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Implementation of environmental management accounting in hotel sector: challenges and barriers

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Abstract: *Despite the burgeoning number of studies on different aspects of Environmental Management Accounting (EMA), so far, little has been discussed empirically on the roadblocks/barriers in EMA implementations that could limit its potential. This paper therefore presents how the interaction of various contingent factors, and institutional and stakeholder pressures help organizations overcome the EMA barriers.*

INTRODUCTION

Due to the growing interest in the natural environment, there is a heightened interest from organizations internationally to adopt corporate environmental management strategies. In order to support these strategies, a growing body of accounting tools and techniques as a decision support tool, known as environmental management accounting (EMA), has emerged as an interface between environmental management and management reporting [1] [2] [3]. Reflecting the growing popularity of EMA is the growing number of studies on EMA in different context covering various aspects [2]. These studies reveal, among others, a fragmented adoption of EMA that inhibits its true potential for corporate sustainable development. Yet, so far, little has been studied empirically about how organizations overcome these roadblocks/barriers to EMA implementation potential [4]. This paper identifies how the interaction between various contingent factors and institutional and stakeholder pressures help organizations overcome EMA barriers.

LITERATURE REVIEW

Many companies make claims to some adoption of EMA activities. However, these practices often represent a few isolated experimental projects rather than systematic and comprehensive implementation [5] [6] [7]. Thus, opportunities exist for many companies for both business and environmental reasons to become more active in EMA, and the pressures on them to do so will increase [5].

As stated previously, despite the increasing number of empirical studies in the field, there are a few barriers that have been empirically identified. The limitations of conventional management accounting practices have been identified as the main force that impedes the better use of EMA practices. In explaining this, it is suggested that current accounting practice and the present accounting frameworks both hinder environmental initiatives and positively encourage environmentally harmful activities [8]. The key problems with conventional management accounting include the following: inadequate communication links between the accounting department

and other departments that collect environmental data, lumping/hiding environmental costs under general overheads, inadequate tracking of materials usage, flow and cost information, exclusion of external considerations in investment appraisal, assumption of immateriality of environmental costs, too narrow and short-term oriented performance appraisal techniques, absence of accounting for externalities and dominance of financial accounting [4] [9] [10]. It has further been identified that the scattered and incomplete data with regard to economic value of environmental impacts, lack of information on environmental cost items, insufficient knowledge and changes in working teams are impediments to EMA [11]. In addition, management awareness has been identified as an important determinant of management accounting practices [12] [13].

METHOD

This study was conducted between April, 2013 and May, 2014 in the hotels listed in the stock exchange in Sri Lanka. The Sri Lankan hotel industry was selected owing to the sector's noteworthy adoption of environmental management strategies and the significant influence of stakeholders and institutional forces in shaping these practices. These noteworthy practices have been often internationally recognized. The data was mainly collected through 34 semi-structured interviews covering 18 hotels with hotel managers, engineers, naturalists/environmentalists, accountants and regulators. In addition, we used on-site observations made in various facility centres of hotels. As a means of triangulation we used document analysis.

FINDINGS AND DISCUSSION

In explaining the EMA barriers, the inadequate link between the accounting and other departments has been suggested as a principal barrier [8] [10]. The study shows that this situation does not exist in many of the hotels studied. This is mainly due to the fact that the fragmentation of information does not exist in many hotels due to the way the hotels are structured and geographically located. Further, the management reporting systems prevalent in hotels also contribute to this. All the hotel sites have a separate accounting, housekeeping, kitchen and engineering department at the site level. The information required for the implementation of EMA is often collected by these departments at various facility levels such as the kitchen, laundry, plant, etc. As a practice, they meet every day with the accountants and discuss various issues pertaining to their departments. Further, the information collected at different facility levels by the various departments is sent to the accounting departments for the preparation of reports for the top level management. As these hotels are

located in different areas of the country, the top level management exercises control through these reports. Therefore, to cater to the top level management information needs, the data including the environmental information to be collected daily and shared with the accounting department that has the final responsibility for preparing these reports. Thus, inadequate communication links between accounting and other departments in retarding the adoption of EMA is not an impeding factor in the hotel sector.

