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SUSTAINABLE TOURISM PRACTICES OF ACCOMMODATION ESTABLISHMENTS IN BULGARIA

Stanislav Ivanov
International University College

Maya Ivanova
Zangador Ltd, Varna

Katia Iankova
University of Greenwich

The goal of current paper is to identify the role of property's category, product and size on degree of application of various sustainable practices by Bulgarian accommodation establishments. Results from the Kruskal-Wallis tests show that all three factors (category, location and size) cause statistically significant differences among the accommodation establishments in Bulgaria regarding the degree of application of the sustainable tourism practices. The paper concludes that Bulgarian accommodation establishments are still in the beginning of adopting sustainable practices. Managerial implications, limitations and directions for future research are also discussed.

Keywords: *sustainable tourism; sustainable tourism practices; hotels; Bulgaria; certification*

JEL Classification: *L83, M1, O1*

INTRODUCTION

Shaped by the Report of the World Commission on Environment and Development 'Our Common Future' (Brundtland Report) from 1987 and *Agenda 21*, the concept of sustainability has permeated every human activity since its introduction quarter of a century ago. In field of tourism, sustainability has been embraced as a guiding principle in the management of destinations (Panakera *et al.*, 2011; Dodds & Butler, 2010), tourist enterprises in general (Swarbrooke, 1999; Weaver, 2006)

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and accommodation establishments (hotels, motels, guest houses, etc), in particular (Bohdanowicz *et al.*, 2004; Bonilla-Priego *et al.*, 2011; Carmona-Moreno *et al.*, 2004; Chan, 2012; Chan *et al.*, 2008; Cvelbar & Dwyer, 2012; Galvão *et al.*, 2011; Graci & Doods, 2008; Mihalič, 2012; Radwan *et al.*, 2010, 2012). The accommodation industry is responsible for waste pollution, increased water and energy consumption in destination areas, creating many (low paid) jobs for local residents, consumption of products and materials produced by the local community (Ivanov, 2005). Therefore, the sustainable practices in this sector are of crucial importance for the reduction of the negative impacts on the nature, and their better integration into the economic and socio-cultural environment of local communities. The importance of sustainable tourism development has even provoked some to compare it (humorously) with rocket science (Tyrrell & Johnston, 2012).

Sustainability is a sound theoretical concept, but if not practically embraced by companies, consumers, public authorities, society as a whole, it will remain just that – an attractive but theoretical concept. Accommodation establishment can adopt various sustainable practices – e.g. waste separation, effective and efficient use of water, electricity and other resources, using local products and labour, corporate social responsibility, to name just a few. However, the *degree* of application of these practices will vary greatly depending on accommodation's type, size, category, main product, location, served market segments, etc. Larger and higher category properties, for instance, generate higher revenues compared to smaller and lower category ones and, therefore, could allocate more financial resources for donations, although they do not necessarily (have to) do it. For these properties, waste treatment might be economically efficient due to the large amount of generated waste. In light of the above discussion, this paper contributes to the growing body of literature on sustainability by focusing on the *practical application* of the sustainability concept by accommodation establishments in Bulgaria. Its goal is to identify the impact of location of accommodation establishments, their size and category on the degree of application of various sustainable practices by them and pinpoint the differences that exist between the accommodation establishments in the degree of adoption of sustainable tourism practices.

LITERATURE REVIEW

Sustainability and sustainable development have three dimensions – environmental, social and economic (Swarbrooke, 1999) – which are

interrelated in the triple bottom line concept (Cavagnaro & Bosker, 2007) for analysing the impacts of any economic activity, including the provision of accommodation services. Although some authors propose a 6-dimension format for the evaluation of destination sustainability by adding political, cultural and technological dimensions (Choi & Sirakaya, 2006), in current paper we consider only the environmental, social and economic dimensions as they are entirely within the control by the accommodation establishments.

Sustainability of accommodation establishments: Environmental dimension

The environmental dimension of sustainability has received an overwhelming attention in hospitality research (see for example Ayuso, 2006; Bader, 2006; Bohdanowicz, 2006; Bohdanowicz et al., 2011; Candrea & Bratucu, 2012; Chan & Lam, 2003; Karatzoglou & Spilanis, 2010; Kasim, 2009; Lee et al., 2010; Mensah, 2007; Rossello-Batle et al., 2010; Robinot & Giannelloni, 2010; Smerecnik & Andersen, 2011; Zografakis et al., 2011 to mention just a few publications in the field). Renewable energies incorporation in hotels' daily operations, the smarter water use, recycling and waste management are the main initiatives that policymakers and stakeholders put emphasis on, in order to secure the sustainability of destinations. Renewable energies are progressively installed and used in tourist destinations regardless of the geography – Balears (Bakhat & Rosello, 2011), Crete (Tsagarakis et al., 2011; Zografakis et al., 2011), Japan (Uemura et al., 2003), Mediterranean islands (Michalena & Tripanagnostopoulos, 2010), Australia (Dalton et al., 2009), Bulgaria (Iankova, 2011). This tendency is instigated mainly by economic and climate change reasons and the improvements in efficiency of materials and technology, and will be consolidated by the rise of oil and electricity prices. The heaviest use of renewable energies is observed in the insular territories or those in mainland with an intense solar radiation, but other sources like bio-energy (Galvão et al., 2011) can be effectively and efficiently utilised in mountain areas as well.

Results from a recent study about the use of alternative energies in Bulgaria (Iankova, 2011) show that the primary reason for installation of solar systems is the high profitability hoteliers achieve during the high tourist season (the average savings from electricity bills are reported to be 30-40 %). The installation of the solar systems in the studied destination (the town of Sozopol) is somehow chaotic: the solar panels market and the producers, the specifications of the products are not well researched in

advance. The decision making process is rather spontaneous subordinated some times to irrational factors – it is accompanied by false beliefs, and some degree of ignorance about the functioning and the efficiency of the system, as well as, in some cases, wrong installation. However, the “solar fever” is continuing to spread around Bulgarian Black Sea coastal resorts based on the belief of the hoteliers that this is moneywise, worthy investment; it is “fashionable” and creates a positive image of the hotels.

