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**THE ADOPTION OF GREEN PRACTICES BY SMALL AND MEDIUM  
SIZED HOTELS IN SOUTHERN THAILAND**



**DOCTOR OF PHILOSOPHY  
UNIVERSITI UTARA MALAYSIA  
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**THE ADOPTION OF GREEN PRACTICES BY SMALL AND  
MEDIUM SIZED HOTELS IN SOUTHERN THAILAND**



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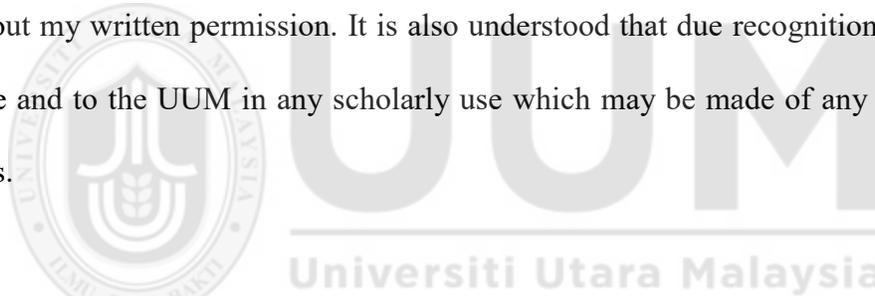


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## ABSTRACT

There have been some encouraging trends in recent years towards green and sustainable practices. Green practices from the foundation to certification schemes are increasingly important for companies involved in tourism and hospitality industries. There are a number of factors driving the demand for green. In hotel industry, however, it is claimed that small and medium-sized enterprises are not actively involved in green practices. The question is whether or not SME owner-managers of hotels are ready to keep abreast of the changes in the dynamic market environment. Using institutional theory as the underpinning theory, this study is to investigate factors that influence the adoption of green practices among small and medium sized hotels in Phuket and Krabi, Southern Thailand. The study adopts a quantitative approach. Data of quantitative analysis was collected through a survey of 145 owner-managers. Results show that internal push factors such as owner-manager attitudes and environmental awareness, and external pull factors such as supply chains positively influence the adoption of green practices. Interestingly, fund availability moderates the relationship between the independent and dependent variables. Policy, theoretical and practical implications are also discussed. Finally, this research provides suggestions for future work.

**Key words:** Green practices, Institutional theory, Small and medium sized hotels, Southern Thailand

## ABSTRAK

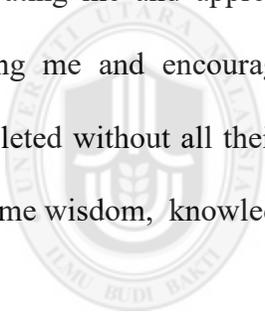
Kebelakangan ini amalan kecintaan terhadap alam sekitar yang lestari semakin mendapat tempat dalam kalangan anggota masyarakat. Amalan hijau ini yang bermula daripada skim asas hinggalah skim bersijil menjadi semakin penting untuk syarikat yang terlibat dengan industri pelancongan dan hospitaliti. Terdapat beberapa faktor yang memacu desakan untuk amalan hijau. Walau bagaimanapun, dalam industri perhotelan, perusahaan kecil dan sederhana (SME) dikatakan tidak bergiat secara aktif dalam amalan hijau. Isu utama yang perlu ditangani ialah sama ada pemilik yang juga pengurus hotel SME bersedia untuk mengikuti perkembangan terbaru dalam persekitaran pasaran yang dinamik. Kajian kuantitatif ini yang mengupayakan teori institusi sebagai teori dasar cuba menyelidik faktor yang mempengaruhi penerimgunaan amalan hijau dalam kalangan hotel bersaiz kecil dan sederhana di Phuket dan di Krabi yang terletak di selatan Thailand. Data untuk analisis kuantitatif diperoleh menerusi tinjauan soal selidik yang dikendalikan terhadap 145 orang pemilik yang juga pengurus hotel. Dapatan memperlihatkan bahawa faktor daya tolak dalaman seperti sikap pemilik dan pengurus hotel serta kesedaran persekitaran dan faktor daya tarik luaran seperti rangkaian bekalan mempengaruhi secara positif penerimgunaan amalan hijau. Kajian juga mendapati ketersediaan dana bertindak sebagai penyederhana hubungan antara pemboleh ubah bebas dengan pemboleh ubah bersandar. Implikasi dasar, teori dan amali turut dibincangkan dalam kajian ini. Kajian turut mengetengahkan saranan untuk kajian pada masa akan datang.

**Kata kunci:** Amalan hijau, Teori institusi, Hotel bersaiz kecil dan sederhana, Selatan Thailand

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## LIST OF ABBREVIATIONS

CFCs:	Chlorofluorocarbons
EFPs:	Environmentally Friendly Practices
EM:	Environment Management
EMS:	Environment Management System
GLF:	Green Leaf Foundation
G-Practices:	Green Practices
ICT:	Information and Communication Technologies
MSMEs:	Micro, Small and Medium-Sized Enterprises
NGOs:	Non-Governmental Organizations
SME:	Small and Medium Enterprise
SMHs:	Small and Medium Sized Hotels
STAs:	Small-Sized Tourism Accommodations
STP:	Sustainable Tourism Practices

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## CHAPTER 1

### INTRODUCTION

#### 1.1 Background of the Study

Today, tourism is regarded as one of the largest and most rapidly expanding industrial sectors in the world. More than 980 million people travelled internationally in 2011 and by 2030, it is estimated that the figure will increase to about 1.8 billion (UNWTO 2012). It is an essential economic engine, making a vital and significant contribution to GDPs. It is also an economically enticing industry in most countries around the globe. Thailand takes tourism to be significant for economic development. The hotel industry, being a subsector of the tourism industry, is thus recognized as a great part of Thailand's economy, operating 24 hours a day, seven days a week (O'Neill, Harrison, Cleveland, Almeida, Stawski, & Crouter, 2009). Hotels and accommodation are businesses directly related to the source of job creation and can generate country revenues (Leonidou, Leonidou, Fotiadis, & Zeriti, 2013). Interestingly, small and medium enterprises (SMEs) account for 98.5 percent of all enterprises in Thailand. They create about 11.78 million jobs, representing 80.4 percent of total employment in the country. The contribution of SMEs to Thai GDP is around 40 percent (Government Public Relations Department, 2013). Thailand is one of the world's top tourist destinations. There are more than 15.5 million tourists who visit it every year. International tourist arrivals to Thailand from 2000 to 2014 show a significant increase since 2000. If in the year 2000 is used as benchmarking with 10 million tourist arrivals, it was reached 26.74 million tourists who visited in 2013, an increase of 167 percent. During 2014 arrivals decreased by 6.66 percent due to huge political protests, followed by the military overthrowing the government. A

