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Greening in the United States Hotel Sector: An Exploratory  
Examination

By

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## Introduction

The concept of “going green” represents an extensive global effort to address negative human impact on the environment. Reid and Herremans (2006) recognize that the contributing factors of environmental degradation include the growth in human population, the wasteful use of natural resources, increased consumer demands, and global economies. Several studies, including Reid and Herremans (2006) and Brown (1994) concur that these threats to the natural environment raise the question of long-term environmental sustainability at the global level. Brown (1994) points out that much of the environmental concern in the 1980s and early 1990s focuses on the manufacturing industry. In acknowledging (Elkington, 1990; Elkington et al. 1991), Brown (1994) understands that the environmental concern has extended to the service industry.

Much of the research attributes the rise of the environmental concern in the hospitality industry to the international declaration for self-regulated sustainable development in the late 1980s and early 1990s. Several studies (Kirk 1995; Knowles, Macmillan, Palmer, Grabowski, and Hashimoto, 1999; Hobson and Essex, 2001) acknowledge the global definition of ‘sustainable development’ as expressed by the World Commission on Environment and Development (WCED, 1987) in the Brundtland Report. Such ‘development’ satisfies the needs of the current generation without jeopardizing the ability of future generations to fulfill theirs. Hobson and Essex (2001) recognize the importance of Agenda 21, which emerged from the United Nations (U.N.) Earth Summit in 1992, as a catalyst for encouraging local businesses to adopt environmentally sustainable practices. Existing literature has alluded to the fact that

Agenda 21's call for global environmental action failed to offer guidelines specific to the hospitality industry (Knowles et Al.)

Some research suggests the establishment of the International Hotels Environmental Initiative (IHEI) as a significant breakthrough in addressing the hotel sector's environmental impact. Launched by the Prince of Wales in 1993, the IHEI consisted of a partnership of 11 major international hotel chains to provide the tools and expertise required to implement environmental programs. Essentially, the IHEI published an industry guide to the best practices of environmental management. Penny (2007) conceived of this industry guide as a more "strategic" environmental program for hotel companies interested in improving their environmental performance. According to Penny, the guide calls for hotels to adopt a clear environmental policy, establish an environmental management specialist with the company, devise implementation plans to reduce energy and water consumption, and provide environmental awareness for employees and customers, among several of the steps hotels should take.

Research studies, such as Chen, Legrand, and Sloan (2005) indicates that large hotel chains such as Marriott International, Accor, Inter-Continental, Hilton International, respectively, have jumped on the 'bandwagon' by establishing environmental initiatives and sharing them with the international hotel industry. Fairmont Hotels and Resorts distinguished itself as having the "most comprehensive environmental program in the North America according to National Geographic Traveler, as cited on the Fairmont website. This Canadian-based hotel chain's "Green Partnership Program" introduced practices to address waste management, energy conservation, water conservation, and the purchasing of environmentally friendly products. Anecdotal evidence suggests that smaller, independent hotels are either unaware or lack the

financial capacity to invest in these big-business environmental initiatives. These smaller hotels may also lack the expertise or time to embark on these initiatives.

There is substantial evidence that indicates that the concept of greening a hotel's operations had its roots in the late 1980s. According to the CKC Report produced in 1993, Ramada International made a concerted effort to become the "Hotelier of Environmental Integrity in Travel and Tourism", as cited in American Hotel and Motel Association (1995). Included in this publication was a section providing guidelines used to operate a green hotel. The excerpt "How to Run a Green Hotel" featured in this publication was the title of seminar led by Kathy Redmond, then Senior Vice President of Ramada International Hotels and Resorts (RIHR). This research portrays Ramada as the cutting-edge leader of hoteliers in terms of their commitment to the environment. For Ramada, the greening process had to be done on a grass-roots level, given its presence in over 40 countries worldwide in the early 1990s. Redmond understood that establishing a worldwide standard for greening Ramada's operations would not be suitable for every property. In other words, what works at one location may not be doable in another, given the geographical constraints. In examining this research, Ramada served as a case study for environmental best practices.