Water use, its consumption patterns in tourism destination and solid waste disposal are another area closely connected to the sustainable practices in tourist accommodation (Tortella & Tirado, 2011; Kuniyal, 2005). The results related to hoteliers’ behaviour towards the solid waste and water management are non-univocal (Gösling et al., 2012) and in many cases hoteliers show a neglecting attitude towards these matters. Hoteliers in rural Wales, for example, adopt evasive practices to covertly use the free of charge domestic waste stream for disposal of their solid waste (Radwan et al., 2010, 2012). Charara et al. (2011), evaluating the water consumption in Barbados, and the efforts to reduce it, found out that water conservation practices in the accommodation industry are driven mainly by potential financial benefits and guests’ satisfaction. Possible measures for water use reduction would be increasing awareness, outsourcing some of the water-consuming activities, essentially laundry services, and increase the financial attractiveness of water conservation measures.

On a technical level, Jackson (2010) suggest that the construction of new generation buildings or the upgrading of the existing ones should integrate the newest environmental materials and technologies using solar or water energy, which will reduce the environmental footprint of the accommodations. According to the author studying the green lodges in US, effective green lodging should be inclusive of all functional areas within a lodging facility as well as the services offered. It is essential to help the property save energy, by choosing energy efficient facility designs, select and install energy-efficient fixtures and equipment. In order to mitigate indoor air quality, the use of eco-friendly chemicals and equipment as well as installing and maintaining appropriate filtration systems, composting and recycling are compulsory for the green lodges. Ars & Bohanec (2010) recommend similar measures for the high mountain huts in Slovenia – installation of photocell of all huts providing electricity and hot water with no emission to the environment. The solid waste, which is transported with helicopters, must be composted, and the non-organic packed for recycling, and the air transport should be

restricted, in order to reduce the carbon footprint and minimise the disturbance of the wildlife (Ars & Bohanec, 2010).

Sustainability of accommodation establishments: Social dimension

The social dimension of sustainability (Bengisu & Balta, 2011; Bohdanowicz & Zientara, 2008, 2009; Henderson, 2007) is usually related to the corporate social responsibility and it is less researched aspect of sustainability in hospitality sector compared to the environmental issues. The social dimension can be summarised by the 4 Es (Swarbrooke, 1999: 69) – equity (fair treatment of all tourism stakeholders), equal opportunities for all involved in tourism, ethics and equal partners (tourists treat tourism employees as equals not as inferiors). In this regard, in practice the social dimension of sustainability of accommodation establishments includes the fair treatment of employees by employers, provision of services and proper attitude towards people with various disabilities, regardless whether they are part of the hotel's employees or its guests. Bengisu & Balta (2011) reveal that most employers in Turkey support the view that employing people with disabilities would improve service quality and efficiency, because employees with disabilities are perceived as most determined, patient and eager to push themselves forward compared with an average employee. However, while willing to hire disabled people in theory, it is not proven that this will be the case in reality, because of the still stigmatised perception about people with disabilities in the general society. Ethical code of conduct and directives for non-discrimination of people with disabilities should be adopted in order to assure an equal opportunity for these employees.

Focusing on the social dimension of sustainable development Fortanier & Wijk (2010) analyse how foreign firms in hotel industry of Sub-Saharan Africa influence the quantity of local employment (number of jobs) and its quality (skills). The research results show rather than contributing to local human capital via training, foreign firms instead prefer to hire well-trained employees from local hotels. On more positive note are other examples such as CSR programme Omtanke implemented in Scandic hotel chain. This programme creates a favourable work climate and provides to managers, employees and guest high level of satisfaction, which ultimately reflect positively on the financial status of these hotels (Bohdanowicz & Zientara, 2008). Finally, it should be emphasised that recent research expands the concept of corporate social responsibility to

encompass environmental and economic activities as well (see for example Tamajon & Font, 2013) which blurs the difference between the corporate social responsibility and sustainability as theoretical concepts.

Sustainability of accommodation establishments: Economic dimension

The economic dimension of accommodation establishments' sustainability is related to their local economic impacts – their integration into the local economy, the use of local labour, food and materials, own production of food products by accommodation establishment. When hotels use local labour and buy food and materials from local producers their expenditures generate sales, jobs, incomes and other economic impacts for the local community (for a very detailed discussion of local economic impacts of tourism see Ivanov, 2005; Vanhove, 2011: 223-279). While tourism and hospitality industry is praised by public authorities for its employment generation, in many cases tourism development is of a core-periphery/enclave type (Mbaiwa, 2005; Nepal, 2002; Nepal & Jamal, 2011) which hinders the integration of tourism enterprises in general and hotels in particular into the local economy. The use of imported products, expatriate labour and foreign ownership of local accommodation establishments increase the leakages from local economy and decrease tourism's economic impact in the destination (Ivanov, 2005). Furthermore, tourism development may cause conflicts with other industries (agriculture, forestry) when it competes with them for resources like land, water, forests (Ahtikoski et al., 2011; Mayer & Job, 2010) but as Tao & Wall (2009) emphasise it is important that tourism complements rather than displaces existing economic activities. Therefore, the evaluation of the economic dimension of accommodation establishments' sustainability should reflect how well they integrate into local economy.