recovery occurred in Q4 2014 and a boom in arrivals was up to 30 million in 2015. In 2012, total revenue amounted to 983 billion Baht. The GDP in the hotel and restaurant segment contributed between 9 and 10 percent because the tourists have increased, especially international tourists from South Korea, China, and India (Office of Tourism Development, 2014). Figure 1.1 and 1.2 show revenue and the number of tourist arrivals in Thailand.

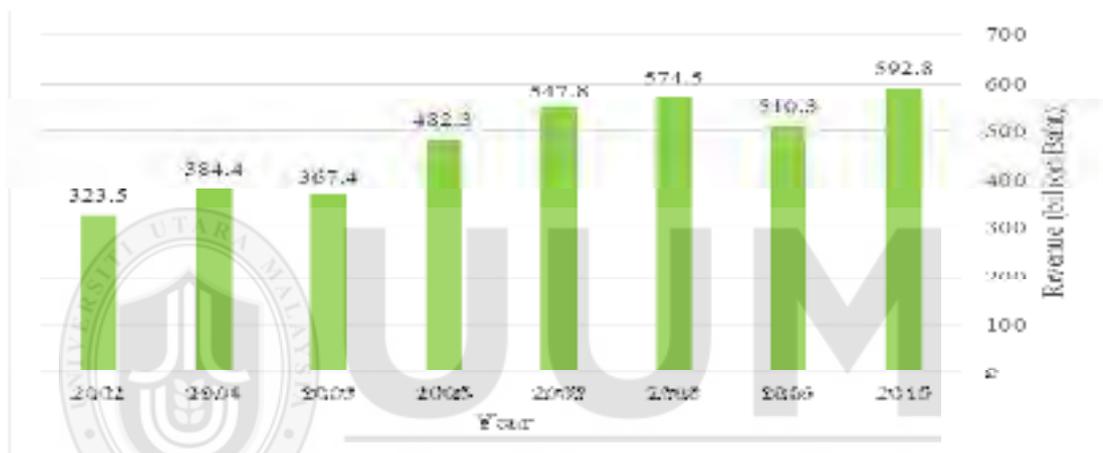


Figure 1.1  
*Tourism Revenue from International Tourists 2002-2010*  
 Source: Tourism Authority of Thailand, 2011

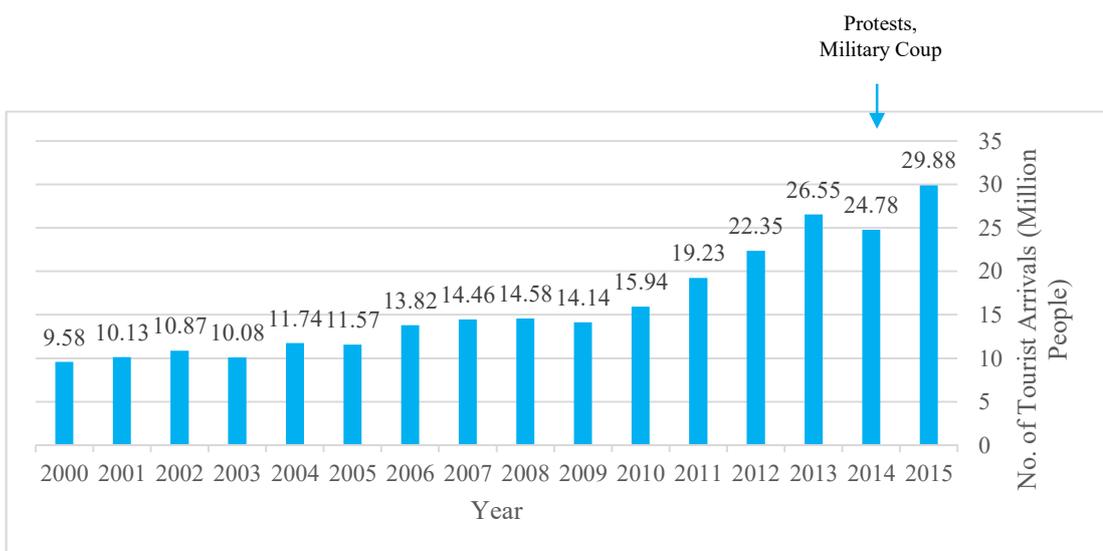


Figure 1.2

*Graph Shows the Number of Tourists in Thailand 2000-2015*

Source: Office of Tourism Development, 2016

In 2011, a report of the statistics of the Department of Tourism, the Ministry of Tourism and Sports showed that the South Thailand had higher tourists than other regions (excluding Bangkok), a sum of about 27,319,500 people (including Thai and international tourists who travel in each trip more than one province) with international tourists around 43 percent. This could generate revenue to the South accounted for over 71 percent of total tourism revenue of Southern Thailand of 307,239 million Baht in 2011.

For tourist attractions in Southern Thailand, most are marine tourism with the geographical location of the South that is bordered by the ocean. The top tourist destination for international tourists is Phuket (6.62 million people in 2011), followed by Krabi (1.34 million people) as shown in Table 1.1.

The growth of international tourism in recent decades has extended Phuket's economic advantage over the other provinces of Thailand. Phuket is the richest province in Southern Thailand and one of top five provinces in the entire country. Thus, this leads to establish many hotels. The growth of mass tourism has also brought unintended negative consequences to Phuket and a great impact from tourism development had affected the local community and all over the region. In addition, Phuket became as a typical mass tourism destination that represented by the crowded beaches, pollutions, and high-rise hotels, and water shortage (Kontogeorgopoulos, 2005: 5). Tourists generate solid waste as well as air, water, noise and visual pollution.

