PROVIDING OF TOURISM ORGANIZATIONS SUSTAINABILITY THROUGH TRIPLE BOTTOM LINE APPROACH*

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Abstract. The hospitality industry’s footprint is characterized by heavy resource consumption and significant waste production. Due to the sustainability there is necessary to use triple bottom line approach, to measure hospitality industry impact on people, the planet and profits (3P criteria). The hospitality has improved its efforts to effectively measure and protect natural resources, but the pillar of social sustainability is increasingly highlighting the role of people. Hospitality sector does not publicly report any of the criteria; only the activities associated with social care and overall welfare. Therefore, we researched possibility to use a joint sustainability index to measure the 3Ps for hospitality industries. The results reveal methods, models, inputs, and outcomes and define the users by anticipating their needs in terms of new sustainability measures in the hospitality industry. The results show that the planet category was weighted the highest, the people category was weighted highly for satisfaction, and profit category was weighted on the upper scale during the research period. This contribution employs a hospitality organization model, but the ideas can be extended to whole other types of organizations.

Keywords: People; Planet; Profit; Sustainability index; TBL – Triple Bottom Line, Hospitality


JEL Classifications: L83, O44, Q56

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1. Introduction

Sustainability has become a mantra for the 21st Century (Dyllick & Hockerts, 2002). There is exhaustive list of definitions explaining sustainability, the oldest one is from 1972 UN Stockholm conference. “The growth of this broader ‘world sustainability’ viewpoint can be seen in the number of companies that have begun reporting on more than just financial operations” (Jackson et al., 2011; GRI, 2002). As sustainable management has evolved to span beyond organizational boundaries, firms increasingly realize the importance of TBL embracing (Shou et al., 2019).

The tourism as “green washing” underwent many redefinitions towards wider aspect of sustainability (Lozano-Oyola et al., 2019; Sheldon et al., 2005). Due to the growing importance of sustainability to the hospitality and tourism industry (Boley, 2011), Elkington made well-known model of the “Triple Bottom Line”, which measure impact of industries on 3P – People, Planet, and Profit. Its goals and objectives are orientated to the sustainability (Elkington, 1997; Ho & Taylor, 2007). This approach intends also to guide managers towards the sustainable operations, supported by government, since sustainability became an agenda, as part of each company objectives (Dyllick & Hockerts, 2002; Lippman, 2010). Regarding TBL approach, companies add to their traditional economical goals (profit) also goals, orientated to the environmental (planet), social and ethical view (people) (e.g. Dainienė & Dagilienė, 2015; Mintz, 2011). To find balance in satisfying every “P” of hospitality life cycle, many challenges arose, all together with ambition of unifying all under joint index. Sustainability in tourism industry is currently indexing the destination, industry, event management, procurement etc. (Janošková & Palaščáková, 2018; Pardo, 2018). But the industry does not index the hospitality organization, not yet considering all aspects of sustainability. Present researches of sustainability in area of tourism are orientated only to the motivations and attitudes of tourism services users (Dinica, 2018; Faux, 2005).

Different development of hospitality and tourism policies became in many ways source of new pressure for creating competitive measurable environment (Khan, 2017). Promoting and realizing unbearable situation with increased waste production challenges in employing and maintaining right people with service focused minds and sufficient business revenues (Lee & Park, 2009). This situation brought another opportunity for creation of new hospitality sustainability indexing, covering all aspects for 3P model under sustainability. Elkington 3Ps serves currently as the referential model of each hospitality company or tourism destination. Stakeholders and shareholders are part of sustainability in form of a produced „carbon footprint“, employee happiness index and societal impact reflected in employment, ecology, community service etc. (Elkington, 1997).