Empirical context

According to the official data by National Statistical Institute (2012b) in 2011 Bulgarian tourism industry boasted 3776 accommodation establishments with 283251 beds. The industry is dominated by small and medium sized properties – the average capacity is 75 beds, although it varies greatly by region (from 232 beds in the coastal region of Dobrich, to 15 in the inland region of Yambol). The industry is highly geographically concentrated – 49.07% of the accommodation establishments and 70.01% of the beds capacity is located in just 4 of the

28 administrative regions: the 3 regions with access to the Black Sea coast (Dobrich, Varna and Bourgas) and the capital region of Sofia. The category structure is unbalanced – in 2011 2615 (69.25%) of the establishments are categorized with 1-2 stars, 868 (22.99%) with 3 stars, and 273 (7.76%) have 4-5 stars. The average price of one overnight is 38.88 BGN (19.88 EUR) which combined with an average stay of 3.7 overnights leads to 145.29 BGN (74.29 EUR) average revenues of accommodation establishments from one tourist. However, the average price of one overnight varies a lot – from 21.04 BGN (10.76 EUR) in the region of Dobrich to 80.26 BGN (41.04 EUR) in the capital region of Sofia.

METHODOLOGY

Sample

Data were collected during August and September 2012. A questionnaire was sent by email to 1931 accommodation establishments in Bulgaria (hotels and guest houses), which represent 51.14% from the total number of accommodation establishments (3776) in the country as of the beginning of 2012, according to the data by National Statistics Institute (2012a). After the initial invitation to participate in the research, potential respondents were sent 2 reminders (2 weeks and 4 weeks after the initial invitation). The final sample included 84 accommodation establishments that have completed the questionnaire, resulting in 4.35% response rate, which is in line with Illum, Ivanov & Liang (2010)'s results. The low response rate could be attributable to Bulgarian respondents' suspicion to surveys and fears of breach of anonymity and is typical for the country. Similarly, systematically low response rates (5-7%) from Bulgarian respondents have been reported in other studies as well (Ivanova & Ivanov, 2013, Stoilova, 2013).

It should be noted that currently there is no consolidated database with all accommodation establishments in Bulgaria. The Ministry of Economy, Energy and Tourism maintains a database of the establishments categorised by the minister (hotels, motels, holiday villages, with 2, 3, 4 and 5 stars) while the information on the accommodation establishments categorised by the local mayors (family hotels, hostels, guest houses with 1, 2 and 3 stars, 1-star hotels) is scattered among over 260 municipalities. The National Register of Accommodation Establishments did not provide current emails of included properties. Therefore, the authors of this study generated their

own database based on the data from the Ministry of Economy, Energy and Tourism and publicly available data of the accommodation establishments from their own websites and various internet directories. The authors successfully identified the contact details of most of the 3, 4 and 5 star properties, while it was difficult to do it for 1-2 star ones due to the lack of websites or lack of current contact details on them.

Questionnaire

The questionnaire included several blocks of questions. The first block examined the degree of application on a 3-point scale (none, partial or full) of different activities, predominantly related with the environmental component of sustainability. The list of sustainable practices was derived from the review of literature and enriched by the authors with practices they had observed in hotels. The second block included open questions that referred to the value of various statistics mostly related to the social and the economic components of sustainability. Data on sustainability's social component was gathered furthermore with the dichotomous questions (applied/not applied) from the third block about different stimuli accommodation establishments provided to their employees and the fourth one which was dedicated to the social activities accommodation establishments were involved in. The fifth block of dichotomous questions (certified/not certified) gathered data on the sustainability-related certificates which the respondents had. It should be noted that respondents self-reported the certificates they had – copies of the certificates were not requested. The final block of questions collected demographic data on the establishment.

Data analysis

Due to their nature, data on the application of various sustainable activities were collected on 2- or 3-point scales (applied/not applied, or fully applied/partially applied/not applied). In this regard, the impact of category, location and size on the level of adoption of various sustainable tourism practices by accommodation establishments in Bulgaria is measured by the non-parametric Kruskal-Wallis test (Baggio & Klobas, 2011). It should be noted that the authors performed parametric test as well (ANOVA) and the differences between the respondent groups were the same as in the non-parametric test (with one exception only discussed below); moreover, the respective F-statistics were statistically significant in the same levels. However, only the results of the non-parametric test

are reported in the paper. The responses of the 4-star properties (9 responses) and the 5-star ones (2 responses) were grouped into one group for the analysis due to the small number of the 5-star hotels in the sample.

DISCUSSION OF RESULTS

Profile of respondents

Table 1 presents the profile of respondents. Seventy-two of them (85.71%) are hotels and 12 (14.29%) are guest houses. By category 41 of accommodation establishments are 1-2-star (48.81%), 33 (39.29%) are 3-star and 11 (11.90%) are 4-5-star properties. In terms of size, 64 (76.19%) of the hotels and guest houses have up to 50 rooms, while only 7 (8.33%) have more than 100 rooms. Six hotels (7.14%) have reported affiliation to a hotel chain. Urban establishments (n=31) represent 36.90% of the sample, mountain properties (n=26) are 30.95% of the sample, seaside ones (n=22) are 26.19% of responses, while only 5 rural establishments participated in the research.

