained multiple questions related to diverse aspects of this sector, including geographical distribution, employment,

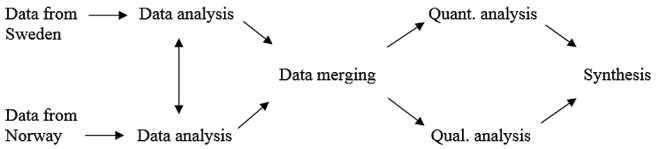

Fig. 1. Research design.

[1] In a broader, cultural-linguistic sense, Scandinavia also includes Iceland and the Faroe Islands (an autonomous country within the Kingdom of Denmark). All these countries together with Finland are grouped into the Nordic countries.

[2] Also known as 'freedom to roam' or 'everyman's right', this is a tradition of the general public's right to access public or privately owned land and water for recreation, including hiking, camping, boating, berry and mushroom picking.

size, income or services provided. The questions were developed building on previous research, with a special set of questions pertained to eco-certification and factors potentially associated with it. The measurements aimed to include values and personal goals (lifestyle orientation, environmental sensitivity), beliefs about the positive context (effectiveness of an eco-certification scheme) and organizational context (size of the company, market orientation, and gender of the owner-manager) (Table 1). The standard 5-point and 7-point Likert scales (ranging from e.g. *Not important at all* to *Very important,* plus *Don't know* option) were used for the measurements. Additional qualitative data were gathered through the analysis of respondent comments on eco-certification in an open-ended question).

3.2. Sampling: Capturing the nature-based tourism sector in Norway and Sweden

In both Norway and Sweden obtaining the sample of the NBT companies followed similar steps. Absence of an accepted definition of the NBT made the task of capturing this sector rather challenging. The sector in both countries lacks official statistical data and inventories. Lacking their own standard industrial classification (SIC) codes, the NBT businesses hide behind other industrial codes, preventing a holistic overview of this sector. To overcome this obstacle, we employed a 'geographic' approach: the NBT companies in both countries were identified by contacting the regional tourist information bureaus (291 in Norway and 308 in Sweden). Fredman et al. (2009, p.24) proposed a minimalistic definition of NBT: "*[n]ature-based tourism is human activities occurring when visiting nature areas outside the person's ordinary neighbourhood*", which was used for the purpose of this study. The tourism bureaus, spread all over both countries, were presented with this definition of NBT and requested to provide the details of the relevant companies in their area. Additionally, the websites of the tourist information bureaus and other relevant organizations were consulted for supplementary data.

As a result, the samples of around two thousand NBT companies were collected per country, which were further refined through the following steps. The websites of NBT companies were double-checked online and the companies with non-functioning websites were contacted by phone. Companies out of business were removed. Supplementary search was implemented via Google, using the most common nature-based tourism activities as the key words (in the local languages and English) to account for the companies not registered with their bureaus. The final samples comprised 1785 NBT companies in Norway and 1821 in Sweden.

3.3. Data collection and analysis

In Norway, the survey (in Norwegian) was administered online using Questback software in the spring of 2013, generating 684 answers (a response rate of 38,3%). In Sweden, the survey was similarly administered online (in Swedish) with the final result of 601 valid responses, i.e. 33% response rate. In both countries, the surveys were followed up by reminders and non-response bias checks by phone, not revealing any systematic bias.

The parts of Norwegian and Swedish surveys which where identically structured and presented interest for this inquiry were merged into a single dataset. The data transformation procedures were implemented when necessary (7- to 5-point Likert scale linear transformation; continuous to binary scale transformation; currency conversion as of 2012 exchange rate; logarithmic transformation of heavily positively skewed variables; merging various subcategories to improve comparability).

First, major similarities and differences between the two countries were inspected. Second, variables associated with the adoption of eco-certification and motivations for adoption were analyzed. Statistical tests were conducted using SPSS 22 software. A series of ANOVAs and Chi-square tests of independence were run to reveal the variables that characterize eco-certified companies. Further, the variables having statistically significant association with having an eco-certification were used to generate a 'decision tree' – a tree-like graph, created with the help of RapidMiner 7.2 data mining software, in order to find early predictors of the eco-certification status (RapidMiner, 2014). A decision tree (generated by recursive partitioning, i.e. repeatedly splitting on the values of variables) is a classification model that attempts to predict the value of a target variable based on several input variables in an easy

Table 1
Selected measurements potentially related to eco-certification adoption among NBT companies.