Table 1.1  
*Number of International Tourist Arrivals in Southern Thailand 2011*

<b>Tourist Attraction</b>	<b>No. of Tourists (People)</b>	<b>%</b>	<b>Revenue (million Baht)</b>	<b>%</b>
<b>Phuket</b>	<b>6,622,776</b>	<b>56.7</b>	<b>163,927</b>	<b>74.7</b>
<b>Krabi</b>	<b>1,340,851</b>	<b>11.5</b>	<b>22,369</b>	<b>10.2</b>
Other Provinces	3,719,399	31.8	33,247	15.1
<b>Total (South)</b>	<b>11,683,026</b>	<b>100.0</b>	<b>219,543</b>	<b>100.0</b>

Source: The Department of Tourism, the Ministry of Tourism and Sports, 2011



Figure 1.3  
*Map of Southern Thailand*

In Southern Thailand, the study will be conducted in Phuket and Krabi which are located on the south west coast of the Andaman Sea. Phuket and Krabi are the rising star in Thailand's tourism industry. The beautiful and breathtaking places, biodiversity, wetland nature reserves, interesting and unique history make an

unbeatable combination that all help make Phuket and Krabi as the premier tourist destinations in Thailand.

Phuket is called “the Pearl of the Andaman” with many outstanding sandy beaches and various sports activities (such as windsurfing, scuba diving, sailing and golf). Krabi attractions are Phi Phi Island, Maya Bay, Ao Nang, Koh Lanta, etc. Phi Phi Island is considered the most popular destination which was visited by millions of Thai and international tourists in 2011 (Tourism Authority of Thailand, 2011).

In 2011, the total number of accommodations (hotels, resorts and spas, boutique resorts, villas, service apartments, homestays, B&Bs and guest houses) in Thailand was 7,458. Table 1.2 shows the number of accommodations in each region of Thailand.

Table 1.  
*Number of Accommodations in Each Region of Thailand*

<b>Regions</b>	<b>Hotels</b>	<b>Resorts and Spas</b>	<b>Boutique Resorts</b>	<b>Villas</b>	<b>Service Apartments</b>	<b>Homestays</b>	<b>B&amp;Bs and Guest Houses</b>
North	405	454	24	16	20	65	344
East	513	578	9	29	10	46	87
Northeast	337	325	7	5	4	25	58
Central	699	716	7	14	30	157	219
Bangkok	363	10	9	0	29	1	48
South	709	820	11	45	11	24	175
<b>Total</b>	<b>3,026</b>	<b>2,903</b>	<b>67</b>	<b>109</b>	<b>104</b>	<b>318</b>	<b>931</b>

Source: Tourism Authority of Thailand, 2011

According to data from a government agency, SME operators constitute more than 80 percent of total hotels and resorts in Thailand. The size of hotels refers to the number of rooms and discovers that more than 65 percent of the hotels are small

hotels (rooms  $\geq$  79), 20 percent are medium sized hotels (80-200 rooms) and 15 percent are big hotels ( $>$  200 rooms). The distribution of hotels and resorts in Thailand is as follows, 29 percent are in Southern Thailand. These southern hotels accounted for 26 percent of all rooms, followed by 21 percent in Northern Thailand. These northern hotels accounted for 15 percent of the total rooms. The hotels in Eastern Thailand accounted for 15 percent. It is the third region after Northern and Southern Thailand. The total number of rooms was 17 percent, which is the second region after Southern Thailand (Office of Small and Medium Enterprises Promotion: OSMEP, 2010).

The increase in tourism has boosted to an increment of hotels and an expanse of the service sector. The expansion of hotels continuously leads to wider environmental and social impacts. Many hotels are damaging the environment due to their growing consumption of natural resources. These include air, water and noise pollution, natural resource depletion and environmental degradation, the loss of biodiversity, labor issues, encroachment and huge overbuilding (Bohdanowicz, 2005; Dodds, 2005; Graci, 2009; Rodríguez & Cruz, 2007; Theobald, 1998). Manager, total quality management, Cristal Hotel Abu Dhabi, Immanuel Williams claimed that “The hotel industry is often considered as one of the most waste producing businesses in the world.” Hence, hotel facilities have higher negative impacts as compared to other types of similar size buildings (Rada, 1996). Also, negative impacts from the hotel industry take place when there is unreasonable usage of natural resources (APAT, 2002). It has been calculated that 75 percent of environmental impacts made by hotels may be associated with the over consumption of nondurable goods, energy, water and all waste emissions released into the air, water and soil (Bohdanowicz,

2006; Cobanoglu, 2010; Robinot & Giannelloni, 2010; Ruiz-Molina, Gil-Saura, & Moliner-Velazquez, 2010). Thus, this is a waste of natural resources and it creates management operational costs. Furthermore, McKercher, Prideaux, Cheung, and Law (2010), Scott and Becken (2010) and Tang, Shi, and Liu (2011) highlight that tourism has become a major contributor to the rising greenhouse gas (GHG) emissions and subsequently a “non-negligible contributor to climate change” (Yang, 2010: 213).

Currently, global warming and climate change are a major environmental issue worldwide that can cause immeasurable destruction of the planet and all life, and people everywhere are concerned about this. At the same time, all nations will be forced to jointly solve the problem of global warming. The details of Thailand’s primary energy consumption see Appendix B on page 257. This issue also creates business linkage, in particular with the hotel sector. According to Banerjee, Lyer, and Kashyap (2003: 106), the relationship between companies and the environment relies upon “the importance of environmental issues facing their firms and which environmental issues are integrated with a firm’s strategic plan.” Ecotourism, in turn, has become trends because people and governments are beginning to realize the scope of the problem and to take action to protect and preserve the environment. Regulatory agencies, non-governmental organizations (NGOs), local environmentalists, consumers and employees experience a heightened consciousness of the environmental impact caused by society. Thailand’s leading movement is the Green Leaf Foundation (GLF) which is a non-profit organization. GLF aligned with the global drive to “go greener” to work with hotels, hotels association, suppliers,

governments and NGOs that aim to help hotels implement more eco-friendly practices.