Tourism has been defined by the United Nation World Tourism Organization as a social, cultural and economic phenomenon that involves the stay of people in countries and places beyond their standard home for personal or professional purposes (Butzmann & Job, 2017). World Travel and Tourism Council (WTTC) raises awareness of tourism as one of the largest industries supporting 266 million jobs generating 9% of global GDP. Due to the tourism importance to sustainability, we face a large amount of “tourism product” - accommodation and services (UNWTO, 2014). A whole phenomenon of tourism is repeatedly affecting the global environment through people and planet. The society has responded promptly to this growing trend, establishing measurable unit under the term “carbon footprint”, directly or indirectly caused by the activity (WTTC, 2018; Lynn, 2009). This lifetime of the product can be incorporated into one common and consistent model, consisting of data from all three dimensions of sustainability. This is presently part of corporate social responsibility (e.g. Fry et al., 2018; Agan et al., 2016; Kang et al., 2010; Antošová & Csikósová, 2016).

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Science documented negative impacts of tourism on the environment. The research regards environmental and sustainability considerations. As presented by Willard and Faux nowadays we faced a wave of anti-globalization and a wave of sustainable development and Breakthrough Decade (Willard, 2002; Faux, 2005). The best-known contemporary researcher on sustainable development with a clearly defined model is John Elkington, who found Triple Bottom Line Approach (TBL). This approach represents an effective tool of what sustainable development should be. TBL approach in area of tourism shows how tourism affects both the people who use its services and the people who work there, and to what extent the environment itself and the entire planet is influenced by tourism (Faux, 2005). One of the most challenging aspects of TBL implementing is its. This is associated with developing meaningful social, economic and environmental indicators. The greatest challenge of these is associated with attempting to quantify environmental and social impacts (see, for example Tyrrell et al., 2013; Skouloudis et al., 2009). There is a need to tailor these indicators for specific industry sectors, such as tourism industry, since tourists in different market segments can generate different environmental and social impacts on destinations (Dwyer, 2005). In addition, the term tourism industry contains organizations producing highly heterogeneous products (e.g., accommodations, food services, recreation and entertainment, transportation and travel). This heterogeneity of the tourism sector further complicates the development of universal social and environmental impact measures (e.g. Dwyer & Forsyth, 2008; Slaper & Hall, 2011; Mihalčová et al., 2014).

Despite these difficulties, a review of the existing literature reveals some early attempts to identify meaningful measures of sustainable tourism impact. WTO developed 11 destination-specific core indicators to measure sustainable tourism impact. Indicators include site protection, stress, use intensity, social impact, development control, waste management, planning process, critical ecosystems, consumer satisfaction, local satisfaction, and tourism contribution to the local economy. WTO indicators had been categorized into ecological indicators (site protection, stress, use intensity, waste management and critical ecosystems); social indicators (social impact, local satisfaction); economic indicators (social satisfaction and tourism contribution to the local economy); and planning indicators (development control and planning process) (Stoddard et al., 2012; Rogers & Ryan, 2001). The importance of these indicators varied by local authority type: regional councils preferred ecological indicators, territorial local authorities preferred economic indicators, and regional tourism organizations preferred both economic and social indicators. Generalized and global sustainable tourism guidelines could be successfully employed at a local level.

On the other hand, there is a difficulty of sustainable tourism scale development in four areas (Dymond, 1997). First, there is difficulty in differentiating between natural changes versus change that can be attributed to tourism activity. Secondly, tourism impact tends to be measured in one-year or five-year increments. But social or environmental changes take tens of years to manifest. Third, the choice of measures of tourism impact is often subjective in nature and may be based on popular recognition rather than utility. The present study represents the innovative approach to evaluation of sustainability in the hospitality industry. Innovation is made by hospitality sustainability index, with model offering exact categorization of each factor of Elkington 3P model (Elkington, 2004). The use of the model is done by applying multi-criterial decision utilizing AHP matrix. Proposed model of the research realizes that profit is also the pressure created on employee’s productivity to deliver forecasted profit that needs to be reflected in the social aspect of the proposed model.
Development and use of the proposed model of sustainability in tourism could be an effective way how to create pressure on business units to satisfy all involved (Lee et al., 2010; Hughes, 2002). It means competitive environment asking for seeking the new ways of improvement and indicator assessing sustainable criteria. By this way model can become part of any free search engine and rating platform, as well as a governmental tool of control.