Factor	Measurement	Reference
Beliefs about eco-certification impacts	Increased profit More customers Marketing advantage	Gössling (2006); Haaland and Aas (2010); Liljenstolpe and Elofsson (2009); www.naturesbestsweden.com
Personal and business goals	Maximizing economic gain Getting stable income Working independently Getting an interesting job Living in a specific place Working outdoors Using local natural resources Working with people of similar interests Offering nature experiences Educating people about nature Contributing to sustainability	Ateljevic and Doorne (2000); Andersson Cederholm and Hultman (2010); Bois (2015); Domeij (2007); Gössling (2006); Liljenstolpe and Elofsson (2009); Lundberg et al. (2014); Lundberg and Fredman (2012); Sampaio et al. (2012); Stensland 2010; Storstad and Bjørkhaug (2003); new measurements
Environmental sensitivity	Operation in or within 5 km proximity of a national park Using national parks in marketing	Lundmark and Müller (2010); new measurements
Organizational context	Average annual sales Average annual costs Number of year round full-time employees Number of year round part-time employees Number of seasonal employees First most important foreign market Second most important foreign market Gender of a respondent	Bois (2015); Domeij (2007); Gössling, and Hultman (2006); Storstad and Bjørkhaug (2003); new measurements

Table 2
Overview of NBT composition in the region.

Activity	Percentage of providers in Norway	Total in Norway[b]	Percentage of providers in Sweden	Total in Sweden
Fishing	64.3	684	68.7	534
Hiking[a]	62.4	684	52.1	501
Water-based activities[a]	44.2	684	73.7	494
Cycling[a]	35.4	684	47.3	501
Wildlife watching[a]	32.9	684	63.9	518
Hunting	32.7	684	37.1	517
Horse riding[a]	21.6	684	36.1	526
Cross country skiing[a]	19.2	684	32.4	512
Snowshoeing	17.7	684	25.6	508
Downhill skiing and snowboarding	16.5	684	19.3	509
Climbing	16.5	684	19.0	511
Dog sledding[a]	14.9	684	24.9	515
Diving and snorkeling	13.0	684	17.9	508
Snowmobiling[a]	9.8	684	27.1	516
Air-based activities	4.7	684	7.6	502

[a] Statistically significant difference in the importance of these activities between Norway and Sweden ($p < .05$).
[b] Absence of variation in the Norwegian sample is explained by the design difference in these questions of the survey.

to interpret manner (RapidMiner, 2014). Finally, the qualitative data from the free comment section (nearly one hundred entries in total) were analyzed through the standard coding technique, to gain an additional insight into the potential barriers for adoption.

4. Results

Prior to merging the datasets of the NBT companies in Norway and Sweden, we compare the composition of this sector in each country. Table 2 shows the importance of various NBT activities per country.

While more companies offer hiking in Norway, the rest of the activities are more widely represented in Sweden. This suggests that there might be some difference in how diversified or specialized the companies are in both countries. ANOVA test suggests that there is a statistically significant difference between Norwegian and Swedish companies regarding the average number of activities a given NBT company offers ($F(1, 1124) = 44.47$, $p < 0.001$). On average, a Norwegian NBT company offers 4 different activities from the aforementioned list, while the number is 5.3 for a Swedish company. More companies in Norway operated in or within five kilometer proximity of a national park than in Sweden (23.3% and 14% respectively, ($\chi^2(1) = 16.39$, $p < 0.001$).

When checked whether a company had any eco-certification, the following results were received: in Norway, 8.3% of all companies were certified, while in Sweden the number was higher – 23.8%. A Chi-square test confirms that the Swedish companies are more likely to be eco-certified ($\chi^2(1) = 52.19$, $p < 0.001$). While having some differences regarding the product specifics, the countries proved comparable in terms of general economic, geographic, social, marketing and characteristics, allowing us to pool the data from both countries (labeled as Scandinavia) to get an insight on eco-certification adoption on the regional level.

4.1. Testing association between various company characteristics and eco-certification status

Based on the previous research and the regional context discussed above, we selected variables, related to the common beliefs about the effects of eco-certification; personal and business goals;

Table 3
Difference between certified and non-certified companies (based on ANOVA).

