Accounting for Sustainability: Environmental Indicators from Croatian Hotels

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Abstract

Hotel industry trends have for some time been strongly oriented towards sustainable development and environmental management accounting (EMA). The aim of this article is thus to present data on key steps leading toward the effective incorporation of EMA within hotel performance information systems. Research evidence has been obtained via 180 (4-5 star) hotels located in Croatia. Interviews were undertaken with key personnel and through an online survey which focused on key business areas considered vital for successful EMA integration. The research results suggest a framework by which hotels can determine the existing level of their sustainable and environmental business. Furthermore, management understanding of the sustainability concept has been proven to lead to an appreciation of sustainable hotel operations and their performance.

Keywords: Environmental management accounting (EMA), corporate social responsibility, CSR, sustainability, hotel industry

Background

The direction of current business trends is strongly oriented towards sustainable development (Beloff, Tanzil, & Clarke-Whistler, 2007; Vejzagić, 2009). Some authors (Beloff et al., 2007; Idowu & Towler, 2003) recognise enormous benefits for businesses around the world if they actively embrace both environmental as well as social concerns. On the other hand though, there is a little empirical evidence describing the relationship between corporate environmental performance, and the level and nature of voluntary corporate environmental reporting practices (Hahn & Kühnen, 2013). In order to successfully meet the varied and complex challenges of this increasingly sustainable environment, organisations need to 'rethink' their accounting performance information systems (Innes & Norris, 2003; Tencati, Perrini, & Pogutz, 2004; Vejzagić, 2009) – not least in the hotel industry.

Achieving optimal efficiency of market operations largely depends on the quality of management. For some years now, environmental concerns have become a business opportunity for successful hotel management (Goldstein & Primlani, 2012). Externally, Gale (2006) identified opportunities from the standpoint of addressing business advantages and environmental achievement to stakeholders through a hotel's reporting system (PricewaterhouseCoopers, 2015).

Internally, meanwhile, eco-efficiency has become an integral variable of process and/or activity improvement management, directed towards minimisation of uncertainties and risks and opening new opportunities for overall business success. The main assertion is that traditional accounting instruments cannot address those challenges presented by the process of sustainable development (Aglietta, 2014; International Accounting Standards Board, 2005; Vejzagić, 2009).

1 Introduction

The role of environmental managerial accounting (EMA) is defined as the provision of a wide range of financial and non-financial information regarding the environmental impacts of an organization, with the purpose of managing and improving its financial and environmental performance through the efficient use of organizational resources (Jasch, 2009). EMA has been developing since the 1990s (Qian & Burritt, 2009) and employs a number of different techniques and tools designed to assist organizations in recognising and managing their environmental impacts. Most commonly used tools include: environmental cost accounting, full cost accounting, life-cycle costing, environmental life-cycle budgeting, environmental capital investment appraisal, total quality environmental management, and material and energy flow accounting (Schaltegger, Viere, & Zvezdov, 2012; Yakhou & Dorweiler, 2004). While environmental financial information is expressed in terms of costs, benefits, savings or related activities that potentially have an impact on the environment, non-financial information (Jasch, 2011; Xiaomei, 2004) is directed in terms of use, flows and energy intensity, and water and materials including waste, etc. (United Nations Division for Sustainable Development, 2001).

As Bennett, Bouma, & Wolters (2002) claim, the EMA system enables an increase in quality of performance management related to the activities of promotion and protection of the environment. Such a system should also be able to help hotel management in the process of operational and strategic planning, emphasizing the need for EMA as an integral factor in improving the economic and ecological processes and hotel activities (Sulaiman & Ahmad, 2006). The EMA follows up on all consumed input values and their flows in business processes, and it records and reports on productive and non-productive outputs through their financial and environmental impact value.