In explaining another limitation in conventional management accounting, it is suggested that much environment-related cost information is often 'hidden' in overhead accounts [4] [9] [10]. In this backdrop, the study finds that all the collected environment-related costs are not assigned to the products/services a hotel offers. However, it is difficult to say that these costs are hidden in the overheads due to the reporting structure prevailing in the hotels. The hotels have established separate cost centres. The significant environment-related costs such as materials, energy and water are separately recorded by a majority of organizations for every cost centre. The establishment of separate cost centres and accumulation of costs for these centres has been largely influenced by the requirements set out in ISO 14000. As these costs represent a significant proportion of the cost for the hotels, they are anyway compelled to identify and monitor them separately and more stringently. They have various recording systems such as Green Books, daily and weekly energy and waste meetings, energy, waste and water reports, all of which track environment-related costs. Thus, in the Sri Lankan hotels most of the environmental costs are separately tracked and monitored due to their materiality.

Moreover, in explaining another limitation in conventional management accounting, it has been identified that the materials use, flow and cost information are often not tracked adequately in traditional cost accounting [4] [6] [10]. However, this argument is not exactly applicable to the hotels as far as their operations are concerned. As they are into the service sector there is no material loss as outlined by [10] except in the cost centres such as kitchen and laundry which are anyway monitored through other mechanisms mentioned. On the other hand, the hotels have separate management information systems at the site level. Hence most of these flows such as energy, materials, water, etc. are often tracked adequately. As stated previously, their reporting structure is such that most of these costs are carefully monitored and recorded for the purpose of reporting to the top-level management. Further, in generating a green image for the hotels, the reporting of these flows and savings of environment-related costs is of paramount importance. Thus, their reporting structure tracks these items adequately due to these reporting pressures from internal management and external stakeholders. Hence, inadequate tracking of materials use, flow and cost information are not a limitation of traditional management accounting in the hotels sector in Sri Lanka.

Investment decisions which are often made on the basis of incomplete environmental information have been further identified as a limitation of conventional management accounting [4] [9] [10]. However, once again, the study finds that this limitation is not very relevant in the context of hotels mainly due to the regulations that govern the tourism sector. For any investment, hotels have to obtain environmental licences from different authorities when a project is initiated and when a hotel is in operation. These licenses require a comprehensive analysis of the impact on the environment. Furthermore, there are certain projects aimed at promoting the green concerns in the tourism sector such as the 'Greening Sri Lankan Hotels Project'. These projects also promote the concerns of the environment when capital budgeting decisions are made. Hence, the study identifies that most of the limitations of incomplete information are not relevant as barriers to the practice of EMA in the Sri Lankan hotel sector.

The study finds that management awareness of the practice of EMA techniques does not decide the EMA practice despite the findings of [12] [13] [14]. We found that management awareness of the practice of EMA techniques is at a low level in the selected hotels. But this has not retarded the adoption of EMA among the hotels. This is mainly because despite their awareness, they carry out various EMA practices/techniques at their hotels for various reasons such as internal and external reporting pressure, regulatory pressures, marketing, etc. This phenomenon once again highlights that EMA has been developed in the hotel sector in response to various institutional and stakeholder pressures [15] [16]. Moreover, we identified that many contextual factors as described in contingency theory [17] also shape the hotel sector's EMA adoption. However, a systematic and holistic approach has not been developed to reap the full potential that EMA offers. This necessitates a comprehensive framework to guide the adoption of EMA. It should be noted here that none of the professional accounting bodies or any professional association connected to the tourism sector in Sri Lanka has issued any guidelines/manual pertaining to EMA as is witnessed elsewhere in the world. The lack of specific guidance in the practice of EMA has been identified as a barrier to the diffusion and adoption of EMA [6] [18] [19].

CONCLUSION

This study demonstrates how the listed hotel sector in Sri Lanka overcomes EMA barriers in adoption and implementation due to contextual factors and various institutional and stakeholder pressures. It suggests some mechanisms that various actors such as corporate management, professional accounting bodies and regulators could initiate to achieve in better EMA adoption.

However, the findings of this study have their limitations owing to the limited number of interviews undertaken, the specific sector and the country chosen, and time period in which the study was conducted (particularly at a time when there is a tourism boom in Sri Lanka). In future studies, these findings can be further explored by

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way of case studies or surveys covering different industries and contexts.

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