Variables	Eco-certified M (SD)	Non-eco-certified M (SD)	df	F
Personal and business goals				
Offering nature experiences*	4.7 (0.5)	4.6 (0.7)	1, 1101	5.7
Getting an interesting job(*)	4.3 (0.9)	4.2 (0.9)	1, 1087	.9
Using local natural resources**	4.4 (0.9)	4.1 (1.0)	1, 1089	8.6
Contributing to sustainability**	4.5 (0.8)	4.1 (1.0)	1, 1085	20.2
Educating people about nature**	4.2 (0.9)	4.1 (1.0)	1, 1084	7.5
Working independently	3.9 (1.1)	3.9 (1.0)	1, 1078	.0
Working outdoors	4.0 (1.0)	3.9 (1.0)	1, 1079	.9
Working with people of similar interests	4.0 (1.0)	3.9 (1.0)	1, 1092	1.2
Getting a stable income	3.9 (1.1)	3.7 (1.2)	1, 1082	3.0
Living in a specific place	3.7 (1.4)	3.7 (1.3)	1, 1073	.0
Maximizing economic gain	3.0 (1.2)	3.1 (1.2)	1, 1074	.8
Beliefs about eco-certification				
Increased profit**	3.7 (1.1)	3.2 (1.0)	1, 961	24.4
Marketing advantage**	3.9 (0.9)	3.4 (1.0)	1, 981	30.4
More customers**	3.7 (0.9)	3.2 (1.0)	1, 957	29.7
Environmental sensitivity				
Frequency of using national parks in marketing**	3.5 (1.3)	2.4 (1.4)	1, 309	24.4
Organizational context				
Annual sales[a] (in thousand in SEK)**	11866 (98601)	1928 (3850)	1, 923	12.1
Annual costs[a] (in thousand SEK)**	1349 (2686)	760 (1661)	1, 731	6.6

Significant at **p < 0,01, *p < .05, (*) p < 0.10, [a] Swedish krones (SEK) value is for the year 2012.
As of 18 May 2017 EUR 1 = SEK 9.7.

Table 4
Difference between certified and non-certified companies (based on Chi-square test).

Variable	Eco-certified	Non-eco-certified	χ^2	df
Environmental sensitivity				
Operation in or within 5 km proximity of a national park*	Yes (26%), No (74%)	Yes (18%), No (82%)	5.59	1
Organizational context				
Number of year round full-time employees**	<1 (30%), 1 (38%), ≥2 (32%)	<1 (53%), 1 (31%), ≥2 (16%)	34.07	2
Number of year round part-time employees**	<1 (51%), 1 (26%), ≥2 (23%)	<1 (71%), 1 (15%), ≥2 (14%)	19.14	2
Number of seasonal employees**	<1 (31%), 1 (22%), ≥2 (47%)	<1 (51%), 1 (22%), ≥2 (27%)	23.88	2
First most important foreign market	Germany (37%), Nordics (23%), Other (40%)	Germany (40%), Nordics (28%), Other (32%)	2.97	2
Second most important foreign market	Germany (32%), Nordics (22%), Other (46%)	Germany (26%), Nordics (26%), Other (48%)	1.67	2
Gender of the respondent**	Male (58%), Female (42%)	Male (69%), Female (31%)	7.55	1

Significant at **p < 0,01, *p < .05.

environmental sensitivity and organizational context, possibly associated with the eco-certification status (Table 1). In order to test the association between the selected variables and the eco-certification status, a number of ANOVA and Chi-square tests of independence were run between certified and non-certified with the following results (Tables 3 and 4).

The companies with an eco-certification were associated with certain factors related to the beliefs about the eco-certification effects, personal business goals or organizational context. Thus, eco-certified companies have higher annual sales and costs, comparing to those who are not. Therefore, it is not surprising that there is a positive association between the number of employees in a company and being certified. Companies, operating in or within five kilometers of a national park are more likely to be eco-certified. In addition, the eco-certified companies have a higher frequency of using national parks for their marketing. The eco-certified companies are also more likely to be owned/lead by women. There is no statistically significant association between being eco-certified and importance of various foreign markets (*Germany, Nordic* or *Others*), as well as the share of local or foreign markets among the companies.

The variables, which had a statistically significant association with eco-certification status (15 variables in total), are selected for further analysis. In order to find the best early predictors for having or not having an eco-certification (labeled 1 or 0 respectively) a decision tree model is created.