Early research shows that environmental and related financial values are important for making investment decisions in situations where such information is affecting the decision (Environmental Protection Agency, 1995). Since processes of investment decisions at the company level have generally shown that it is a multi-criteria process, it considers not only economic and risk factors, but also political and socio-environmental and governmental (regulation) factors (Enoma & Mustapha, 2010). Information about the impacts of subsistence allows the identification, allocation, and transformation of eco-costs, and thus the assessment of their potential impact on the business decision making process, and creates opportunities for eco-cost reduction. On the other hand, reporting on environmental costs and impacts also represents a specific starting point for calculating and providing information on the eco-efficiency at the strategic and operational levels of the hotel business.

Seen in this light, eco-efficiency is an interconnecting concept within sustainable development, which internally bridges the ecological and economic components of business and serves as an indicator of the demand for natural resources and the need for a process of de-materialization (Hák, Moldan, & Dahl, 2007). Therefore, the goal is to enhance value-added products with the least impact in the stage of creation, use, and disposal (International Accounting Standards Board, 2005). Basic characteristics of the eco-efficiency approach as an instrument for the analysis of sustainability is primarily an induction of an empirical relationship between economic activity and costs and benefits of environmental impacts (Huppes & Ishikawa, 2007). In our research, hotel information systems' ability to calculate and use eco-efficiency indication of certain business processes, programs and/or activities represent an advanced stage of environmental management systems (EMS) development and introduction.

3 Research

More than a decade ago research of hotel practice revealed that over 70% of the hotels provide specific information about CSR, while about 64% of hotels also publish their environmental policy (PricewaterhouseCoopers, 2006). However, only about 28% of hotels articulated commitment to corporate responsibility at the highest level, and just over 30% of the organizations possess control systems to control the elements of corporate responsibility.

About the same percentage of hotels provide relevant information about corporate responsibility (e.g., health and safety, resource use, waste generation, work with the local community, etc.), while another 25% provide only limited information. The main task of the research was to observe hotel organizations from the perspective of their environmental approach to the overall business in a number of interconnected areas of a hotel business and the level of systematically implemented EMA tools:

Environmental policy and/or strategy – The information presented in the environmental policy or strategy are revealing the initial determination of the organization towards the environmental issues and generally describe the efforts that will be undertaken and/or are being taken in the direction of its improvement and preservation. The underlying assumption is that the environmentally oriented hotel management system would struggle towards development and implementation of goals based on the strategy of "triple bottom line" (Elkington, 1998), usually in line with the "3P" approach, standing for profit, people, and planet. This provides a solid base for development of measurement and reporting tools for energy and water consumption, as well as for waste management, with built-in management guidelines around conservation of resources, cost savings (control), legal compliance, and improved relations with the local community. Business systems that accept the principle of sustainable development at the top management level and integrate those principles in their strategic development plans disassociate from achieving only short-term results (International Institute for Sustainable Development, n.d.).

Environmental investments – The research of Pereira-Moliner et al. (2015) shows reactive and proactive environmental behaviour in hotels in which above average business performance levels achieved are significantly more connected to environmentally proactivity. This depends on the strategic information and assessment of costs at all stages of the product lifecycle programs, processes and activities, creating a base for environmental investments inclusion. The strategic management role includes planning and directing investments in long-term programs expected to support future financial benefits of the organization ("What is strategic planning?" n.d.). Margolis & Walsh (2003) reported a mainly positive relationship between environmental and financial constructs.

Organizational culture – Corporate sustainability starts with a company's value system and a principled approach to doing business ("The ten principles of the UN Global Compact," n.d.). Implementation and integration of the values associated with the protection and improvement of environmental quality in an organization's culture is a fundamental feature of the development of the EMS in business entity. With sustainability initiatives like the Global Compact, companies are trying to set the stage for long-term success (United Nations Global Compact, 2015). Organizations that support a precautionary approach to environmental challenges, like promotion of greater environmental responsibility and the development and diffusion of environmentally friendly technologies, are reporting progress in applying principles, and are defining EMA frameworks in which other companies can operate.