#### Purpose

The aim of this paper is to explore the concept of greening in the U.S. hotel sector. Much of the existing research on the topic of greening is relegated to the European and Asian hotel sectors. Within the literature review, the paper will examine what industry leaders and scholars have reported about the progress of greening in the global sector. Given the scant research domestically, the paper will attempt to generalize some of the findings to the situation in the U.S.

hotel sector. The paper's methodology section will build on European research on greening and develop a blueprint for U.S. hotels to measure their environmental impact and reveal ways they may have addressed it within their operations. A proposed questionnaire, if distributed to property-level general managers, may provide an indication of the extent greening has caught on in the U.S. hotel sector. This paper will contribute to the existing body of research and provide insight as to why some hoteliers have adopted green programs, while others have failed to do so.

### Statement of the Problem

For many hoteliers, the idea of greening hotels which entails adopting practices addressing ambient air quality, energy usage, water consumption, waste management, and building construction, has grown in the popularity in the past couple years. The growing reality in the U.S. hotel sector is that the industry is fragmented when it comes addressing their environmental impact; in other words, many companies have implemented green practices that address the specific needs of their hotel properties and others have not. What might work for an existing property in New York City may not be sensible for a new building in Arizona. In addressing this problem, it is important recognize that greening of the hotel sector cannot be pigeonholed into an "all or nothing" proposition. There is a growing consensus that U.S. hotels should go green. The issue will be to determine how various independent variables including capital costs of implementing green practices, the size of a hotel property, the company affiliation have an impact on the level of environmental commitment of a U.S. hotel property.

## Literature Review

### *Gap in Environmental Commitment*

A majority of the existing research on the 'greening' of hotels investigated the underlying attitudes and motivations for adopting environmental programs among hoteliers, albeit in the international hotel sector. Several studies (Knowles et al., 1999; Hobson and Essex, 2001; Penny, 2007) have investigated the level of environmental commitment by assessing the attitudes of hotel property managers toward the types of environmental policies and practices adopted, albeit on a localized, small scale. With the exception of the best environmental practice study by Enz and Siguaw (1999), there has been no scholarly research conducted on measurement of environmental achievement by hotels in the United States. According to Kasim (2007), the concept of environmental responsibility has been embraced "by only a fraction of (an elite") group of hotel chains based in Western Europe and North America while others in the industry remain laggard" (p.35). One of the shortcomings of this study is that it fails to clarify who the 'laggards' are and how they have addressed their environmental impact in comparison to the major hotel chains.

Perhaps Bohdanowicz (2005) represents the most comprehensive effort in testing whether a significant difference exists between independent and chain-owned hotels. The study hypothesized that chain-affiliated hotels are generally more environmentally pro-active than independents based on several assumptions. In the context of independent hotels, the importance

of environmental issues and the willingness to act on them hinges on the hotel manager's attitudes and knowledge. Chain hotels, in contrast, generally include environmental considerations into their corporate policies. Additionally, Bohdanowicz assumed that external governmental pressures make environmental commitment a requirement for these large companies. It is also worth recognizing that chain hotels tend to possess greater financial resources than independents, and they are concerned with maintaining a positive brand image.

Existing literature on the 'greening' of the hotel industry provides a snapshot of what environmental progress has been accomplished and where there might be room for improvement. One can argue that Bohdanowicz (2005) attempted to fill a research gap that has not been widely addressed. The specific objective of the Bohdanowicz study was to identify differences in environmental attitudes between chain-affiliated and independent hotels in the European hotel sector to reveal a possible gap in environmental commitment. The study asked respondents from both chain and independent hotels to evaluate of the following: The importance of environmental protection issues for tourism, and the perceived relative importance of environmental concern as an advertising tool and factor in customer decision-making (as compared to "location", "quality of services", "price", "tradition of hotel, and other factors on a 6-point Likert scale). The email survey also asked respondents to evaluate the importance of seven specific incentives to introduce more environmentally friendly programs. Bohdanowicz' findings indicate minimal divergence in opinion between chain and independent hotels on the importance of environment protection in tourism. Although roughly 8 out of 10 of total respondents viewed environmental issues as important, there was consensus among both chain and independent respondents that concern for the environment was relatively less important as an advertising feature. In other words, they perceived that customers place greater value on location, quality of services, price,

and tradition of the hotel in purchasing decisions. This finding is consistent with what was discovered in Penny (2007).