From this decision tree (Fig. 2) we can assume that the shortest path to predict the likelihood of a company to have an eco-certification is to see whether a company believes that eco-certification contributes to higher profits (ranked higher than 2.5)

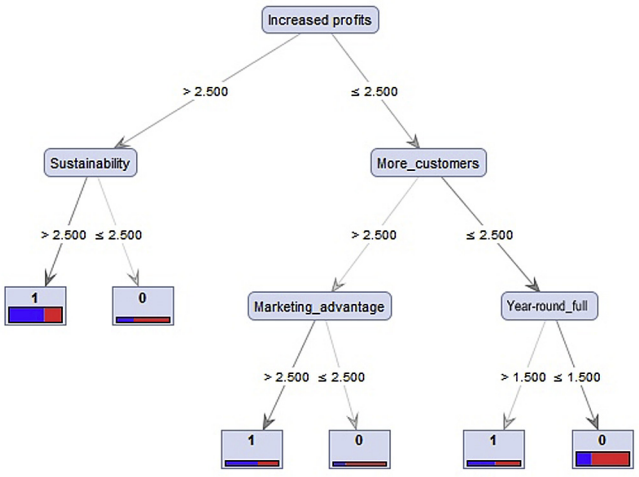

Fig. 2. Decision tree.

and whether *Contributing to sustainability* is an important motivation for operating their business (ranked higher than 2.5). If a company does not believe the *Increased profit* due to certification (ranked lower than 2.5), but nevertheless believes that it might contribute to gaining to more customers and marketing advantage, then the chances of being eco-certified are also higher. Finally, if a company has low beliefs in the economic benefits of eco-certification but has at least 1-2 year-round full-time employees, then it is also more likely to opt for eco-certification comparing to micro- or seasonal companies. Even though the accuracy of the model is relatively low (60%, cross-validated) and the leaves of the model are not 'pure', strictly speaking, it nevertheless gives a general insight into importance of various variables associated with eco-certification.

4.2. Qualitative insights

After the qualitative analysis of about one hundred separate comments, three types of barriers in adopting an eco-certification scheme emerged. These barriers are, generally speaking, congruent with the previous knowledge on micro-firms, lifestyle entrepreneurs and the Scandinavian specifics. The Scandinavian (self)image of being sustainable 'by nature', importance of self-reliance and independence, equating ecotourism with NBT, discussed in previous research (e.g. Fredman et al., 2006; Gössling, and Hultman, 2006; Gössling, and Alkimou, 2006; Viken, 2006), becomes visible here.

4.2.1. Barrier 1. Disbelief in the effectiveness and efficiency of eco-certification

It is apparent that there is a disbelief in the effectiveness and efficiency of eco-certification as well as a general mistrust and skepticism towards this scheme as such. The following statements are illustrative in this regard: '*We operate in an eco-friendly manner in many areas, but we do not want any bureaucracy such as certifications! Even more paperwork! It is this paperwork that is going to kill small businesses someday, should one speak of threats!*' or '*Eco-certification is of course in line with our principles, but I don't believe it will affect profitability or client flows*'. Similar sentiments and the lack of trust towards eco-certification, for example, were found among the small hotels in Sweden (Bois, 2015).

4.2.2. Barrier 2. Considering eco-certification as unnecessary/unaffordable for micro-companies

Another recurrent theme relates to a belief that one's company is too small for any eco-certification (or other formal schemes). Many of the companies made sure to state that they are very small, and, therefore, certification is not for them. This is congruent with the quantitative findings of this study, which suggest that the companies with an eco-certification tend to be larger than average (based on their annual turnover as well as the number of

employees). Size has also been previously found as an important factor to explain engagement in green policies (Mair and Jago, 2010; Sampaio et al., 2012).

4.2.3. Barrier 3. Seeing eco-certification as a redundant effort

It becomes apparent that there is a belief that one does not need to follow any ecotourism principles to be sustainable, and relying on ones' own knowledge and skills is sufficient. The following comments are typical: '*We have our own approach to how things should be done*', '*We feel that our attitudes and work are far ahead of any eco-certifications*' or '*We apply common sense!*'. It has to be added that some NBT companies based their distrust on the fact that the majority of tourists arrive by air, which is not explicitly accounted for by tourism eco-certifications. Considerable number of companies felt the need to bring examples of their own environmentally friendly practices even if they are not certified, such as recycling, reduced fuel consumption, having an annual environmental plan and monitoring, giving discounts for customers arriving by public transport, supporting local food producers, supporting local conservation efforts, volunteering for the local community etc.

Finally, the companies who did have certification or saw this practice as useful, elaborated on other positive effects, not included in the survey questions, such as improved knowledge about the customers, improved knowledge about the current environmental issues or having more stability and quality in the offered product.