INSERT TABLE 1 HERE

Environmental dimension of sustainability

The general picture

The review of sustainability literature has shown the prevalence of the environmental focus on the issue. However, results presented in Table 2 indicate that many of the sustainable environmental practices that are considered as normal business and operational practices in accommodation establishments in developed economies are yet to find their way into Bulgarian properties. For example, 48 (57.14%) out of 84 establishments in the sample do not separate waste. In a personal conversation with the first author, one of the general managers of the mountain hotels participating in the research said that a couple of years ago the hotel was applying actively waste separation but later this practice was ceased because the separated garbage was not collected by the waste removal companies with appropriate trucks but all waste containers were input into one truck where the waste mixed again. The hotel manager pointed out that this practice was demotivating for the hotel's employees because they saw their efforts being futile (similar findings have been reported by Iankova (2011) for Sozopol). Another area where Bulgarian

accommodation establishments are lagging is the presence of a contract with a company to buy separated waste (total mean response $m=0.25$) and in waste composting ($m=0.18$) with only a handful of hotels reporting to have such contracts or performing waste composting. Accommodation establishments do not perform well in terms of using solar panels for electricity ($m=0.35$), movement detectors for controlling light in rooms ($m=0.51$), water cleaning before ($m=0.58$) and after being used by guests ($m=0.39$), water tap aerators ($m=0.54$) and photocells for water consumption control ($m=0.12$) (see Appendices 1a, 1b and 1c). It is important to note that accommodation establishments have stricter policies for energy and water saving by the employees ($m=1.35$ and $m=1.21$, respectively) than by tourists ($m=0.95$ and $m=0.64$, respectively). The result is logical – hotel managers have direct control over employees' behaviour while imposing restrictions or a soft policy for reducing water and electricity consumption by guests might hurt guests' experience and their overall satisfaction with the stay.

INSERT TABLE 2 HERE

On the positive side, properties actively use energy-saving electric bulbs ($m=1.52$) and appliances ($m=1.24$), have thermo- ($m=1.63$) and hydro-insulation of the building ($m=1.45$) which improves its energy efficiency, provide clean towels upon request by guests ($m=1.73$) – only 3 (3.57%) of the properties have declared they do not use energy saving electric bulbs. Surprisingly, accommodation establishments in Bulgaria do not seem quite interested in measuring the financial impact of their sustainable environmental activities. Only 34 (40.48%) of them responded they have calculated the approximate amount of saved expenses due to activities for decreased consumption of water and electricity – the average amount saved per annum is reported to be 4284.09 BGN (2190.42 EUR) (see Table 3 further in the text).

The role of category, location and size

Category seems to have a statistically significant impact on the environmental practices applied by the accommodation establishments. For example, higher category properties are more likely to have a contract with a company to buy separated waste ($p<0.05$), to have policies for energy saving by the employees ($p<0.01$) and tourists ($p<0.01$), to clean the water before being used by the tourists ($p<0.01$), to have thermo- ($p<0.05$) and hydro-insulation of the building ($p<0.10$). These results are

logical, since some of the above activities require large investments (e.g. systems for cleaning the water before use) and, therefore, are more feasible in higher category properties. Property's *location* influences the level of adoption of waste composting. Mountain properties are much more likely to apply this practice than non-mountain ones ($p < 0.01$). This observation is also logical when we take into consideration the fact that composting biodegradable waste requires land space – something urban and seaside properties are not rich with. Similarly, mountain establishments outperform the non-mountain ones in the use of bio/eco food products ($p < 0.05$). Due to their predominantly mass tourism targeting, seaside and mountain properties consume a lot of water. In this regard, they have adopted stricter policies for water saving by tourists than their urban and rural counterparts ($p < 0.10$).

Looking at the results in Table 2 we may conclude that as long as the environmental dimension of the sustainable tourism practices is concerned *size* does matter. Larger properties (over 100 rooms) are more likely to separate waste ($p < 0.10$), to have a contract with a company to buy separated waste ($p < 0.01$), to have policy for energy ($p < 0.05$) and water saving by tourists ($p < 0.10$). Of course, these findings are natural, since the economies from the provision of these activities are highest for the large properties and, therefore, they have the highest stimuli to save energy or water. Size also does not influence the amount of money saved by accommodation establishments due to the application of environmental practices ($p > 0.10$) (row 3.4 in Table 3), but the F-test from the ANOVA is significant at $p < 0.01$. However, this last result must be treated with caution due to the small number of received responses for this particular question (25 for small properties (up to 50 rooms), 3 for mid-sized (51-100 rooms), and 4 for large ones (over 100 rooms)) and the high variation of responses. The rest 52 out of 84 respondents reported that they do not measure the economic benefits from the sustainable environmental practices.

Economic dimension of sustainability

The general picture

The economic component of sustainability was measured through a set of several questions – own production of food products (milk, yoghurts, other dairy products, meat, etc.), percentage of employees from local community, percentage of expenses for food products and materials from local and Bulgarian producers (see Table 3). About 75% of the

employees of the Bulgarian accommodation establishments live in the local municipality. More than 70% of expenses for food products and materials go to Bulgarian producers, and 41.38% go to producers from the local municipality. Involvement in own production of food products is negligible. The research did not include sensitive questions regarding the average salaries of employees in the accommodation establishments because of the suspicion Bulgarians have towards questions related to salaries, incomes, profits and taxes. Therefore, this research cannot reveal any tendencies regarding salaries of employees.

INSERT TABLE 3 AROUND HERE

The role of category, location and size

Category does not have any statistically significant impact on the percentage of employees from local municipality – between 72.73% (1-star properties) and 78.19% (2-star properties) of the employees live in the same municipality. Similar lack of significant differences is observed in the percentage of food products and materials from local or Bulgarian producers. On the opposite side, category has an impact on the production of own food products to be used by tourists ($p < 0.05$) (row 3.5 in Table 3). This is logical, since hotels and guest houses with agricultural activities in Bulgaria tend to be up to 3 stars, and 4-5 star establishments prefer to buy rather than grow their own agricultural produce.

Comparison on the basis of the *location* reveals an interesting picture. Mountain properties seem more involved in the own production of food products than the non-mountain ones, especially the seaside properties ($p < 0.05$). This particular result is not surprising considering the location of the mountain properties and the greater possibilities they have to integrate agricultural activities compared to seaside and urban properties, for which own production of dairy and meat products seems unfeasible. As a result, mountain establishments offer more bio/eco products than non-mountain ones as well ($p < 0.05$) (Table 2).