The businesses then face public pressure for social responsibility and there has been a growing awareness and consciousness among hoteliers and investors regarding the social and environmental impacts of hotel development and operations. The hoteliers express genuine concern towards green initiatives (Cespedes-Lorente, De Burgos-Jimenez, & Alvarez-Gil, 2003). For example, reports from the literature indicate that there is an increased popularity in ecological initiatives among hoteliers (Bohdanowicz, 2006; Forte, 1994; Mensah, 2006; Smith & Perks, 2010; Stipanuk, 1996; Wahid, Abustan, Khalid, & Amran, 2008). So, environmentalism or greening has fast emerged as a global phenomenon (Brown, 2008; Kilbourne & Pickett, 2008; Manaktola & Jauhari, 2007). Environmentalism is growing among consumers (Montoro, Luque, Fuentes, & Cañadas, 2006; Wustenhagen & Bilharz, 2006) in order that is prompting businesses to realize a sense of community and emerging “corporate environmentalism” (Banerjee, Gulas, & Iyer, 1995), particularly in the tourism sector (Han, Hsu, & Lee, 2009; Han, Hsu, Lee, & Sheu, 2011). “The implication is that guests require the industry to influence both the making of these products and their consumption in an environmentally safe manner. At the same time, it becomes imperative for the industry to reduce its air, water and solid waste pollution, degradation of natural resources, and loss to biodiversity”, Rachita Sood, Director of Services, JW Marriott Chandigarh said.

Similarly, in Thailand, the natural resource & environmental committee of Thailand, Thai Chamber of Commerce has explained that the great powers of other foreign

countries have started to be interested in environmental issues, and in general, people have begun to care more about the environment and their surroundings. It can be said that our world is stepping from the information age or a knowledge-based society to a green society, a society of good health, concerned about global warming, hazardous waste, water, noise, and air pollution. Individuals or consumers start demanding that manufacturers or entrepreneurs embrace conscience and responsibility. Not only should they produce good quality products at low costs, but they also possess the responsibility to the environment in being more environmentally friendly. Those who have been affected either directly or indirectly are more demanding. Thus, it is creating the pressure for the manufacturers or entrepreneurs that must strive to deal with these environmental issues.

Brown (1996) remarks that “The hospitality industry will no longer be able to ignore its environmental responsibilities as it will have to respond to a number of pressures. For example, the “green tourist” will demand “green” accommodation (Brown, 1994); legislation with regard to the disposal of waste has implications for the hospitality industry; and the continued increase in energy costs will necessitate reductions in usage.” It is consistent with Foster, Sampson, and Dunn (2000) who mention that the hospitality and tourism industry is being pressured from many forces to being green. In consequence of that, this can reduce resource usage (i.e. energy, water, and waste) which management has mainly concentrated on maximizing operational efficiency, i.e. minimize costs to maximize profits (Iwanowski & Rushmore, 1994; Tzschentke, Kirk, & Lynch, 2008).

More recent studies have shown that consumers are getting more and more sensitive regarding the responsibility of business in the protection of the environment. Some studies indicated that customers will respond with more favorable attitudes and concerns toward eco-conscious hotels (e.g. Dalton, Lockington, & Baldock, 2008; Munoz & Rovera, 2002). For instance, Hotel Melia manager observes that nowadays customers have more environmental concerns. They choose hotels they consider eco-friendly (Mensah, 2004). According to Butler (2008), similarly, guests expect hotels to become increasingly green conscious. As a consequence, many hoteliers now recognize the needs and expectations to adopt green practices that offer to prospective green clients and to improve customer satisfaction (Foster et al., 2000). If there is a failure to adopt green practices in a hotel, it can lose prospective clients to other green hotels (Butler, 2008) and will risk losing market share (Farquharson, 1992). Also, employees today do seem happy to work for an employer under a green working environment (Environmental Leader, 2012).

The environmental trend has further encouraged hotels to adopt new green practices that enable them to minimizing their possible negative environmental and social impacts. In fact, sustainability and environmentally responsible tourism business have become valuable marketing tools and techniques necessary for growth. To deliver sustainable solutions, hotels going green are taking steps toward cutting down on the utilization of energy, water, and other natural resources while providing money saving benefits as well as improved company competitiveness (Bowe, 2005; Chen, Legrand, & Sloan, 2005; Dodd, Hoover, & Revilla, 2001).

From a lot of the past, most hotels have given priority to energy management that is motivated with expressing a desire to cut costs rather than acting with concerns for the negative impact they deliver on the environment by implementing environmental management (Kirk, 1996). Maintaining environmentally friendly practices is one of the fastest growing trends out there. Going green is top priority for most organizations today. Many organizations have adopted environmentally friendly practices, and there is empirical evidence that proactive environmental strategies are able to, at last, pay off (Dean & Brown, 1995, Judge & Douglas, 1998; Klassen & McLaughlin, 1996; Klassen & Whybark, 1999; Sharma & Vredenburg, 1998).

All of this, it is crucial to go “green” by hotel SMEs in order to answer demand for more corporate responsible behavior and attract increasing the needs for green customers and employees that can establish the business sustainable future and also turn it into a competitive edge. Likewise, “the adoption of a green agenda for Thailand ensures that the destination and the Thai tourism industry retain international competitiveness. By keeping pace with the latest trends in global travel, this strengthens Thailand’s global image as a dynamic and relevant ‘brand’,” said Ms. Sasi-Apha Sukontarat, Executive Director of TAT’s Product Promotion Department. Hotel SMEs also see a number of benefits from environmental initiatives in response to the rising concerns over sustainable tourism. Indeed, fostering the sustainable tourism principles through G-Practices are complimentary to tourism development (Hassan, 2000). Nowadays, many hotels are taking steps to recycle and reduce the usage of energy, thereby reducing costs, increasing profitability, bringing economic benefits to local communities, conserving the cultural and natural resources of the destination areas, and taking some steps towards sustainability.