Due to the mentioned literature review the goal of the contribution is to evaluate sustainable development through triple bottom line in chosen tourism company in Slovakia – Hilton Hotels and Resorts. The choice of this type of tourism organization results from the global brand of full service of Hilton Hotels and Resorts, which presents flagship brand of multinational hospitality company in area of tourism sustainability.

2. Materials and Methods

In general, the most desirable outcome of the research is to find all criteria in perfect balance, when all pillars would be fully satisfied. It presents the index where People satisfaction (stakeholder, employees, and guests), shareholder under Profit pillar, and Planet protection (minimum waste and consumption of resources), would be in the ideal world with 100% satisfaction for each factor and each category, as shown in the following graph at Figure 1.

![Fig. 1. HSI general model, graphical display of results in stage of Equilibrium for each category](source: graph created in Inkscape software)

Process of the research can be described by following steps illustrated Figure 2.
Data collection of the research started in 2015; different types of questionnaires were designed measuring the guest satisfaction and the team member satisfaction. The designed questionnaires were distributed by an online survey called SALT (Satisfaction and Loyalty tracker). Full data collection became a platform for model definition and KPIs comparison, and finally framed in 2018. Each data/factors fall under the separate 3P model category, later entering the AHP matrix.

Key performance indexes (KPIs) of environmental aspect were defined by hotel chains of the world. KPIs consist of the measurement of water consumption, energy consumption and waste production. We considered direct and indirect consumption of waste and water.

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Entry data and factors defining the “People” category: “People” category data represent findings as people - the guests and people – employees’ satisfaction. Guest’s satisfaction data was directly gathered from SALT, and data for employee satisfaction from annual TMOS survey (Team Member Opinion Survey).

- Entry data and factors defining the “Planet” category: “Planet” category data represented collection of water and energy consumption and waste production. Due to the data processing we used Lightstay software on a monthly basis. Data were updated and monthly reports figures provided the source data for the proposed model.
- Entry data and factors defining the “Profit” category: When realizing the primary need to get back the investment with further profits, we obtained data on return on investment and other investors KPIs. Justifying profit as the only entry data for this research proposed a model of the hospitality sustainability index calculation would not be complete and correct.

Data from 2015 up to 2018 included revenues and profits. They have been processed into the proposed sustainability model for the analysed organization by linear conversion. That approach was also applied for water...
consumption, energy consumption and waste production measures. Only the questionnaires from SALT and TMOS in form of percentage representing total satisfaction have been inserted directly into model for each factor.

Result of the calculation was defining analytic hierarchy process (AHP). It was done by entropy and weights given by experts (e.g. Saaty & Peniwati, 2008; Cingula et al., 2013; Saracoglu, 2013; Crouch & Ritchie, 2005). The next way was to use end results of KPIs representing measured P. The aim was to avoid any doubt of expert judgement choosing and defining weight for each factor. AHP was considered from different perspectives, when formulating the final index. Although the same data will be used, with potentially different weights assigned, results might differ accordingly. With intentionally changed weights of factors entering the AHP, different results might be desired for different user/evaluator/decision maker (Kim et al., 2017).

Therefore, the factors assigned for each category (P) were in calculation either assigned by weight provided by entropy, or by manually assigned weights (expert entries). Those different models served as a base model for the case study. Case study defined a weight of each factor of the model serving the hospitality sustainability index, judged by government/local municipality or client selecting, or employee selecting, employer etc.

To minimize potential manipulation of the model, entry data and weights are numbers (direct results of questionnaires representing, the direct opinion, direct measurement, figures evaluation of the factor). Weights are assigned directly by entropy. Due to the different potential users of Hospitality Sustainability Index (HSI) (represented in one number), the end result is not indicative enough for all parties. This would limit its wide use and ability to provide sufficient information for the decision makers. Based on the multi-criteria evaluation, evaluating the 3P, proposed general HIS index can naturally offer several modifications (weights amended = weight defined).

### 3. Results

The research results explain and calculate sustainability index in the chosen organization. Weights are calculated by entropy. Due to the contribution extend, we will illustrate results in 2018 (see Table 1.) and compare them with other results from research period.