The one area where Bohdanowicz (2005) identified large differences between chain and independent establishments was in the area of environmental knowledge. In particular, respondents were asked whether they were aware of any national or international institutions that promote environmental sustainability. These institutions are comprised of hotel associations, “green” certification bodies, and organizations that produce industry-specific guidelines and award certification for environmental excellence. This study discovered that over half of chain-affiliated respondents declared knowing of these institutions, whereas only 24.2 percent of independent hotel respondents did so. Bohdanowicz suggests the lack of awareness of environmental institutions, particularly among independent hotels, can be remedied if environmental institutions make more of a concerted effort to promote environmentally sustainable practices to unaffiliated hotels.

The extent to which a gap in environmental performance exists between chain-affiliated and independent hotels can only be partially explained by the attitudes of hoteliers. It is worth examining what existing studies have found on environmental performance. Bohdanowicz (2005) found that better than 80 percent of the respondents from both groups declared that they participate in environmental activities, in comparing the level of involvement in energy conservation, water conservation, and responsible waste management between chain and protection in tourism. Although roughly 8 out of 10 of total respondents viewed environmental issues as important, there was consensus among both chain and independent respondents that concern for the environment was relatively less important as an advertising feature. In other words, they perceived that customers place greater value on location, quality of services, price,

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with greater financial resources than independent properties explains the differences in environmental performance.

Other studies (Knowles et al, 1999; Hobson and Essex, 2001; Penny, 2007) evaluated the environmental performance of the hotel sector on a very localized level. For example, Knowles et al. assessed the performance of London-based chain and independent hotels on 16 specific areas of environmental areas. In contrast to Bohdanowicz (2005), these studies did not make any distinctions between chain-affiliated and independent hoteliers in terms of their levels of environmental commitment. Instead, this body of research, particularly Knowles et al. and Penny, attempted to analyze the overall environmental commitment of their respective local hotel sectors. Consistent with Bohdanowicz, the aforementioned studies concur that while some hotels adopted environmentally friendly practices to their operations, a large majority of them have yet to establish formal environmental policies and staffs to oversee environmental programs. Knowles et al. and Penny, respectively, advance the idea that there are two classifications for hotels in terms of their environment commitment: Reactive/responsive and proactive/socially responsible.

This dichotomy of reactive and proactive hotels in terms of becoming more environmentally sustainable deserves further attention. Some of the existing research contends most hoteliers are merely reactive to market forces, responsive enough to implement environmental programs when it is financially sensible to do so (Knowles et al., 1999; Penny, 2007). Only a small minority of hoteliers “appear to be socially responsible enough to be proactive and take actions in advance of customer and commercial pressures so as to reduce their impact on the environment” (Knowles, p. 263).

#### The Size Factor

Tzschentke, Kirk, and Lynch (2004) recognized an early study (Ytterhus and Aasebo, 1996), which posited that size helps determine environmental action. This earlier study's logic was based on the assumption that larger businesses are exposed to greater stakeholder pressure from employees and customers, and thus are required to act. However, as Tzschentke et al. (2004) pointed out, the Ytterhus and Aasebo study may not be so relevant to the hospitality industry because it examined a business sector exposed to greater legislative pressure than the hospitality sector. Tzschentke et al. did attempt to legitimize the argument that "size matters" in environmental performance by referencing earlier cross-sectional studies (British Chamber of Commerce (BCC), 1996; Stabler and Goodall, 1997; Knowles et al., 1999). These studies indicated that environmental performance diminished greatly with size and that legal compliance was a primary driver to environmental action.

In spite of the pro-active environmental stance by these large, chain hotels, some have doubted whether the entire hotel industry has benefited from the IHEI. Tzschentke et al. (2004) acknowledge the assertion in Wallis and Woodward (1997) that small and independent hospitality enterprises are less likely to voluntarily subscribe to industry-wide practices; limited financial resources and the tendency to be more responsive to legislative mandates for environmental protection help support this claim.