Although the hospitality industry could help boost the economy of a particular country, environmental management and sustainability have been recent significant issues in the hospitality industry. Consequently, large-scale trends toward a shift in investments and management decisions towards more green and sustainable practices, facilities and systems will reflect the changes. Also, the importance of the growing demand of these types of change needs to be discussed. These can eventually lead to a number of research initiatives has been examined emerging issues in the hospitality industry in the Thai context. Among the environmental issues, there has been limited research to pro-environmental behaviors of SMEs in the Thai hotel industry. The majority of research has focused on environmental management in different countries and different kinds of industries. Moreover, studies on examining both internal and external determinants that influence the adoption of green practices have barely been undertaken. External elements in the environment could cause trouble for the organization. This study then is motivated by the lack of empirical research in the extant literature on green practices adoption among SMEs in the Thai context. There remains therefore unanswered whether SMEs can survive and prosper in a dynamic and uncertain environment under such pressure. The different types of drivers or pressures with different size companies will tend to have different relative levels of importance for companies going green. As such, this paper will develop a framework to identify the most important internal and external factors that influence the adoption of green practices (G-Practices hereafter) by small and medium sized hotels (SMHs) in Southern Thailand. This framework is built on institutional theory. The research problem of this paper is formulated as a question: what institutional factors could help to identify

organizational environment for the hotel industry on G-Practices adoption in the context of Southern Thailand?

## **1.2 Problem Statement**

Global warming and climate change are a growing concern worldwide; the energy crisis and the economic downturn have brought about dramatic changes in consumer attitudes, travel seasonality and other travel patterns and trends. European governments and businesses have moved far beyond Asia in green initiatives.

Even though this has changed some in recent years, sustainability issue has not been historically recognized as important by mass tourism (Kasim, 2006). But alternative eco-tourists have been accused of “loving nature to death and disrupting the lives of local people” (Kasim, 2006). Businesses today are facing increased pressures for sustainability within the tourism and implementing the strategy, in turn, is required to reduce their products and services’ negative impact on the destinations and the whole tourism industry.

Traditionally, business has only put weight on profit maximization. This short-term focus, nevertheless, appears to be lost consumer support, and business leaders signal their support for the organizations’ long-term health. This represents the modern fundamental changes in companies. The hospitality and tourism industries must lessen the negative environmental and social impacts, if the industries need to be profitable and sustainable growth in the future. Social and environmental impacts caused by business are indeed needed to be solved by business, merely it requires a commitment by business and all stakeholders to do the right thing. Business and

society are interdependent and both are crucial for robustness or neither will sustain growth in the long-term.

Recently, environmental management and sustainability have been important issues in the hospitality industry. Although several researches have been done on G-Practices by linking the drivers and consequences of G-Practices adoption as well as the drivers and G-Practices adoption with organizational performance across in a variety of industries, there are still yielding mostly mixed results. Much of the literature suggests that the adoption of G-Practices is not influenced by external factors such as customers (Weng, Chen, & Chen, 2015), but other researchers argue that the motivation for the adoption of environmental management are often due to pressure from customers (e.g. Le, Hollenhorst, Harris, McLaughlin, & Shook, 2006; Mensah, 2014; Wee & Quazi, 2005), suppliers (e.g. Blamey, 2000; Chiou, Chan, Lettice, & Chung, 2011; Morrison, Cushing, Day, & Speir, 2000), government legislation (e.g. Bohdanowicz, 2005; Reynolds, 2013); insurers, and financial institutions (e.g. Chan, 2008; Chan & Wong, 2006; Hillary, 2000). There is some inconsistency in these results that is difficult to reach conclusions. In this study, factors influencing the adoption of G-Practices were selected according to listed institutional factors. Further, Jackson (2010) contends that as for hoteliers, it is challenging to consider how the green supply chain may have an impact on G-Practices. However, not many researchers have attempted to investigate supply chains as adoption driver. This study, therefore, seeks to reexamine the influence of external pull factors (regulations, green consumers, local communities and competitors plus a new variable in supply chains) on G-Practices adoption in the hotel industry.

In the tourism industry literature, environmental pressures for change are often examined (Halbe, 2013; Le et al., 2006; Mensah, 2004), but much emphasis is placed on saving costs, conserving resources and maximizing profits (Tzschentke et al., 2008; Vernon, Essex, Pinder, & Curry, 2003). In academic studies, the emphasis on cost issues is unclearly visible. As pointed out by Nakamura, Takahashi, and Vertinsky (2001), internal factors, e.g. managers' values, attitudes, and beliefs, may also influence firms' adoption decisions. In addition, Jackson (2010) argues that the study should investigate hotel managers' attitudes towards G-Practices. Thus, only very few studies have examined internal push factors (owner-manager attitudes and environmental awareness) in the hotel industry.

Previous studies show that the adoption of G-Practices among SMEs is driven by various pressures or drivers (e.g. Calvache & Evra, 2008; Moorthy, Yacob, Chelliah, & Arokiasamy, 2012). Today, the relationship between these factors becomes more complex and may not be straightforward. Dixton-Fowler, Slater, Romi, Johnson, and Ellstrand (2013) and Wagner (2011) suggest that most research has concentrated on investigating the link between these factors, the studies should not abandon the need to investigate the indirect effects for the possible mediated or moderated rather than direct relationships between these factors. However, there remains very limited research about how the characteristics of an organization moderate this relationship (Delmas & Toffel, 2012). In the above studies on G-Practices, it was found that companies require to explore additional organizational characteristics, including companies' capabilities and financial resources (Darnall & Edwards, 2006; Sharma, 2000; Sharma & Vredenburg, 1998) and individual owner-managers' characteristics

(Bansal & Roth, 2000; Cordano & Frieze, 2000). According to Doddy (2010), she asserted that managers of the hospitality industry do not implement environmental program because of lack of money and resources necessary to invest in order to meet standards and procedures that lead to addition obstacles behind it. This is in line with findings from previous environmental research. Therefore, this study focuses on how funds availability moderates the relationship.