Mountain establishments also seem more economically integrated with local communities. The average percentage of employees from local municipality in mountain properties is reported to be 87.21% (13 of these respondents have even hired employees only from the municipality they are located in), while for seaside ones the percentage is only 51.48% ($p < 0.01$). Furthermore, 51.96% of expenses of mountain properties for food products and materials go to local producers, which is much higher than for non-mountain ones but differences are not statistically

significant. The higher percentage of employees coming from the local municipality and the expenses for food products and materials going to local producers in mountain establishments compared to non-mountain ones means that these establishments generate less leakages from the local economy than non-mountain properties. These results might be attributable to the smaller average size of the mountain properties in the country, compared to seaside and urban ones, and their orientation mostly to domestic tourists and foreign eco- and rural visitors which might decrease mountain properties' propensity to use non-local products and employees. In addition, the location of the properties far away from big cities hinders their inbound logistics and creates stimuli to use locally produced food and local labour in order to save on transportation costs. Bulgarian and foreign tourists' willingness to buy traditional and local products and might also be considered as a stimulating factor for mountain hotels to provide such. However, future research should determine the factors influencing the propensity of accommodation establishments to use local labour, food and other products, because they go beyond the scope of current paper. Finally, all analysed groups have declared nearly similar percentages of expenses for food products and materials from Bulgarian producers – between 74.75% (mountain) and 66.12% (urban) – and there is no statistically significant difference between them ($p > 0.10$).

The *size* of the accommodation establishments does not have statistically significant impacts on the percentage of employee coming from the local community, the percentage of expenses for food and materials going to local and Bulgarian producers. It influences only the own production of food products ($p < 0.05$), because only small establishments under 50 rooms have declared involvement in such activities.

Social dimension of sustainability

The general picture

Accommodation establishments seem quite actively involved in social activities (Tables 4 and 5). About 44% have declared sponsoring local social activities like sport events and cultural festivals, 37% - donations for social homes, 36% - participating in donation campaigns and 45% - provision of preferential prices for disadvantaged people. Properties are less likely to stimulate donations by tourists – only 11% have declared they have adopted this practice. We can only speculate

what the reasons for this low result are but we suppose that it is a consequence of hotel managers' perceptions that their corporate social responsibility includes activities *undertaken* by the hotel (i.e. with direct contribution of the hotel to donations), not activities *stimulated* by it (indirect contribution of the hotel to donations). However, future research should confirm whether this proposition is correct.

INSERT TABLE 4 HERE

INSERT TABLE 5 HERE

Social sustainability is related to sustainable HRM practices as well (Table 4). Our research shows that accommodation establishments focus mostly on providing financial stimuli to the employees depending on their performance (76%) and free food during shifts (77%). Incentive trips or language courses are not considered as important HRM activity. Half of the respondents provide free transportation to/from the hotel, free accommodation for the employees and trainings within the firm. Companies are more likely to offer internal training than external, obviously due to financial reasons. The predominance of the financial stimuli and the provision of free food during shifts and accommodation for the employees is completely understandable, considering the nature of the hotel industry and the location of the establishments – mountain and seaside properties are located far away from the permanent residence of workers and hotels must provide transportation for commuting. In addition, the high seasonality requires a lot of seasonal workers, many of whom come from parts of the country located far away from hotel's destination and need to be provided with accommodation by the employer. However, it is surprising that all analysed groups of establishments do not put much emphasis on language training of the employees, having in mind that foreign tourists generated 71.14% of the revenues of accommodations establishments in 2011 (NSI, 2012b and authors' calculations).

One of the main ingredients of the social component of sustainability is company's role for providing employment for disadvantaged people – young employees (18-30 years old) who usually lack experience, mature employees (over 50 years old) who are close to retirement and for the firms it is financially demotivating to invest in their training and development, and employees from ethnic minorities who might not be treated equally to employees from the dominant ethnic group. That's why respondents were also asked about the approximate percentages of these 3 groups of employees working in their accommodation establishments

(Table 5). Not surprisingly, employees aged 18-30 account on average for about 40.76% of employees in the accommodation establishments, employees over 50 years are 23.09%, while employees from ethnic minority groups represent less than 5% of employees.

The social element of sustainability includes furthermore activities to cater for the needs of customers with special needs (rows 5.6-5.9 in Table 5). Results indicate that more than 90% of accommodation establishments do not provide Braille signs in lifts and corridors (for customers with visual disability) or do not have employees knowledgeable in the sign language (for customers with aural disability). Accommodations' performance is better in terms of wheelchair access but this might be a consequence of the legal regulations in Bulgaria which stipulate that wheelchair access must be provided in accommodation establishments with at least 20 rooms rented to tourists. In addition, more than two thirds of the accommodation establishments provide menus for people with special nutrition requirements (due to diabetes, religious reasons, allergies, vegetarians) which could be explained with the ease of menu item provision and the competitive advantage the special menus give to the hotel restaurants.

The role of category, location and size

Category does not seem to be a major determinant of properties' social activities. No statistically significant differences were found on the basis of property's category in the level of donation, involvement in social activities in the local municipality, provision of lower prices for disadvantaged customers (Table 5). Similarly, category does not influence the sustainable HRM practices (Table 4) with two notable exceptions – upscale properties are more likely to offer internal training to their employees than budget properties ($p < 0.10$) while the latter are more likely to hire employees above 50 years of age ($p < 0.01$). Results are not surprising. Lower category establishments are more likely to be family owned hotels and guest houses, with low salaries for non-family member employees, hence less and older employees who do not need periodic training due to the simplified operations they have to perform. Category, however, influences the higher level of adoption of wheelchair ramps by upscale hotels ($p < 0.01$) and the provision of menus for people with special nutrition requirements ($p < 0.01$). Obviously, special menus are expensive to provide and, thus, are financially more feasible for higher category properties.