#### Cost Benefits

The Bohdanowicz (2005) study asked respondents to rank the importance of various incentives to introduce environmentally friendly programs. It is not surprising that both chain and independent hotels perceived cost-savings associated with environmental programs as the strongest incentive to act. "Consumer demand", "image improvement", and "diminishing environmental impact" were deemed as less important factors. This finding is by no means

novel; Hobson and Essex (2001) acknowledge an earlier research study (Brown, 1994) showing cost-savings as a primary reason for introducing environmental initiatives among large and medium-sized hotels in the UK. Bohdanowicz contended that the push toward environmental sustainability in the hotel sector is contingent on the industry leaders ability to prove environmental initiatives do have cost-savings.

Aside from the Enz and Siguaw's (1999) best environmental practices study and reports from industry trade journals, very few academic research studies have shown evidence revealing the cost-savings benefit of environmental programs. Bohdanowicz (2005) argued that it has already been documented that energy- and water-saving measures, green purchasing, and waste minimization practices result in cost-savings. Kasim (2007) reported that the Forte Hotel Limited chain managed to reduce its electricity costs by over \$340,000 US Dollars (USD) each year after installing "combined heat and power systems" (CHP). While it is unclear what the upfront capital costs were for the installation of this "building energy management system" (BMS), Knowles et al. (1999) reported that the U.K. government helped back this technological innovation when first introduced in the 1980s.

### Customer Demand

The Bohdanowicz (2005) study illustrated that customer demand is the second most significant incentive to introduce "greening" measures to the hotel industry. As previously mentioned, both chain and independent hotels agreed cost-savings is the premier driver. Qualitative data from Bohdanowicz raises doubt as to whether European hoteliers believe their customers will support the emerging "green" culture in the hospitality industry. According to an Italian respondent, "the general public is not ready for such a big step [into more environment-oriented behavior and practices], which is absolutely necessary to ensure a decent future for our

children” (Bohdanowicz, p. 194). In evaluating the reliability of this viewpoint, it is worth pointing out that this individual’s perception neither accurately reflects the attitudes of other hoteliers, nor that of the consumers. One should assume cultural and social norms influence environmental attitudes.

Several studies (Kirk, 1995; Penny, 2007) refer to Feiertag’s (1994) report that provides preliminary evidence that American hotel groups’ environmental policies have spurred consumer interest. Early studies measuring guests’ perceptions of environmentally friendly hotels suggested some consumer ambivalence. Watkins (1994) cited a Virginia Tech University study conducted by Gustin and Weaver (1996) that showed about 70 % of survey respondents are “likely or “extremely” likely to stay in a hotel with a proactive environmental stance. However, Watkins pointed out that respondents expressed an overall unwillingness to incur any incremental increase in price to stay at an environmentally friendly hotel. On some level, this finding conflicts with earlier survey studies. Gustin and Weaver acknowledge a study conducted by the Roper Organization (1990) that found a majority of the survey respondents would pay more for environmentally friendly products. Given that there has been little further research done on consumer perceptions of “green” hotels, it might be beneficial for the major international hotel chains like Marriott, Hilton, and Intercontinental, among the few, to conduct market research in existing properties that have not implemented environmental programs.

#### Previous Methodologies: Strengths and Weaknesses

The methodology employed in Bohdanowicz (2005), particularly the decision to sample a large portion of the European hotel sector in fine detail distinguishes this study from others that measure environmental attitudes and the level of commitment to environmental responsibility.

Bohdanowicz admitted that many of the existing studies “investigated insufficiently broad samples in terms of geographical or subject scope (typically a single destination, region, or brand)” (p.191). In support of this claim, several studies already mentioned (Knowles et al., 1999; Hobson and Essex, 2001; Penny, 2007) suffer from small samples focused in European and Asian locales, respectively. These studies also do not explicitly attempt to measure any differences in the environmental attitudes and activities between chain-affiliated and independent hoteliers. This purpose of this section of paper is to identify the most statistically sound, reliable research methodology among the previous methodologies.