Additionally, large organizations are the most visible towards this greening trend. 90 percent of all organizations worldwide are SMEs. Collectively, however, they make up a large part of the global economy and can greatly impact the local economy and community. While individually SMEs do not have a significant impact on the environment, the large number of SMEs worldwide assures that the collective impact is massive (Carrigan, Moraes, & Leek, 2011). In the hotel industry, there is an emerging literature on environmental issues that includes major studies done on large hotel chains (Carmona-Moreno, Céspedes-Lorente, & De Burgos-Jiménez, 2004; Chen et al., 2005; Mensah, 2006; Nazmiye, 2007; Vernon et al., 2003), mainly in the United States and Western Europe. It remains unclear, however, if and to what extent the conclusions of these studies are relevant to other countries (Chen, Wong, & Leung, 2008; Kasim, 2007). Little research has focused on SMEs in tourism and their environmental practices (Morrison, Carlsen, & Weber, 2010; Thomas, Shaw, & Page, 2011; Vernon et al., 2003). Methods utilized for adopting environmental management practices in large organizations are unable to be successfully scaled down to fit SMEs. SME adoption approaches seem to be unlike to those of larger companies (Lawrence, Collins, Pavlovich, & Arunachalam, 2006; Masurel, 2007). Vernon et al. (2003) argue that SME's adoption in tourism is not always straight, but

quite something more complex (Sharper & Carlsen, 2004). Despite the fast growing sector of the hotel industry, quite a few studies have been conducted to understand the factors influencing the environmental management in small and medium hotels and the obstacles to environmental management in such organizations that remain only partially answered (Mensah, 2014). Thus, this study tends to contribute to the discussion by looking into the effect of both internal push and external pull factors in G-Practices adoption among SMEs in the Thai hotel industry.

Lastly, at the theoretical level, much of the research focuses on the description of business practices and has failed in developing appropriate theories. Institutional theory as theoretical approach of management studies reveals that institutional theory identifies internal and external environmental factors as institutional factors. In this vein, the researcher echoes Scott's (2005) call for more institutional research examining non-Western cases – as part of a broader effort to test the generalizability of extant models and theories. Yet, little attention has been paid to validate and develop the theory. Institutional pressures on the adoption of G-Practices have barely been undertaken in Thailand, especially in SMHs. Therefore, the developed model can be tested against empirical data to determine its validity.

To summarize, there is a really limited number of studies that would have explored on SMEs in tourism. This study focuses on SMEs in the Thai hotel industry context. In order to encourage a more widespread and proactive engagement of SMEs in G-Practices, the complex reasons and the impetus behind their adoption have to be better understood (El Dief & Font, 2010; Kollmuss & Agyeman, 2002; Sharper & Carlsen, 2004; Tzschentke, Kirk, & Lynch, 2004). It is important that this study will

examine the effect of institutional factors that can lead to the adoption of G-Practices by SMHs in Southern Thailand because they are significantly dissimilar from those influencing developed countries and studying them will be a significant step in advancing a better understanding of the incentives and impediments to G-Practices adoption among SMHs. This study also highlights the importance of additional organization characteristics by integrating in the model the moderating effects of funds availability that will offer important insights into the underlying motivations.

### **1.3 Research Questions**

The study seeks to address the following research questions.

1. What is the effect of internal push factors on G-Practices adoption?
2. What is the effect of external pull factors on G-Practices adoption?
3. What is the effect of funds availability on G-Practices adoption?
4. What is moderating of funds availability can influence the relationship between internal push factors, external pull factors and G-Practices adoption?

### **1.4 Objectives of the Study**

The objectives of this study are as follows:

1. To examine the effect of internal push factors on G-Practices adoption.
2. To investigate the effect of external pull factors on G-Practices adoption.
3. To determine the effect of funds availability on G-Practices adoption.
4. To evaluate the moderating effect of funds availability on the relationship between internal push factors, external pull factors and G-Practices adoption.

To sum up, why does the author select this thesis topic? There are the following four reasons. Firstly, this study responds to the call from earlier researchers for the need to understand the factors influencing the adoption of G-Practices among SMEs, especially in tourism. Secondly, SMEs are a major economic driver and a major player in the Thai hotel industry. Thirdly, there are over 80% of international tourists, visiting Phuket and Krabi (2 out of 14 southern provinces). Fourthly, CSR and Go Green campaign has been spread by Thai government to Thai society and this helps check the hotel sector's response after the campaign. Furthermore, the author found out that it is not likely to select only one dimension, e.g. external factors and tackle it separately; both internal and external dimensions lead to change. So, this approach complements institutional theory by exploring how institutional pressures are imposed by internal and external factors and how these pressures influence SMHs to adopt G-Practices.

### **1.5 Significance of the Study**

This section will provide a description on the various significances of the study given theoretical and practical contributions in the field of G-Practices in the hotel industry. Theoretically, the author contributes to institutional theory of the hotel company by demonstrating legitimacy matters. Little attention has been paid to theoretical validation. Empirical research is needed to validate theoretical claims. Institutional pressures on the adoption of G-Practices have barely been undertaken in Thailand. The study offers novel insights into institutional theory and its application in the field of tourism in SMEs. Much of the available literature on environmental engagement and small companies seems inclined to emphasize more on understanding the

barriers limiting companies' participation in programs used in behavior change (Palmer, 2000). There is very little attention given to understanding the factors that influence SMHs and their G-Practices from the institutional perspective. The benefit of this paper thus is paid to the validation and development of the theoretical model in a non-Western case. Institutional theory identifies institutional factors that make up internal and external environmental factors, according to which organizational behavior could be researched. The analysis of institutional factors in different countries and many industries indicates that institutional factors exert their influence that can be strong or weak. Further, this research is able to disclose conditions under which organizations are particularly likely to resist institutional pressures.

Practically, Thailand is still in its infancy regarding the adoption of G-Practices in the hotel industry. The benefit of this study is paid for assisting the Phuket and Krabi community comprised of public sector, civil society and local government organization that help develop strategies, policies and practices that assist and provoke hotel businesses in pursuing G-Practices.

For policy-makers, this research is intended to provide insights for policy-makers into ways of fostering green entrepreneurship in SMEs, providing the strongest guidance and support, and strengthening the performance of SMEs in the hotel industry and their contribution to local economies.

For industry, this research is intended to encourage the hotel sector to the adoption of more G-Practices. This work serves as a guide for practitioners to recognize the perceived internal and external pressures to be relevant to manage the organization effectively and realize the importance of G-Practices adoption as well as the benefits

of both business and the environment. More importantly, this can help hotel companies reexamine their behavior and integrate environmental concerns into their strategic plans. Further, it is hoped that this can inspire future academics and researchers on this area of study in the hospitality industry and other countries. The results of this study will add the body of knowledge and provide policy suggestions.

## 1.6 Definition of Key Terms

The list below shows the definition of key terms.