The location of the establishment influences significantly the level of involvement of the property with various social activities (Table 5). Mountain and rural properties, for example, have reported to be more involved in donation campaigns than seaside and urban ones ($p < 0.05$). Additionally, mountain establishments are more likely to sponsor social activities in the local municipality than non-mountain ones ($p < 0.10$). The higher social involvement of mountain establishments might be due to the fact that mountain communities, where these properties are located, are much smaller than the urban or seaside ones, or probably they are run by local owners, which creates a higher sense of identification with the local community and desire to contribute for its development by the mountain accommodation establishments. It should be noted that none of the 4 groups looks particularly interested in stimulating donations by tourists as mentioned earlier. Another peculiar insight is the average donations as percentage of the annual expenditures of the accommodation establishments (row 5.10 in Table 5). Although the difference among the 4 groups are not statistically significant, mountain properties have a higher average value of donations as percentage of their annual expenditures (3.11%) than non-mountain ones, which is another clue about the higher level of involvement in social activities by mountain properties.

Looking at Table 4 we can see some interesting results. Urban establishments are much less likely to offer free transportation ($p < 0.01$) and accommodation to employees ($p < 0.01$) than non-urban ones. This is due to the fact that seaside, mountain and rural establishments are predominantly located in a distance from the place of the permanent residence of the employees, and, thus have to provide transport and/or accommodation, while the urban hotels do not face such needs. Furthermore, urban properties are less likely to offer financial stimuli ($p < 0.05$) and incentive trips ($p < 0.01$) to employees. This might be due to the higher pool of potential employees in urban areas which shifts the bargaining power in favour of the hotels who now do not feel the pressure to provide good financial stimuli in order to keep their employees – if an employee leaves he will be replaced easier in urban hotels than in non-urban ones. Similarly, urban hotels are much less inclined to hire employees above 50 than non-urban ones ($p < 0.05$). The average share of employees above 50 is highest in mountain properties (30.33%) which might be attributable to the higher average age of population in mountain communities in Bulgaria, compared to urban and seaside regions (NSI, 2012c and authors' calculations).

As in the environmental dimension of sustainability, the size of the accommodation establishment influences positively its involvement in social activities. Larger hotels stimulate more the donations by tourists ($p < 0.01$) and are more engaged with donations to social homes ($p < 0.10$) than smaller ones. Obviously, this is a matter of available resources that could be diverted from production and donated for a social cause – larger properties can *afford* to donate and stimulate donations by tourists.

Regarding the HRM practices (Table 4) we observe quite a peculiar situation – the responses of the small and large properties are quite similar and mostly divergent from mid-sized ones. For instance, mid-sized hotels are less likely to offer accommodation ($p < 0.05$) to employees, but more likely to offer free food during shifts ($p < 0.10$), language courses ($p < 0.05$), trainings within ($p < 0.10$) and outside the firm ($p < 0.01$) and incentive trips ($p < 0.10$), compared to small and large-sized properties. We attribute the results to the following facts. On one hand, small sized properties do not have the financial resources to provide all the stimuli to their employees or do not need to do it, if it is a family owned hotel or guest house. On the other hand, large hotels hire a lot of employees and the leaving of one employee can be relatively easily compensated by hiring a new one or the redistribution of his work among the remaining employees, which decreases the stimuli to large hotels to keep their employees. However, in midsized properties each employee performs a sizable portion of the work and his leave would hurt significantly the working process, which generates stimuli for the managers and owners to keep them. Additional future research could delve deeper into this matter and provide further insight into the role of size on the HRM practices applied by accommodation establishments.

Similar to the role of category, we find statistically significant differences between small, midsized and large hotels in the provision of wheelchair ramps ($p < 0.01$) and menus for people with special diets ($p < 0.01$). Large properties perform much better than small ones, which is a consequence of the economies of scale needed for the provision of the special menus and the legally compulsory provision of wheelchair ramps for large hotels in Bulgaria (something that is not required for guesthouses and small family hotels which fall into the small sized properties group in our analysis).

Sustainability certification

The general picture

Bulgarian accommodation establishments put much greater emphasis on HACCP (Hazard Analysis of Critical Control Points) certification than on other types of certificates (ISO, eco-/bio products, energy efficiency) – half of the establishments reported to have HACCP system in place (Table 6). This is completely logical considering the fact that HACCP is compulsory for all F&B outlets in Bulgaria, including those located in accommodation establishments. Therefore, all hotels that offer at least one F&B outlet (e.g. lobby bar, breakfast room, restaurant, etc.) must be HACCP certified. This is not the case with ISO, energy efficiency and other types of certificates – they are not compulsory and certification relies on the good will and the sustainability vision of hotel managers and owners. Results from our research on the sustainability certification are not encouraging – too few of the properties have been certified in the different aspects of sustainability and those that certified have done it due to legal requirements (compulsory HACCP). However, previous research (Segarra-Oña et al., 2012) reveals that environmental certification (ISO 14000) might have positive contribution to company's financial performance, which can be used as an argument for more proactive behaviour by hotel owners and managers towards sustainability certification of properties they possess/manage.

INSERT TABLE 6 HERE

The role of category, location and size

The *category* of the establishment has a positive and statistically significant impact on its certification in HACCP ($p < 0.05$) and ISO 22000 (Food safety management systems) ($p < 0.10$) due to the fact that lower category properties do not always have F&B outlets and, thus, do not need HACCP/ISO 22000 certification in difference to 4/5-star ones, which offer several F&B outlets. Location does not have statistically significant impact on certification. Size influences positively the HACCP ($p < 0.05$), energy efficiency ($p < 0.05$) and bio/eco food production certification ($p < 0.10$) – it might be explained with the financial resources necessary for the certification process which larger properties could easier afford than smaller ones.