Knowles et al. (1999) sought to measure the extent to which London hotels were engaged in environmentally friendly business practices. The study used a stratified random sample from the local tourist bureau’s hotel database and identified chain and independent hotels as the sample groups. Both large and small hotels were included within the two strata. One of the advantages of this survey method is that the element of randomness is maintained. Essentially, a self-assessment questionnaire was mailed to general managers of 150 hotels in London. The response rate was only 28 %, which Knowles et al. considers low. The 42 respondents represents only 0.2 percent of the total number of UK hotels (roughly 1800), the results found in this study are not generalizable beyond the population studied. Despite the advantage of random stratified sampling, chain-affiliated hotels were overrepresented among the 42 responding hotels. Knowles et al. admitted that the sample of respondents is skewed towards the chain hotel, deviating from the fact that roughly 20 % of UK hotels belong to a chain. The 16 items or environmental action areas featured in the questionnaire was based on a pilot study of 12 London hotel industry representatives, which helps justify doing the study.

It is worth reiterating, however, that the objective of this survey was not to investigate a performance gap between chain-affiliated and independent hoteliers. Instead, the results from the survey portrayed a broader picture of participating hotels operating independent of one another, rather than part of an industry-wide coordinated effort to address environmental impacts. Clearly, the major flaws of this methodology pertain to the small sample size, low response rate, and the lack of qualitative data describing the motivations behind pursuing specific environmental actions. One can surmise that it would be difficult to generalize the results to different hotel markets.

Penny (2007) designed a multi-tiered survey questionnaire that contained closed, open-ended, and some attitudinal questions. The underlying objective of the study was to use the Macao hotel sector as a case study to evaluate the extent to which hotels use environmental management as a facilities management tool. Similar to the Bohdanowicz's (2005) study, Penny examined the attitudes and environmental initiatives of hotel managers, albeit at a much smaller scale. In the methodology section of this study, the researchers neglected to specify whether the respondents of 81 hotels were randomly sampled. Given that the respondents were provided 6 weeks to complete the 9-page questionnaire, and follow-up calls were done made to non-respondents every two weeks, it is not surprising the survey yielded a high response rate of 46 %. The three-part structure of the methodology in Penny (2007) allowed the researchers to develop an in-depth profile of the respondents, their environmental attitudes, and the types of environmental initiatives most commonly implemented. The first part of the survey captured the characteristics of the hotels and the respondents. Data from this section indicated that respondents from independently owned hotels represented over 75% of the total respondents. Gathering the educational attainment levels of the respondents did not seem entirely relevant for

the purpose of the study. The study also gathered information on the size of the hotel establishment and customer profile.

One of the strengths of the methodology is the logical ordering of the survey questions. Similar to the Bohdanowicz's (2005) methodology, the first section measured the respondents' environmental attitudes. The 5-point Likert scale employed ("disagree strongly" to "agree strongly") uncovered the underlying motivations for addressing environmental issues in the hotel context. The third set of questions examined the hoteliers' environmental strategies uncovering the propensity to take actions to reduce waste, water consumption, and energy use.

One of the obvious limitations of this research methodology is that it does not address whether recognizable differences exist between chain and independent hotels as far as environmental commitment. In this case, independent hoteliers were overrepresented in the sample. Perhaps this accurately reflects the profile of the Macao hotel sector, but it might not reflect that of other places in the world. After reviewing some of the methodologies from previous studies, it is clear there is a lack of focus on measuring the relationship between types of ownership and the level of environmental commitment. Bohdanowicz (2005) is perhaps the only study to directly investigate differences in attitudes and environmental activities between chain and independent hotels. For this reason, one should consider it a blueprint for future research.