<table>
<thead>
<tr>
<th>3 P</th>
<th>Criteria</th>
<th>3P weights calculated by Entropy</th>
<th>Weights of factors calculated by Entropy</th>
<th>Year End results</th>
</tr>
</thead>
<tbody>
<tr>
<td>People</td>
<td>Employee satisfaction</td>
<td>-</td>
<td>0.877177496</td>
<td>0.803</td>
</tr>
<tr>
<td></td>
<td>Guest satisfaction</td>
<td>-</td>
<td>0.122822504</td>
<td>0.617</td>
</tr>
<tr>
<td>Planet</td>
<td>Energy consumption</td>
<td>0.385634353</td>
<td>0.187807589</td>
<td>0.716</td>
</tr>
<tr>
<td></td>
<td>Water consumption</td>
<td>0.424854552</td>
<td>0.422975852</td>
<td>0.817</td>
</tr>
<tr>
<td></td>
<td>Waste consumption</td>
<td>0.189511095</td>
<td>0.389216558</td>
<td>0.805</td>
</tr>
<tr>
<td>Profit</td>
<td>Revenues</td>
<td></td>
<td>0.937550464</td>
<td>0.709</td>
</tr>
<tr>
<td></td>
<td>Profit</td>
<td>HIS 79.611</td>
<td>0.062449536</td>
<td>0.555</td>
</tr>
</tbody>
</table>

*Source:* processing in Inkscape software
HSI entropy 2018 with the 79.6 score was allocated with the highest weight - 42% to Planet category. People category with high satisfaction of Employee and Guest, has been given the 2nd highest weight of 38%. Profit is on an upper scale by entropy with weight of 19%, when analysing development from 2015-18 (as shown in Figure 3).

![Fig. 3. HIS general model, Entropy, graphical display of results on the 3Ps triangle](source: processing in Inkscape software)

HSI general model from the view of equal weights is given by Table 2.

<table>
<thead>
<tr>
<th>3 P</th>
<th>Criteria</th>
<th>3P weights provided</th>
<th>Weights of factors provided equally</th>
<th>Year End results</th>
</tr>
</thead>
<tbody>
<tr>
<td>People</td>
<td>Employee satisfaction</td>
<td>0.333333333</td>
<td>0.5</td>
<td>0.800</td>
</tr>
<tr>
<td></td>
<td>Guest satisfaction</td>
<td>0.333333333</td>
<td>0.5</td>
<td>0.617</td>
</tr>
<tr>
<td>Planet</td>
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<td>0.333333333</td>
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<td>0.333333333</td>
<td>0.333333333</td>
<td>0.805</td>
</tr>
<tr>
<td>Profit</td>
<td>Revenues</td>
<td>0.333333333</td>
<td>0.5</td>
<td>0.709</td>
</tr>
<tr>
<td></td>
<td>Profit</td>
<td><strong>HSI 70.7</strong></td>
<td>0.5</td>
<td>0.555</td>
</tr>
</tbody>
</table>

*Source: processing in Inkscape software*

HSI equal weights model in 2018 with result of 70.7 is in comparison with an entropy model figure lower by 8.46 points. Figure 4 compares the results from the view of entropy and equal weights.
Almost in all cases method of entropy calculated for HSI higher result than when HSI was provided by calculation with equal weights. For this case, averagely Entropy scored +10 vs. method of equal weights. Only in 2015 equal weights was higher by 22.3 points.

Following are the predetermined HSI users benefiting from proposed basic HSI model:

1. People - as employees (selecting based on HSI their employer).
2. People - as guests (selecting hospitality organization to stay based on guest satisfaction).
3. Profit - as investor (selecting existing hospitality organization as investment).
4. Planet - as natural resources usage (government as regulator).

For calculation of HIS, benchmarking indexes were proposed. They serve as market differentiation and measuring tool for the users:

1. HSI Enviro – Environmental focus.
2. HSI Social – Social focus.
3. HSI Guest – Guest stay focus.
4. HIS Invest – Investment focus.