CONCLUSION

Sustainable tourism practices comprise environmental, social and economic aspects. In achieving its aim to identify the degree of application of various sustainable practices, this paper investigated the sustainable tourism practices adopted by Bulgarian accommodation establishments and analysed the role of category, product and size on the level of adoption of the various practices. Results show that in general Bulgarian accommodation establishments need to go a long way before becoming completely sustainable. Our findings also reveal that the category of the property, its size and location have a statistically significant impact on the level of application of the sustainable tourism practices.

Truly, accommodation establishments might consider adopting some sustainable practices as expensive because they require huge investments and lead to increased costs in the short run which the establishments might not be able to bear due to competitive pressure, while other practices might be perceived as having only marginal impact on their customers. However, the requirements of tourism demand can serve of a stimulus for accommodation establishments to adopt sustainable practices. New generation of tourists appear showing a behaviour drifting away from the pure consumerism, but developing mentality of environmental consciousness, that characterises them as tourists who would prefer to stay in environmentally friendly accommodations using renewable energy sources. They are willing to pay more for “green” products and higher prices for staying in environmental friendly hotels (Dalton et al., 2009; Kang et al., 2012), although some authors do not find support for this hypothesis (e.g. Smerecnik & Andersen, 2011). Tourists in Bulgaria appreciate these initiatives and show interest, especially in the small and medium size hotels, youth hostels, B&Bs and guest houses, where the communication between hosts and guests is more informal (Iankova, 2011). Therefore, by adopting sustainable practices, Bulgarian accommodation establishments could appeal to the more sustainability conscious tourists that could ultimately lead to higher revenues and profits for the establishments.

As a limitation we can mention the sample size – only 84 properties agreed to participate in the survey (despite the invitation reminders), although 1931 properties have been contacted and the authors guaranteed the anonymity of respondents. Further research could be directed to other practices, applied by Bulgarian establishments, with a special focus on activities specific for the area – like production of Bulgarian dairy

products, using locally produced products in hotels' spa and wellness centers, or integrating craft works in the design of the hotels/hotel facilities, etc. Additionally, future research could reveal hotel managers' perceptions of sustainable tourism practices and identify the factors that influence the adoption of specific practices.

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REFEREED ANONYMOUSLY

Stanislav Ivanov (stanislav.ivanov@vumk.eu) International University
College, 3 Bulgaria Str., 9300 Dobrich, Bulgaria.

Maya Ivanova, Zangador Ltd, Varna, Bulgaria

Katia Iankova, University of Greenwich, London, UK

APPENDIX

Table 1. Sample characteristics

Characteristic	Frequency	Share
<i>Type of accommodation</i>		
Hotels	72	85.71%
Guest houses	12	14.29%
<i>Category</i>		
1 star	13	15.48%
2 stars	28	33.33%
3 stars	32	38.09%
4/5 stars	11	13.10%
<i>Location</i>		
Sea	22	26.19%
Mountain	26	30.95%
Urban	31	36.90%
Rural	5	5.95%
<i>Number of rooms</i>		
Up to 50	64	76.19%
51-100	13	15.48%
Over 100	7	8.33%
Total	84	100%

Table 2. Degree of application of sustainable environmental activities by accommodation establishments

No	Activity	Total mean	Standard deviation	Kruskal-Wallis χ^2 test		
				Category	Location	Size
2.1.	Waste separation	0.50	0.63	3.771	0.245	4.933*
2.2.	Contract with a company to buy separated waste	0.25	0.58	10.568**	7.506*	15.143***
2.3.	Waste composting	0.18	0.49	1.434	14.946**	0.179
2.4.	Solar panels for electricity	0.35	0.67	1.145	3.532	2.482
2.5.	Policy for energy saving by the employees	1.35	0.63	14.271**	5.674	4.491
2.6.	Policy for energy saving by the tourists	0.95	0.73	14.471**	0.331	7.414**
2.7.	Energy-saving electric bulbs	1.52	0.57	3.744	4.635	0.340
2.8.	Movement detectors for controlling lights in common areas	1.15	0.81	5.012	5.674	0.145
2.9.	Movement detectors for controlling lights in rooms	0.51	0.77	1.489	1.667	1.480
2.10.	Use of energy-saving appliances (class A or higher)	1.24	0.59	4.104	4.354	0.054
2.11.	Water cleaning (before being used by the tourists)	0.58	0.84	16.820**	1.448	5.675*
2.12.	Water cleaning (after being used by the tourists)	0.39	0.76	5.593	1.471	1.200
2.13.	Solar panels for warm water	0.74	0.91	4.031	2.436	3.674
2.14.	Policy for water saving by the employees	1.21	0.64	2.517	0.586	1.209
2.15.	Policy for water saving by the tourists	0.64	0.72	3.558	7.265*	5.614*
2.16.	Water tap aerators	0.54	0.80	0.504	4.469	2.588
2.17.	Water tap photocells for water consumption control	0.12	0.39	4.782	1.016	3.388
2.18.	Thermo-insulation of the building	1.63	0.69	8.355**	0.261	1.150
2.19.	Hydro-insulation of the building	1.45	0.75	7.009*	1.396	0.734
2.20.	Clean towels upon request only	1.73	0.50	1.803	4.290	0.460
2.21.	Use of bio/eco food products	0.68	0.66	0.741	8.961**	0.034

2.22. Use of recycled paper for administrative purposes	0.86	0.66	0.955	4.287	2.065
2.23. Natural bath cosmetics	0.29	0.50	3.556	4.898	0.194
2.24. Cleaning with bio-degradable substances	0.69	0.71	2.214	1.561	3.195

Note: N=84. Results on a 3-point scale: 0-not applied, 1-partially applied, 2-fully applied. Grouping of respondents: *Category* (1, 2, 3 and 4/5 stars), *Location* (urban, rural, mountain, seaside), *Size* (up to 50, 51-100, over 100 rooms).