### Proposed Methodology

Based on Bohdanowicz's (2005) research methodology, it is feasible to design a study measuring whether differences in ownership influence the level of environmental commitment in any geographical context. Although the proposed methodology is in its development phase, the study will target chain-affiliated and independently operated hotels in the United States hotel

sector. A survey questionnaire will be emailed to property-level general managers to complete. Respondents will have a month to submit their responses electronically. Time and financial restraints influenced the decision to electronically disseminate the questionnaire. The decision to create a quantitative study was motivated in part by a finding in Tzchentke et al. (2004). This previous study implied that taking a qualitative approach through one-on-one interviews would be less feasible in the case of chain-owned operations. Tzchentke believed that because involvement in environmental initiatives is often a corporate directive, gaining access to the environmental policymaker would be difficult. Although this research study proposed would be quantitative in nature, it by no means should be regarded as conclusive.

One should acknowledge that some elements of the proposed methodology are modeled after previous studies (Knowles et al, 1999; Bohdanowicz, 2005; Penny, 2007). In particular, the attitudinal measurement portion of the email questionnaire mirrors that of Penny. Conducting an environmental assessment of the hoteliers based on the three categories of energy conservation, water conservation, and “responsible” waste management is derived from Bohdanowicz. In addition to these three categories, the mock questionnaire will measure whether hotel properties engage in practices addressing indoor air-quality, building materials, and green purchasing.

### *Sampling*

The methodology will use a stratified random sample of 5,000 hotel properties in the United States from the American Hotel & Lodging Associations hotel list of member properties. Two groups of hotels are identified--chain-affiliated and independently operated hotels. Within the two strata, both large and small hotels are included in the sample. The stratified sampling approach was adopted from Knowles et al. (1999) to incorporate the size variable. In this study, a

hotel with fewer than 150 guest room would be considered small; hotels with greater than 300 guestrooms are classified as large.

## Data Collection

### *Part I: Background Data*

The first section of the questionnaire will ask the respondent to answer questions pertaining to the ownership, size, and geographic location of the hotel property. The format would look something like this:

#### A. Ownership

1. How do you classify the ownership of your hotel property?

- a. Chain-affiliated
- b. Independently-owned

#### B. Size of Property

1. How would you rank your property in terms of size?

- a. Small (1-150 rooms)
- b. Medium (151-299 rooms)
- c. Large (300+ rooms)

#### C. Where is your property located in the United States?

- a. Southwest (Four Corner States, California, and Nevada)
- b. Northwest (Oregon, Washington, Idaho, Montana)

- c. Southeast (Georgia, Florida, Mississippi, Alabama, Florida, Tennessee, The Carolinas)
- c. Northeast (Mid-Atlantic and New England)
- d. Midwest (Great Plains, Great Lakes region)
- e. South (Texas, Oklahoma, Louisiana, Arkansas, Kentucky)
- f. Other (Hawaii or Alaska)

*Part II: Attitudinal Measurements*

Both independent and chain-affiliated respondents will be asked to respond to some attitudinal statements on the following 5-point Likert scale (5-Strongly Agree; 4-Agree; 3-Not Sure, 2- Disagree; 1-Strongly Disagree)

- A. Your hotel facility has an influence on the natural environment.
- B. There are economic benefits to take action on environmental issues at your property.
- C. Taking action on environmental issues will increase employee satisfaction.
- D. Taking action on environmental issues will increase customer satisfaction.
- E. Taking action on environmental issues will influence your hotel property's brand image and competitiveness.

*Part III: Environmental Assessment*

This part of the survey will ask the respondent to evaluate the environmental commitment of the hotel property on the following categories: Energy conservation, water conservation, "responsible" waste management as measured in Bohdanowicz (2005). The term "responsible" waste management refers to any practices that reduce or minimize the amount of waste produced

at the property. Recycling falls into this definition. The mock questions listed below can be used as a blueprint for all six categories including energy conservation, water conservation, waste management, indoor air quality, building materials, and green purchasing. For the purposes of space, I decided not to repeat questions 1A, 1B, 1C, and 1D for every category.

1A: Has your property implemented environmental practices that conserve energy?

a. Yes; b. No; c. Not sure

1B: If you specified that you have implemented solutions to conserve energy,

a. Please list any particular technological improvements, or specific practices introduced.

b. Has the practice(s) provided any cost-savings? Yes/No/Not sure

1C: If you have not implemented energy conservation practices, explain why not?

a. Financial restrictions

b. Lack of knowledge of possible practices

c. Lack of foreseeable financial benefit

d. Lack of management support

e. Negative effect on guest's hotel experience

f. Other (specify)

1D: If you have not implemented energy conservation practices, do you plan to in the future?