Table 1.3  
*List of Definition of Key Terms*

Category	Definition
Budget Hotels	Room rates are the lowest for this type of lodging property. This type of hotel typically offer guestrooms only. There is little or no public space, no meeting or function space, and very limited food and beverage facilities, if any ( <a href="http://lambtonhat.weebly.com/uploads/4/4/1/3/4413567/unit1.the_lodging_industry.pdf">http://lambtonhat.weebly.com/uploads/4/4/1/3/4413567/unit1.the_lodging_industry.pdf</a> ).
Ecotourism	Responsible travel to natural areas that conserves the environment and improves the welfare of local people. (The International Ecotourism Society, TIES, <a href="http://www.ecotourism.org">www.ecotourism.org</a> ).
Environmental Management (EM)	Organization involvement in EM refers to the extent to which a hotel seeks to implement environmental initiatives. There are two dimensions of hotel EM practices: technical practices and system practices (Álvarez Gil, Burgos Jiménez, & Céspedes Lorente, 2001; El Dief & Font, 2012). Technical practices are defined as operational practices to reduce the negative impact on the natural environment. System practices apply to organizational activities that monitor and support environmental technical practice; for example, chain hotel companies have developed their own environmental auditing and reporting systems for company-owned and franchised hotels in an effort to gauge and improve sustainability of individual properties. Technical practices are categorized into three main areas: water conservation, energy saving, and solid waste reduction (Kirk, 1995; Stipanuk, 1996).
Free Rider	A person who chooses to receive the benefits of a "public good" or a "positive externality" without contributing to paying the costs of producing those benefits ( <a href="http://www.auburn.edu/~johnspm/gloss/">www.auburn.edu/~johnspm/gloss/</a> ).

Green Hotel	An environmentally sensitive hotel that operates its business in a manner that minimized degradation of the environment (Iwanowski & Rushmore, 1994; Kirk, 1995). Roarty (1997) puts forward three criteria: (a) product, (b) technology, and (c) business ethics.
Green Practices (G-Practices)	Internal efforts or activities of a hotel to implement environmentally friendly practices towards the goal of becoming a green facility (Mungai & Irungu, 2013).
Green Washing	Disinformation disseminated by an organization so as to present an environmentally responsible public image (www.oxforddictionaries.com).
Midscale Hotels	Room rates tend to be equal to or slightly above market area average. These hotels offer a wider range of facilities and amenities. There will be limited public space and meeting/function space with at least one food and beverage facility ( <a href="http://lambtonhat.weebly.com/uploads/4/4/1/3/4413567/unit1.the_lodging_industry.pdf">http://lambtonhat.weebly.com/uploads/4/4/1/3/4413567/unit1.the_lodging_industry.pdf</a> ).

Table 1.3 (Continued)

Small and Medium Enterprises (Service Sector)	A Small and Medium Enterprises (SMEs) for Thai Enterprises: small = less than 50 employees, annual sales turnover = less than 50 million Baht; medium-sized = 50-200 employees, annual sales turnover = more than 50-200 million Baht (Office of Small and Medium Enterprises Promotion: OSMEP).
Organizational Field	Sets of institutions and networks of organizations that together constitute a recognizable area of life (DiMaggio & Powell, 1983; Maguire et al., 2004: 659).
Sustainability Development	Meet the needs of the present without compromising the ability of future generations to meet their own needs (Inyang, Schwarz, & Mbamalu, 2009).

## 1.7 Organization of the Thesis

This study is structured in five chapters. Chapter one focuses on an introduction of the research context and illustrates the research objectives and questions. Chapter two provides a recapitulation of the related literature on G-Practices, internal push and external pull factors, and owner-managers' perceptions of pressures as they pertain to their personal characteristics and companies' resource. This chapter includes the underpinning theory and theoretical framework. Then, a relevant hypothesis is proposed. Chapter three explains the methodological background of the

research study. Chapter four presents the results of the quantitative data analysis. Chapter five discusses the final findings in the light of prior studies in the literature and draws elaborate conclusions on the study together with the implications for practice, the limitations of the study, and recommendations for future studies.



## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 Introduction

The purpose of this chapter is to evaluate the relationship between internal push factors, external pull factors, and moderating variable on the adoption of G-Practices. This chapter provides a comprehensive overview of the relevant literature on the hotel industry's G-Practices and several factors that have been investigated as influences of G-Practices. Then, the variables are selected by the author as the independent variables for this study are discussed. Previous empirical findings relating to each construct will be explored. The chapter further gives an overview of the underpinning theory and then develop to the theoretical framework of this study. In the end, it will end with the author's proposed hypotheses.

#### 2.2 Definition and Conceptualization of G-Practices

“Green” is a less strict term, frequently applied to signify “environmentally friendly”, “eco-friendly”, “environmentally responsible”, “sustainable” or “environmentally oriented” (Han et al., 2009; Kalafatis, Pollard, East, & Tsogas, 1999; Laroche, Bergeron, & Barbaro-Forleo, 2001; Manaktola & Jauhari, 2007; Pizam, 2009; Roberts, 1996) and is referred to actions (e.g. recycling) that reduce the business's negative impacts on the environment. Over the past decade, “green” has become the word of choice for those who are aware of environment protection. Green choices are growing for both businesses and individuals. Going green will benefit both the environment and business. An increasing number of businesses are realizing that

operating more sustainably also saves them money, and in most cases, results in an expanding customer base.

There are a wide variety of opinions in the literature on the definition of green practices. Green practices as defined by Gupta and Sharma (2002) are environmentally friendly management principles in which the efficient use of environmental inputs and/or outputs is enabled by executive levels. Montabon, Sroufe, and Narasimhan (2006) define environmental management practices as the techniques, policies and processes that decrease the environmental impacts within the operation of an organization. Manaktola and Jauhari (2007) define green practices as the company is committed to supporting environmental practices that purport to limit or ameliorate the company's harmful effects on the environment, while conserving energy, saving water and diminishing solid waste. Mohindra further (2008) views green practices as the embracing of the three Rs of the environmentalism: reduce, reuse and recycle. Further, Jackson (2010) has identified green practices are the ones which can cancel out the negative effects concerning the use of energy, water, waste and indoor air quality. Green practices include buying and using energy efficient equipment; recycling of aluminum, paper, plastic, and other materials; reducing air pollution; and using reusable, biodegradable and organic products (Schubert, 2008). Opinions differ slightly from author to author, but the main idea remains the same. Researchers agree that the various conceptions of "green practices" rest on the main idea of practices that dilute the harmful effects of business on the environment.