Eco-labels/certificates – are defined as the way hotels communicate externally, indicating their environmental efforts and the shape of the market attitude towards them (Global Ecolabelling Network, 2004). They cover the area of an environmentally friendly construction and design of the hotel, introduction of the EMS, certain eco-processes (i.e. organic food, purchase of energy produced from sustainable sources, eco-supplier procurement policy, etc.) and eco-education. The process was initiated in Germany in the late 1970s and was on a completely voluntary basis. Today, world tourism recognises 52 different eco-labels ("Ecolabel index," n.d.). The idea is to help consumers when choosing and buying those products and services that have environmental credentials (e.g. Green Spot, Nordic Swan, the US Green Seal, etc.). A connection to EMA is established through the eco-labelling practices that require comprehensible, and reliable information: the consumer must understand and be able to trust the information conveyed (Global Ecolabelling Network, 2004). This provides the ecolabelling process with the necessary institutional frame (Rubik & Frankl, 2005).

EMS – shows how corporate environmentalism is transforming business operations, as quality management did previously (Berry & Rondinelli, 1998). In EMS policies hotel management expresses the importance of the development and implementation of EMS as the main process towards standardization in managing the hotel's business operations related to environmental protection ("Corporate social responsibility," n.d., "Environment," n.d., "Environmental impact," n.d., "Sustainability," n.d.). EMS is based on the control of natural resources and the implementation of a measurement-based methodology (Markandya, Perelet, Mason, & Taylor, 2001), and it represents part of an integrated management system which includes organizational structure, planning activities, responsibilities, procedures, activities, processes and resources for developing, implementing, achieving, and monitoring and maintaining the environmental policy (Črnjar & Črnjar, 2009).

Thus, EMS aims to protect the economic interests of organizations while managing processes and effects arising from the interrelationship of environmental and economic components of sustainable development within a hotel (Robbins, 2007).

Eco-benchmarking – is an integrated component of a comprehensive EMS strategy (Block & Marash, 2002), 2002) used to track and document eco-efficiency results. It is recognized as the process of EMA for comparing a metered value of a current environmental performance with its baseline over time, within and between peer groups (Energy Star, 2013). The goals established for an individual benchmarking program determine the data outputs required (e.g. gross resource consumption, greenhouse gas emissions, energy cost savings, etc.). The output metrics selected for the benchmarking program meanwhile dictate the data inputs required (Energy Star, n.d.). The EMA ensures the relevant databases and specific indicators are in accordance with the requirements of target users that should enable timely and relevant long-term and short-term business decisions.

Eco-taxation – is imposed for environmental reasons (Smith, 2008) or as an instrument for fiscal consolidation (OECD, 2010). Theoretical research believes that higher rates of environmental taxes will increase the price of inputs (Popp, 2002), but at the same time will encourage a higher level of environmental innovation, technology, and knowledge (Höglund-Isaksson & Sterner, 2010; Johnstone, Haščič, & Watson, 2011; Kumar & Managi, 2009; Schoenenberger & Mack, 2009). Since eco-taxation, observed from different angles, is an obligation towards the state for the unrealized environmental goals (Bachus, 2012), an expense ("Glossary of tax terms," n.d.), a market price instrument (Črnjar & Črnjar, 2009; Kosonen & Nicodème, 2009) or instruments for achieving the objectives of economic and environmental efficiency (Fullerton et al, 2008), it has significance for the hotel's positioning toward the regulators and regulations passed. At the same time regulatory demands, through environmental goals, become an expression of the minimum values of a hotel's environmental sustainability ("Corporate social responsibility," n.d.).