Yes/ No/ Not Sure

2A). Has your property adopted any practices that address indoor air quality?

Yes/No/Not Sure

3A). Did your property use recyclable raw materials in the construction of the hotel's building?

Yes/No/Not Sure

4A). Has your property adopted green 'eco-purchasing' practices? In other words, does your property purchase recyclable products in its food and beverage outlets, housekeeping, and engineering departments?

Yes/No/Not sure

4B). If you specified 'yes', please list the specific products and for which departments the property purchased those materials?

*Part IV. Environmental Awareness and Ownership Specific Questions*

1A). Does your property have an environmental policy incorporated into its operations?

Yes/ No/ Not Sure

1B). If you answered "yes", who introduced the policy?

- a) Corporate headquarters
- b) The General Manager
- c) A collaboration of line-level employees and managers

2A). Has your property received environmental certification by a government body or an independent, third party organization?

Yes/No/Not Sure

If you specified yes, please list the name of the organization.

2B). Please list any other environmentally friendly practices not mentioned in earlier questions, if any.

### Strengths and Weaknesses

The results from the proposed methodology will potentially expose the underlying motivations and disincentives to adopt environmentally friendly business practices. In addition, the research should uncover some of the best environmental practices incorporated at the property level. Despite these strengths, there are however some limitations to the study. It remains to be seen whether the proposed methodology will reveal measurable differences in environmental commitment between chain-affiliated and independent hotels. In that regard, the issue of validity may be questionable. This mock questionnaire should be pilot-tested to determine whether property-level general managers understand what the aim of each research question is.

One of the potential flaws in the methodology relates to the sampling strategy. Drawing a sample from the AHLA hotel list of member properties potentially excludes those independent properties that do not have the awareness or the resources to become a member. This could result in a disproportionate number of chain-affiliated respondents implying a sample bias exists. The

alternative approach that Bohdanowicz (2005) took was to choose individual hotel properties based on the availability of contact information presented in either hotel directories or websites. It remains unclear which approach would reduce the potential sampling bias. Indirectly related to the sampling bias is the potential for a low response rate due to a lack of follow-up procedures. Perhaps the respondents should be allotted more than a month to complete the email questionnaires.

This research study may also be vulnerable to a response bias. Respondents may deliberately provide false information to embellish their property's environmental commitment. By falsifying their answers, the respondents are attempting to avoid embarrassment for themselves, their property, and perhaps their affiliated hotel chain. One method of combating this potential error is to ensure that the identity of the respondent remains anonymous, and the data retrieved from the study is not disseminated without the permission of the respondent.

### Implications

As mentioned earlier, the proposed study should not be regarded as conclusive evidence showing differences in environmental commitment between chain-affiliated and independent hotels. The research could provide greater insight as to why the hotel industry has been slow in becoming more environmentally responsible. If the study does find a measurable gap in environmental performance between these hotels, what can the industry do to bridge the gap? Bohdanowicz (2005) recommended that the hotel industry improve its efforts in educating its customers about the environmental issues within the industry. Greater customer environmental awareness might lead to greater demand for "green" practices in the hotel sector.

Achieving more environmentally responsible behavior in the hotel sector will be dependent on the industry's ability to prove the associated cost-savings benefit to these practices.

Bohdanowicz (2005) encouraged the collaboration of hoteliers and members from academia to perform extensive cost-benefit analyses and widely disseminate the findings within the industry. If cost continues to represent a significant barrier to adopting environmentally friendly practices, the industry should consider consulting with outside environmental experts on how to develop new and less expensive technologies. Awareness of these best practices is one thing, but acting on them remains the challenge. Are there sufficient tax incentives and government mandates for environmentally responsible behavior in the hotel industry? Given the lack of research on these two issues, it is unknown what has been accomplished. Future studies should investigate whether the hotel industry is amenable to tax incentives and government intervention as a step toward greater environmental sustainability.

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