*** Significant at 1% level; ** Significant at 5% level; * Significant at 10% level

Table 3. Economic dimension of sustainability

No	Activity	Total mean	Standard deviation	Kruskal-Wallis χ^2 test		
				Category	Location	Size
3.1.	Percentage of employees from local municipality	75.12	34.39	3.128	15.082** *	0.988
3.2.	Percentage of expenses for food products and materials from local producers (from the local municipality)	41.38	32.23	1.250	4.807	0.097
3.3.	Percentage of expenses for food products and materials from Bulgarian producers	70.70	28.64	1.291	2.803	3.345
3.4.	Amount of saved expenses per year due to activities for saving water and electricity (BGN)	4284.09	9343.63	0.663	4.135	3.671 †
3.5.	Own production of food products (milk, yoghurt, meat ...) #	0.23	0.47	8.135**	8.991**	6.546**

Note: N=84. 1Euro=1.95583 BGN. Grouping of respondents: *Category* (1, 2, 3 and 4/5 stars), *Location* (urban, rural, mountain, seaside), *Size* (up to 50, 51-100, over 100 rooms). #Results on a 3-point scale: 0-not applied, 1-partially applied, 2-fully applied. † F-statistic (9.836) statistically significant at p=0.001 level

*** Significant at 1% level; ** Significant at 5% level; * Significant at 10% level

Table 4. Social dimension of sustainability: stimuli to employees provided by accommodation establishments

No	Activity	Total mean	Standard deviation	Kruskal-Wallis χ^2 test		
				Category	Location	Size
4.1.	Free transport to/from the hotel	0.50	0.50	2.137	16.090***	3.852
4.2.	Accommodation for employees	0.51	0.50	4.356	32.951***	7.620**
4.3.	Free food during shifts	0.77	0.42	5.570	5.974	4.752*
4.4.	Language courses	0.23	0.42	4.347	2.606	7.451**
4.5.	Trainings within the firm	0.48	0.50	7.242*	0.194	4.972*
4.6.	Trainings outside the firm	0.30	0.46	5.705	3.430	9.277***
4.7.	Incentive trips	0.15	0.36	6.008	12.936***	5.527*
4.8.	Financial stimuli, depending on employee performance	0.76	0.43	2.123	9.984**	1.996

Note: N=84. Results on a 2-point scale: 0-not applied, 1-applied. Grouping of respondents: *Category* (1, 2, 3 and 4/5 stars), *Location* (urban, rural, mountain, seaside), *Size* (up to 50, 51-100, over 100 rooms).

*** Significant at 1% level; ** Significant at 5% level; * Significant at 10% level

Table 5. Social dimension of sustainability: non-HRM activities

No	Activity	Total mean	Standard deviation	Kruskal-Wallis χ^2 test		
				Category	Location	Size
5.1.	Donations for social homes #	0.37	0.49	2.529	1.490	4.881*
5.2.	Participation in donation campaigns #	0.36	0.48	1.994	7.924**	1.570
5.3.	Stimulating donations by tourists #	0.11	0.31	3.341	0.840	10.107***
5.4.	Sponsoring social activities in the local municipality (sport events, cultural festivals, etc.) #	0.44	0.50	3.012	7.578*	0.736
5.5.	Preferential (off-season) prices for disadvantaged people #	0.45	0.50	1.391	0.454	0.457
5.6.	Braille signs in lifts and corridors (for customers with visual disability) #	0.12	0.45	3.961	1.870	2.413
5.7.	Wheelchair ramps #	0.73	0.88	23.048***	3.005	17.599***
5.8.	Staff with knowledge of sign language (for customers with aural disability) #	0.02	0.15	0.822	0.982	0.633
5.9.	Menu for people with special nutrition requirements (due to diabetes, religious reasons, allergies, vegetarians) #	0.89	0.76	14.862***	1.280	16.443***
5.10.	Donations as percentage of annual expenditures of the accommodation establishment (in %)	1.87	3.43	2.295	4.875	2.388
5.11.	Percentage of employees aged 18-30 years (in %)	40.76	28.95	2.921	5.330	1.672
5.12.	Percentage of employees above 50 years (in %)	23.09	28.15	12.905***	7.851**	0.649
5.13.	Percentage of employees from ethnic minorities (in %)	4.83	10.41	0.626	5.644	6.738**

Note: N=84. #Results on a 2-point scale: 0-not applied, 1-applied. Grouping of respondents: *Category* (1, 2, 3 and 4/5 stars), *Location* (urban, rural, mountain, seaside), *Size* (up to 50, 51-100, over 100 rooms).

*** Significant at 1% level; ** Significant at 5% level; * Significant at 10% level

Table 6. Certification of sustainable activities of accommodation establishments

No	Activity	Total mean	Standard deviation	Kruskal-Wallis χ^2 test		
				Category	Location	Size
6.1.	ISO 9000 (Quality management system)	0.13	0.34	5.186	6.098	3.349
6.2.	ISO 14000 (Environment management system)	0.04	0.19	6.148	0.259	0.961
6.3.	ISO 22000 (Food safety management systems)	0.13	0.34	7.525*	2.464	3.349
6.4.	HACCP	0.52	0.50	8.522**	0.221	6.680**
6.5.	Certificates for energy efficiency	0.20	0.40	4.055	1.975	6.388**
6.6.	Certificates for bio/eco food productions	0.02	0.15	0.822	1.543	4.713*
6.7.	Other certificate	0.02	0.15	3.359	1.543	4.713*

Note: N=84. Results on a 2-point scale: 0-not applied, 1-applied. Grouping of respondents: *Category* (1, 2, 3 and 4/5 stars), *Location* (urban, rural, mountain, seaside), *Size* (up to 50, 51-100, over 100 rooms).

*** Significant at 1% level; ** Significant at 5% level; * Significant at 10% level