Eco-processes – Based on the research of (Huppes & Ishikawa, 2007) the reasons for the implementation of eco-efficient activities in a hotel's business processes is associated with the ability to achieve satisfactory operating results from the acceptance of such a business model. The EMS role to identify a source of negative environmental impacts is ensuring alignment of goals set in policy (Block & Marash, 2002), not only in the production process, but also in the phase of the design and construction of the hotel and in the procurement of equipment (Tambovceva, 2010). Similar to quality management, the improvement of ecoprocesses includes objectives identification, analysis of the current situation, and the improvement of existing or development of new approaches, developing a plan of changes and its implementation, and, finally, results measurement (Hoyle, 2009; Mutafelija & Stromberg, 2003). In this way, the existence and recognition of eco-processes in hotel organization in all their structural complexity should indicate the presence of EMA tools.

The research intention was to obtain information about a "natural" path for the EMA integration into the hotel's overall EMS. The logic behind this would be that the satisfactory level of eco-efficiency of hotel business processes and activities in eco-hotels can be achieved if relevant requirements at the strategic level are met (e.g. sustainable building, eco-technologies introduction and eco-education of employees).

4 Methodology

An initial pilot study was conducted on a sample of twenty environmentally conscious hotels in the UK recorded in the database "Eco Hotels of the World". A year later, the survey was then conducted on the sample of 180 hotels in Croatia, 25 of which were five-star- and 155 four-star-hotels. The overall response rate was close to 40%.

The design and wording of the research questions started with the premise that EMA has, or may have, a significant role to improve the hotel's overall business sustainability. Existing traditional accounting frameworks are still widely seen as delivering inadequate information support for successful environmental decision making (Jasch, 2003; Namakonzi & Inanga, 2014). More specifically then, **the first goal** was to comprehend the level of consciousness of hotel management's dealing with the environmental protection process and the environmental impact of hotel operations. The analysis takes into a consideration managerial opinion and position on the general and specific environmental aspects in the hotel business practice. Examined is how environmental regulations, eco-taxes and the influence of authorities impact on hotel operations, and the role of eco-benchmarking on the development of EMS.

The second goal, meanwhile, was to establish an EMA implementation model based on observed natural and logical course of development and implementation of the entire integrated system for environmental management at hotels. To achieve this goal, the role of EMA was to be determined in various stages of environmental management component introduction and importance that different environmental performance indicators may have for the short and long-term decision-making process.

5 Results

The research results (Table 2) indicate that in 77,1% of the Croatian cases, as compared to 95% in the UK (pilot study), the presence of environmental elements that are tracked in the hotel business through an environmental policy based on SMART (Specific, Measurable, Attainable, Relevant, Time-bound) goals. These objectives – identified in the environmental strategy – clearly indicate that the current global environmental trends have reached the hotel industry in Croatia. Almost every hotel manager both in interview and questionnaire claims to plan further environmental management structure development. Also, at this stage of strategic objectives prioritization, environmental objectives are identified as the key part of overall business strategy in 81.4% of the Croatian cases (100% in the UK). Among the priority objectives, energy (100%), water consumption 55,6% (57,9% in the UK), and recycling program development 46,3% (36,8% in the UK) rank as top three. The opportunity costs of achieving these goals are minimized and transparent in 81,5% of cases (73,7% in the UK).

Environmental policy is considered an initial and crucial step towards the planning of environmental processes, EMS implementation, and general sustainability practice development, so 81,5% (78,9% in the UK) of mangers actively monitor the compliance of this policy. Thus, from an accounting perspective, the perceived level of correlation between a successful environmental policy implementation and its effective monitoring and results evaluation through a reporting system, is high or very high in 57,4% (79,4% in UK) of the cases (arithmetic mean=3,6111). Also, 46,3% of Croatian respondents (78,9% in UK) believe there is a high or very high positive relationship between the overall business results and the successful implementation of environmental policy (arithmetic mean=3,4815, SD=0.92636).