All indexes are illustrated by Figure 5.
In 2017 Entropy calculated the highest score for performance. It followed by the second HSI Equal weights method. In HSI model, the best performer was HSI Enviro with 71.5. The lowest was HSI Guest with 66.3. Performance in the analysed organization in 2018 received the highest evaluation in HSI Enviro score (72.5) and the worst rating was HSI Guest with 68.4. In general, four years of research measured by entropy, sustainability showed overall the highest scores. According to applied HSI focused indexes, performance varied slightly, but copied same trend in last three years.

4. Discussion, limitations and implications

The question that has to be addressed when considering TBL, is applying to tourism development projects. The question is whether synergies can be achieved between the development tourism organization and the community within which it operates. Dwyer (2005) provided many benefits, which may accrue to the organization of tourism development. Among these benefits belong – marketing, operational, strategy and relational benefits (Skouloudis et al., 2009). Operational benefits refer to cost savings and operating efficiencies. For the tourism organization, TBL can identify potential cost savings. It means enhanced design and operational efficiencies, recycling and waste reuse, reduced operating costs and transportation, etc. Result of the increased sensitivity of tourism organization toward its environmental and social impacts means a better understanding of organization contribution to sustainability. Also human resource costs can be reduced when employees are retained and attracted by an organization that focuses on sustainability. Finally, capital costs may be reduced when the organization has improved access to “ethical” and “green” investment funds.

From marketing perspective, tourism development organizations can benefit from adopting the approach of TBL through improved market positioning (McCool et al., 2001). The result of an improved market positioning can arise when its consumers become aware of the social and environmental sensitivity of the organization (Savitz & Weber, 2006). The adoption of TBL by tourism organizations could result in increased competitive differentiation. This in turn can facilitate the organization’s ability to attract new markets as well as encourage
repeated visits. TBL might also benefit the tourism development organization via enhanced stakeholder relationships. TBL approach can improve organization of tourism sustainable development by proper strategic decision-making.

The results of HSI calculations mapped the history and evolving trend applied on the selected hospitality organization. Model with automatic entropy calculation and the model with the adjusted weights proved the different final result. But the joint index reflects how successful the sustainability of selected organization was. The index respects all three basic components or criteria and its representatives. Together with understanding and proven records, use and popularity of AHP model has been used as base of HSI calculation, experts’ evaluation and expert judgment of weights. The research also concluded that the standardized approach to each factor data inputs must exist due to the correct results. Probably the biggest challenge in the past was how to unify measuring of water, energy, waste production in different hospitality types. Heating and cooling days are completely different in Africa, comparing with Northern Europe, etc. This demands long-term data collection, with aim to create industry standards. Profit and revenues are the only data that are well measured and standardized. The current challenge comes in aspect of Social pillar, measuring the guest and employee satisfaction in same way worldwide. The TBL helps the tourism industry to benefit from sustainability (Mousavi et al., 2017).

Conclusions

The research aimed to search possible using of existing evaluation of sustainability in hospitality area, where everyone would be happy by proposing hospitality sustainability index. Ability to sustain was firstly introduced as ecology, “the very expensive thing for hoteliers”. Later it was defined as cost cutting, profit increasing technique. Big corporations, receiving the highest public pressure realize importance of all aspects of sustainability. Such corporations progress the most.

Novelty of the research brought model of calculation of the index measuring all 3Ps, helping to differentiate hospitality organizations. Hospitality sustainability index of competitive advantage was proposed to create further a competitive environment within the hospitality sector. Proposed HSI calculated with AHP method of entropy was compared with equal weights assigned model. All new HSI users need to understand that sustainability is generally accepted as component of 3P. They would probably judge differently and put different weight to a certain aspect of the model.

The results of the paper present contribution to the sustainable development of tourism from the view of preventive, environmental initiative, intended to minimize waste and maximize product output, as well as an increased contribution for all stakeholders, which is the goal of TBL approach as well. Although in this work we employ a hospitality organization model, the ideas can be extended to whole other types of organizations.

References


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