5. Discussion and conclusions

This paper analyzed the factors associated with the (non) adoption of eco-certification in the NBT sector in the Scandinavian region. As such, it contributes to a region-wide insight into the specifics of the companies who invest in an eco-certificate, and better understanding of the barriers this scheme faces. This is particularly interesting given the sustainability performance and the worldwide reputation of the Scandinavian countries. Even though the overall percentage of the eco-certified companies in Scandinavia remains relatively low, our paper shows that this is a rather defined and niche segment.

5.1. Common characteristics of the eco-certified companies

Our analysis suggests that the eco-certified companies are more likely to be lifestyle entrepreneurs, who prioritize altruistic and outward-oriented goals, such as using local resources, offering nature experiences, educating people about nature and contributing to sustainability, which is linked to previous findings (Andersson Cederholm and Hultman, 2010; Ateljevic and Doorne, 2000; Domeij, 2007; Font et al., 2016a,b; Lundberg and Fredman, 2012; Lundberg et al., 2014; Sampaio et al., 2012; Thomas et al., 2011; Tzschentke et al., 2008). Gaining more knowledge about the customers, being updated on current environmental issues or having more stability and quality in the offered product are additional motivating factors. Companies who operate within or near a protected area and who use protected areas in their marketing, are presumably rather environmentally sensitive, and thus more likely to participate in an eco-certification scheme.

Finding lifestyle preferences among the certified entrepreneurs provides additional interesting insight to the argument by Font et al. (2016a,b), who argue that lifestyle entrepreneurs are, in general, averse to sustainability communication tools and dislike marketing. Our findings suggest that there is a business segment that combines lifestyle goals with positive beliefs about sustainability communication tools. Believing in the power of a certificate to increase profits, attract more customers and provide marketing advantage was found to be associated with being certified. This has to be emphasized, because not seeing any value in eco-certification and being very skeptical about it seems to be one of the biggest barriers this scheme faces in Scandinavia. Finally, comparatively larger companies and companies with female owner-managers are more likely to adopt an eco-certification, which was also found among the organic farmers in the region (Domeij, 2007; Storstad and Bjørkhaug, 2003). The latter is especially noteworthy, given that this sector is dominated by male entrepreneurs.

Overall, it can be concluded that the companies who combine lifestyle goals, eco-sensitivity, positive beliefs about voluntary sustainability schemes together with a favorable organizational context (larger size, higher income and having a female leader) are more likely to invest in an eco-certificate. This suggests that so far the eco-certification schemes have been appealing to a rather niche segment of the NBT entrepreneurs, while the barriers for a more widespread adoption remain strong.

5.2. Barriers for adopting eco-certification

Our qualitative data largely supports the earlier findings by Gössling and Hultman (2006) and suggests that adapting the global narrative of eco-certification to the local context might still be an issue in Scandinavia, a challenge also faced in other regions (Medina, 2005; Wen and Ximing, 2008). It is quite visible from the responses that many companies perceive eco-certification as ineffective and consider formal sustainability schemes to be redundant overall. This is not just rooted in the skepticism towards the sustainability agenda as such, as is the case in many other parts of the world, but rather the opposite. The statements of many companies implied that they consider themselves *already* sufficiently sustainable, applying their own sustainability approaches and environmental efforts and not needing any legitimation on behalf of a third party. This belief is not groundless, since Sweden and Norway are both ranked in the top three of the global Sustainable Development Goals Index (SDG, 2016). The majority of the companies also do not believe that eco-certification is associated with better marketing, which might even lead to underreporting of one's sustainability work (Delmas and Grant, 2014; Font et al., 2016a). It can be argued that while improving competitiveness and environmental responsibility are very strong motivations, achieving legitimation (regulatory or societal) through eco-certification does not come forward as strongly in Scandinavia in contrast to previous research in other parts of the world (e.g. Bansal and Roth, 2000; Revell et al., 2010). This suggests that the added value of eco-certification is not very clear for the local businesses and, most likely, consumers, who perceive Scandinavia as a highly sustainable region overall.

There is also a more common barrier: both qualitative and quantitative data suggest that the eco-certification schemes fail to appeal to small and micro-companies. This is related not only to the affordability problem discussed before (Domeij, 2007; Liljenstolpe and Elofsson, 2009) but also to the persistent belief that small companies are sustainable regardless of what they do just due to their size, or that their impact is negligible and hence does not deserve any formal management schemes. This is highly relevant to tourism, where environmental impact is of a cumulative rather than singular nature (Gren and Huijbens, 2015). In addition, there are also indications that the discourse of organic, eco- or sustainable production is still primarily appealing to women. The link between sustainability and gender has been noticed in previous literature (Domeij, 2007; Storstad and Bjørkhaug, 2003).