The planning process, as a starting point in the operationalization of environmental strategies, covers certain level of annual resource investments in knowledge and application of environmental technologies, projects, and training programs for employees. Thus, 61,4% (85% in the UK) percent of the sample run such a visible approach to investment programs. Volume and structure of environmental investments in the total investment budget show the importance and the determination in which management approaches the achievement of defined environmental objectives. In 27,9% of the cases (41,2% in the UK), eco-investments are represented as 1 to 2,99% of total investments, while at the same time 72,1% respondents (82,4% in the UK) achieved planned eco-goals within the time defined in plans and budgets. Interestingly, the largest number of respondents (30,2%) could not estimate the annual level of environmental investments.

A distinction was made between voluntary and mandatory investments which the hotel takes. The largest number of respondents in Croatia (30,2%), the structure of eco-investments falls in the bracket of 75 / 25% obligatory vs. voluntary, while less than 5% (4,6%) of hotels are ready to undertake eco-investment on a mainly voluntary basis. For comparison, in UK hotels, the environmental investment program primarily aims for increases in energy savings (70,6%) and decrease in carbon footprint (11,8%). Further, Croatian hotels highly value programs in energy savings (39,5%), while close to a third (30,2%) invests in compliance with actual or anticipated environmental regulation.

Based on hotel management accounting logs and cost behaviour observations, some hotel managements claim up to 40% of initial eco-cost savings from "zero money investment programs". These programs were based on application of a "common sense approach" (switch it off if not in use, regular maintenance, etc.), aimed to enhance their employees' environmental awareness through education. Respondents agree in 46,5% (70,6% in the UK) that the environmental information and related eco-costs are very important for the development of an eco-investment program (arithmetic mean=3,6744, SD=0,80832).

However, it is a strong belief that the systematic development of environmental corporate value system (culture) should be the first step in the introduction of an effective EMS (Dawes, n.d.). The existence of such a value system is confirmed by 62,9% of respondents (85% in the UK). Like UK managers (96,1%), Croatian managers believe that the principles of sustainable development are extremely or very important (93,2%) for the development of corporate culture and ethics (arithmetic mean=4,2273, SD=0,56501).

Also, 96,1% of respondents (94,1% in the UK) believes that proclaiming sustainability and environmental awareness development in the hotel business is unthinkable without environmental education of employees. This is considered of utmost importance for building a system of corporate environmental awareness (arithmetic mean=4,5227, SD=0,53936). From the financial point of view, 54,5% of respondents (41,2% in the UK) believes that the development of environmental responsibility correlates to some extent with the growth of hotel revenues. The main difference is that 47,1% of UK managers estimated this level of correlation as high (arithmetic mean=3,7059, SD=0,68599), while only 27,3% in Croatia (arithmetic mean=3,5, SD=0,79241) held that opinion.

The formalization of corporate culture characteristics such as CSR, is usually expressed through an external certification by implementing eco-labels and/or eco-certificates for certain business processes, products, services, or the hotel building. The goal is to impact the perception of external stakeholders. While the image of a hotel is expected to be enhanced on the market, only 35,7% of hotels actually own such a label (65% in the UK). Furthermore, results show that 24% of respondents believe there is an exceptional level of correlation between eco-labelling and the hotel's business results (UK 7,7%), while 52% believes that there is a certain level of correlation, while 12% believe there is no correlation at all (arithmetic mean=3,12 SD=1,26886). This may indicate the lack of instruments for monitoring the effects and realistic understanding of eco-labels and eco-certificates correlation with business results in hotels. Interestingly, 76% of respondents (61,5% in the UK) argue that there are agreements with participants in the value chain of hotel products (eg. suppliers) that encourage the eco-efficiency of their business.

It is observed that the existence of a relevant and effective EMS represents the foundation for further implementation and structural development of an eco-philosophy which 24,3% of the hotels have introduced (40% in the UK). Of the hotels that have introduced the EMS, 64,7% are using the ISO 14001 system (37,5% in the UK). The remainder, or 35,3%, have developed their own environmental management system (62,5% in the UK), aimed at improving environmental and financial performance of the organization and communication of environmental achievements with stakeholders.

The results also show that 100% of respondents (62,5% in the UK) believe that the EMS is important or very important for lowering the eco-costs (arithmetic mean=4,5329, SD=0,99262). This indicates that the EMS is a very important factor for improving the quality of a hotel's environmental business, at the same time offering confirmation of Haider's (2010) theoretical settings of the connection between these two elements of business. In addition, 35,3% of respondents (25% in the UK) consider EMS to be extremely important for improving hotel's financial performance, while a majority of 52,9% does not believe that EMS has any relevance for financial performance improvements (arithmetic mean=3.2941). This indicates that an EMS on average represents only a somewhat important factor for overall business result improvement.

Although, 64,7% of respondents (75% in the UK) confirmed that the successful implementation of the EMS is the basis for successful implementation of EMA, only 20% of respondents supported existing EMS with the EMA tools that allow measurement, evaluation and monitoring of environmental performance. Interestingly, 58,3% of respondents that implemented such tools, defined clearly the eco-costs within the accounting system (25% in the UK) and 66,7% uses standardized EMA methods (25% in the UK). Further, 75% of them (50% in the UK) say that the eco-costs are actively involved in determining the market price policy for the hotel's products. The extent of insufficient coverage of eco-costs is needs to be further tested.

The results show that 41,7% of respondents (50% in the UK) estimate the share of eco-costs participation in total costs of the hotel in the range of 0 to 4.99%, and the third of estimated between 20 and 25% of total hotel's costs. Previous research of DeSimone & Popoff (2000) presented eco-cost estimates by management, where in initial stages of EMS introduction the estimates of eco-costs averaged between 2 and 3%, and later, in the phase of implementation and integration of EMS, these estimates ranged between 15 and 25% of total costs, depending on the business branch. Hotel managers that estimated eco-costs in the range of 20-20% already have implemented or are implementing EMS in their company.

In the research, it was important to determine the extent to which the various methods and techniques relevant to the measurement and report of eco-costs of the hotel, based on the research (Wisner, Epstein, & Bagozzi, 2006) on elements of the relationship between the value of a financial and environmental performance. The results show that Material Flow

Analysis – MFA (avg. grade=4,4167), Life Cycle Assessment – LCA (avg. grade=4,3333), Life Cycle Costing – LCC (avg. grade=4,3333) methods are of the greatest importance for the measurement and reporting on eco-costs. In the UK, relevant techniques are Material Flow Analysis – MFA (avg. grade=3,5), and Risk Management Techniques (avg. grade=3,25).

For Croatian managers, the importance of EMA and the eco-cost reporting for the development of certain business aspects is mainly seen in the process of long-term decision making and alignment with present/future eco-legislation (avg. grade=4,75). The most important aspect of eco-costs for the UK managers is corporate image improvement (avg. grade=4,25), Croatian managers place it on third place (avg. grade=4,4167), followed by business strategy development (avg. grade=4) and alignment with eco-legislation (avg. grade=4).

The structure and content of EMA reports on eco-costs and other environmental information, to provide information relevant to business, is based on reporting on energy efficiency and water and waste management in 91,7% of cases (75% in the UK), compliance with environmental regulation for 58,3% (50% in the UK), and environmental employee education for 75% of cases (same as UK). Information about eco-costs can be found in 58,3% of reports presented (25% in the UK). Information on carbon footprint can be found in 58,3% of Croatian EMA reports (80% in UK).

A system of eco-benchmarking for the information has been integrated into the 17,1% of the hotel reporting systems (47,4% in the UK). The survey found that 11,1% of respondents performing eco-benchmarking has not implemented any of the available ecological indicator systems, triggering the question of methodological effectiveness in the process of information comparison relevant to environmental management, and the quality of the results and conclusions drawn from them. Among the selected system parameters, Global Reporting Initiative (GRI) is being used by 33% of the sample in Croatia (44,4% in the UK). It is the most applicable sustainability indicator system globally and includes environmental set of indicators for environmental management.