5.3. Conclusions and recommendations

While some of the challenges are common to the promotion of market-based solutions world-wide, it is clear that there are issues rather unique to the Scandinavian NBT sector. Dominated by micro-firms, led by lifestyle entrepreneurs, rooted in the rich local traditions of outdoor recreation, this sector seems to be a strong supporter of various sustainability practices overall. Hence, the percentage of eco-certified companies might be an inadequate measure of environmental awareness and engagement among the businesses. It seems that the eco-certification schemes so far have failed to convince the majority of the NBT companies that formalization of their environmental efforts will lead to certain unique competitive advantages, help improve their sustainability performance or offer them wider societal legitimation. The certified companies, in their turn, seem to be a rather niche and narrow segment, not typical for the sector.

If the eco-certifications schemes aspire to gain a wider popularity, especially in Scandinavian context, the following key areas need to be addressed. Our data and the previous research suggest that eco-certifications schemes are perceived mainly as a tool to reach competitive advantage via improved marketing. Certified NBT companies indeed believe that eco-certification results in marketing advantage, higher profits and more clients. The majority of the companies, however, are not convinced that this is the case, which is also congruent with previous findings (e.g. Font et al., 2016a,b; Gössling and Buckley, 2016). Therefore, good examples and positive results need to be better articulated and communicated to wider audiences. It is especially crucial to appeal to micro-companies, who dominate the NBT sector. This means that both fees and application procedures need to be fine-tuned to these businesses. A larger issue here is to convince smaller businesses that their environmental efforts are equally important and are worthy of formalization and legitimation.

Finally yet importantly, in order to succeed in the region the eco-certification schemes need to strengthen their own unique rhetoric, which will be appealing to the businesses in a local historical, cultural and environmental context. So far, the majority of the companies following the traditions of *friluftsliv*, use their own experience, apply their own common sense, come up with their own solutions and do not see an ecolabel as a worthy avenue to improve their sustainability performance. This is also linked to the global image of Scandinavia as a region with an abundance of pure nature, high quality of life and strong environmental practices. This context has its own unique advantages, avoiding the drawbacks associated with the institutionalized ecotourism in other parts of the world, but also creates challenges in standardization and communication of the sustainability practices in the NBT.

The rapid growth of the NBT in the region, higher pressure on natural resources, growing competition and proliferation of a diversity of NBT actors will most likely lead to a growing demand for high-quality experiences, improved sustainability performance, need for differentiation and legitimation, and, consequently, eco-certification. The elephant in the room is the air travel, which is currently not explicitly included in the local tourism eco-certification schemes. The credibility and effectiveness of the existing carbon labels in tourism remains rather low (Gössling and Buckley, 2016). In light of the exacerbating climate change and the ever-increasing tourist air traffic, there are indications that some NBT companies feel that their efforts on the ground dwarf in comparison to the harm done by the traffic emissions and, consequently, feel demotivated to invest in eco-certifications. The popularity and positive impact of the eco-certifications schemes will depend on their ability to respond to the new challenges and present a convincing option for businesses (especially micro-) to simultaneously improve marketing and environmental performance (i.e. to stimulate higher positive context and personal agency beliefs among the entrepreneurs, capitalizing on the local knowledge, traditions and values).

5.4. Limitations and suggestions for further research

Due to the comprehensive nature of our surveys, the number of questions pertaining to eco-certification and the motivations for adoption were limited. A specially developed survey targeting eco-certification issues in an in-depth manner would yield richer results. While the datasets in both countries were very similar, a number of data transformation procedures were nevertheless necessary, which might have resulted in some data loss.

The qualitative data in the survey hints that there are a number of strong underlying beliefs and attitudes, which should be better addressed with in-depth interviews among both certified and non-certified entrepreneurs. In order to further analyze the specifics of the Scandinavian NBT and disentangle the sustainability narrative from the local concept of *friluftsliv* it would be highly interesting to investigate the demand perspective on this issue. More research attention should be paid to the perceptions of the eco-labels among the foreign and domestic nature-based tourists, in order to better understand the image of Scandinavia overall and the added value of the sustainability schemes. Finally, a closer look to the link between gender and sustainability is necessary to understand the differences in perceptions of eco-certifications, which becomes especially interesting in Scandinavia, a global leader in gender equality.

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