Two key areas of eco-benchmarking application, according to 91,7% of the Croatian respondents, are the development of the hotel's image (arithmetic mean=4,6667, SD=0,65134), and total cost decrease (arithmetic mean=4,6667, SD=0,65134). Of UK managers, 55,6% evaluate the impact of the eco-benchmarking on the development of the hotel's image as extremely important (arithmetic mean=4,444, SD=0,72648), the same as for the development of sustainable business (eco-)processes.

The analysis of eco-processes (3R, standing for Reuse, Reduction, Recycling) in the sample represents the attempt to indicate the existence of programs aimed to maximize the eco-efficiency of processes, products, and services in the hotel. Thus, 30,4% of respondents have defined eco-processes adjusted to the 3R philosophy (73,3% in the UK). However, only 21,7% of those surveyed have a special system of supervision and reporting of eco-processes at the level of accommodation, and food and beverage department (53,3% in the UK). The energy efficient use represents 13% of the program, energy efficient usage of the technology represents a third (33,3%) of the information structure in the report.

Since a normative framework is sometimes seen as the greatest push for overall CSR development (Banerjee, 2014), and considering the sensible expectation of continuously tightening environmental legislation, eco-taxation was carefully observed as a force that should make management reconsider sustainable business options. Nevertheless, the present eco-tax and eco-regulatory system is still not entirely based on an adequate system of measurement, evaluation, and reporting of environmental impacts, or of clear distinction of eco-costs; 67,1% of hotels claim full compliance with valid national eco-regulation and ecotaxes (60% in the UK). On the other hand, 44,7% of respondents (16,7% in the UK) claim that government eco-incentives and/or eco-taxes have a positive impact on the sustainable development of the hotel's business. Still, 76,6% of respondents (68,9% in the UK) see ecotaxes of key importance for future EMA development.

The last part was aiming to explore management satisfaction with information provided by a traditional accounting system, and the importance of non-financial accounting information, as a starting point for the principles of sustainable development introduction. Most of respondents (41,4%) believes that this information is somewhat satisfying (55%), while 32,9% believes that information very well meets the needs of management (15% in the UK). The remaining respondents consider that information does not satisfy or meet the needs of hotel management. The importance of non-financial accounting information for business decision-making is considered extremely or very important by 58,6 % of respondents (70% in the UK). None of the respondents felt it was completely unimportant.

6 MODEL: Steps of EMA's Implementation into the Hotel's Management System

The definition of the eco-objectives is dependent on the current level of eco-components integration in an eco-hotel. This is the basis for determining the method, direction, budget, and period required for their achievement. This primarily refers to the period in which a traditional hotel system performs the transformation process into a system with the characteristics of an eco-hotel.

The existing situation can reveal the level of eco-component integration and determine the need for its further development. This can also specify a reasonable period in which it can make the process of its full integration, and integration of EMA into the eco-hotel information systems. From the strategic perspective, the introduction of eco-components is defined in two main stages and two sub-stages:

Stage 1: The initiative. The management starts the initiative of the eco-component integration process in the business processes, defining the environmental business policy and strategy, redefining and setting the mission and vision of the hotel in the direction of environmental (sustainable) business activities. The process requires the identification of goals, activities, and operation fields and setting a test pattern for future operationalization of strategic objectives and the implementation of eco-components in the hotel. Management defines and describes the key areas of environmental impact and objectives in the hotel's (business) policy and adding key environmental objectives in a business strategy, mostly associated with the increase in energy efficiency, reduction in water consumption, and the development of waste recycling program.

Sub-stage 1: Broadening the initiative. Management usually discusses the process of compliance with existing and future eco-regulations and eco-taxes at the cost-benefit level (eco-costs due to penalties, fines, or eco-tax burden), and in 10% of the cases, the hotel management uses regulatory and eco-tax compliance as one of the strategic eco-objectives. At this stage, 60% of the hotel managers noted the EMS as an important future strategic step for the eco-component integration in the hotel management system.

Fear of loss of revenue due to negative market image tends to kick off the development of environmental corporate value systems. Thus, the development of corporate environmental awareness has been confirmed as of a high importance for the development of corporate culture and ethics in the hotel organization, same as simple eco-labelling and eco-certification program (organic food, eco-labelled local suppliers, etc.). It is considered to be in high correlation with the development of environmental education and awareness of hotel employees. However, only 35% of the hotels have some form of indicators for measuring corporate environmental awareness of the hotel.

The eco-investment program is present from the initial stage, while its ratio in the total investments pool increases how the EMS develops. The program can be divided into those obtained before the formation of the EMS and after its integration into the hotel's management system. Hotels in the survey which have not implemented EMS, mostly estimate the level of eco-investments around 1-3% (40%), while the hotels that have implemented an EMS (25%) estimate this share over 10% of the total investments.

Stage 2: EMS formalization. The EMS introduction represents a position in which environmental aspects of the business from the initiative stage becomes a part of integral management system. The main challenge remains in system complexity which requires a certain share of business resources, and in management willingness to transform eco-initiative approach into the frame protocol system. Hotels that have integrated EMS use a form of strategic environmental impact assessment of the hotel operations associated with existing business policies, plans, and programs. There is a strong need for a monitoring and reporting system, adequate for information support in comparing the results with defined eco-objectives and eco-programs.

Hotels seek to develop an effective program for eco-efficiency through 3R program (Reuse, Reduction and Recycle) and seek integrated system tools for evaluating and reporting on the eco-efficiency of business processes, products, and services. At that time, around half of the hotels, report the existence of monitoring and reporting systems on some main processes eco-efficiency, and tend to support the connection between an increase in the ecoefficiency level and an input decrease in the process of creating the hotel's total output.

Sub-stage 2: Full environmental management and reporting system integration. The methodological systematization of tools and instruments for monitoring, measuring, and reporting of environmental impact and eco-costs occurs through the introduction of EMA and eco-benchmarking into a hotel's integrated information system.

The primary objective of this phase is the effective, timely, and relevant usage of environmental information as a support to the undertaken environmental programs and tracing progress in achieving ecological objectives defined in the environmental strategy. Integrating a certified EMS, e.g. according to ISO 14001, requires the application of EMA instruments. The EMA becomes a part of integrated information system supporting internal and external environmental reporting. Eco-costs are defined as an accounting information element through standardized methods.

7 Conclusion

The hotel managers see the link between strategic eco-costs management, their reduction as a strategic objective, and EMA as a support for the implementation of the planned strategies. All of the respondents believe that information about eco-cost and eco-impacts of the hotel business are extremely or very important to achieve the objectives that are associated with long-term business decisions, compliance with environmental regulations, inputs procurement policy, eco-benchmark for hotels, and the development of business processes. The development of step-by-step procedures in four phases should provide a significant boost to the guidelines development for the EMA system implementation.

The implementation of eco-components into the integral information system of hotels creates a condition for the complete information support to the control process. It will provide the factual basis for the identification, definition, monitoring, and reporting on the achievement of strategic and operational objectives within the eco-environmental components of sustainable businesses. Also, it will enable prediction of effects on economic aspects of the hotel business.

Before it reaches the final stage, hotel management may be in possession of an experience that diverges from raw environmental (sustainable/CSR) initiative to overall EMS professionalization. Success of such a system should be supported by EMA in compiling, publishing, and comparing reports on the environment and in using various eco-efficiency indicators to monitor the success of ecological objectives. This involves the simultaneous use of financial and non-financial indicators as a direct link for monitoring progress in meeting environmental and financial objectives.

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