Reid and Herremans (2006) acknowledge the factors leading to environmental degradation, including the growth rate of human population, the uneconomical usage 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 worldwide stage. Brown (1994) indicates that in the 1980s and early 1990s, the focus is mainly on a global environmental concern in the manufacturing industry. All industrial systems are affected from environmental pressures including processes, inputs and operations (Elkington & Hailes, 1992). Nevertheless, a global environmental concern has moved into more care in the service industry such as tourism (Chung & Parker, 2010). The service industry has come under a lot of scrutiny. As a result, it moves too slow to take steps to decrease the environmental impact. According to Sloan, Legrand, and Chen (2004: 179), “the consumption of resource needs by tourists is creating an enormous ecological, social, and cultural legacy in many destinations around the world, thus the hotel business must carry a large part of the responsibility.” Further details on the main environmental impacts of a hotel refer to Appendix C on page 259.

According to Sustainable Business Associates (2008), seven environmental dimensions of green practices include water management, energy efficiency, wastes, purchasing policies, logistics and noise, air quality and landscape integration. Dimensions of green practices studied by Chou, Chen, and Wang (2012) add pollution prevention, environmental health, reuse and recycle programs, green purchasing, green material, sustainable foods, and green designs of buildings and space. Within the hotel industry, there are dissimilar ways for environmental issues

to be expressed in practice. So far, it is apparent that hotels commonly adopt environmental practices that are identified through water, waste, and energy management (i.e. Bohdanowicz, 2006; Mensah & Mensah, 2013; Nicholls & Kang, 2012a, 2012b). Very little attention is devoted to items outside of those areas.

For the aim of this study, green practices is defined as practices or initiatives that can be adopted by a company strived for minimizing the environmental footprint of its operations. Changes to the company's products and processes are included in these practices or initiatives. Therefore, G-Practices focus on these three major areas as the most popular environmental management practices and add few more categories as determined by Tourism Thailand which are air purification and health promotion as well as environmental management system. In this study, G-Practices are conceptualized as consisting of six features: energy efficiency, water conservation, waste management, air purification, health promotion and environmental management system as the details are shown below. Other G-Practices are beyond the scope of this study. Going green is a long-term strategy for supporting a healthy environment and generating the long-term business value ([www.tourismthailand.org](http://www.tourismthailand.org)).

**Energy Efficiency** - Excessive energy use is extremely costly. Even minor adjustments can result in massive cost savings. Energy-saving measures can lead businesses to lower the carbon footprint while also cutting down on costs. By savings, it can be passed on the guests. Such measures include reuse of linens, installation of motion sensor lighting in public areas and utilization of fewer light bulbs or low-energy light bulbs.

**Water Conservation** - Water conservation practices at a hotel are able to conserve a precious resource while minimizing costs of water. Green Hotels and Resorts institute measures, including drinking water in restaurants only upon request, low-flow showerheads, low flush composting toilets and reduced flow dishwashing valves. Instituting linen-and-towel reuse programs can help reduce the number of loads of laundry washed. Significantly, it not only can reduce energy and detergent use, but also save water.

**Waste Management** - Paper and food waste represent the biggest amount of waste sources generated by hotels. An efficient approach to manage solid waste in hotels is recycling and reuse. Waste can be minimized up to 80 percent by working with green vendors to ensure minimal wrapping materials. Also, products are delivered one day and packaging is collected the following day for recycling.

**Air Purification** - Clean air is fundamental to good health. Taking advantage of the natural surroundings and preserving trees and foliage will improve the air quality through the natural cycle of oxygen and carbon dioxide. Utilizing environmentally-friendly electrical appliances such as refrigerators, televisions and air conditioners, and covering plants grown outdoors help improve air quality and decrease air pollution. Clean air includes establishing smoke-free rooms, planting trees, and placing plants and flowers throughout the hotels.

**Health Promotion** - Meals by providing a healthy menu without chemical additives, preservatives, artificial flavors or colors and MSG can be another way that these

hotels prove their eco-consciousness. Car-pooling is also an alternative method for health promotion.

**Environmental Management System (EMS)** - An Environmental Management System (EMS) is a set of processes and practices that enable an organization to reduce its environmental impacts and increase its operating efficiency ([www.epa.gov/ems](http://www.epa.gov/ems)). The EMS provides a framework that helps a company achieve its environmental goals through consistent control of its operations. The EMS itself does not dictate a level of environmental performance that must be achieved; each company's EMS is tailored to the company's business and goals. It involves policy commitments, defining objectives, targets and programs, monitoring performance and conducting reviews (Jafari, 2000).

### **2.3 Unidimensionality of G-Practices**

Gadenne, Kennedy, and McKeiver (2009) tested linkage in the model between external influences, environmental awareness & attitudes, moderating variables and green practices. Confirmatory factor analysis (CFA) was used to test their validity, where each item was restricted to load on its hypothesized factor. It showed that all constructs had significant loading of higher than 0.5, exhibiting the degree of convergent validity (Hair, Black, Babin, Anderson, & Tatham, 2006). G-Practices are those related to EMSs. Hence, following Gadenne et.al. (2009) this study conceptualized G-Practices as a unidimensional construct. In addition, based on the findings of previous research in G-Practices (Khanna & Speir, 2007), they asserted that G-Practices are a unidimensional construct and a reliable criterion variable. In

one study of hotel companies, Nicholls and Kang (2012a) investigated the adoption of twenty-one “green practices” as a single construct.

## **2.4 Determinants and/or Antecedents of G-Practices**

A review of previous literatures on the factors of G-Practices is required so that is to better understanding of factors influencing the adoption of G-Practices. The following discussions emphasize on the reviews on the determinants and/or antecedents to the adoption of G-Practices. These factors are categorized into two major components, namely, drivers and barriers.

### **2.4.1 Drivers for G-Practices**

The driving forces are the factors that facilitate change in the environmental performance of each business because they push it in a new direction by using the environmental management tool. Organizations’ decision making in their adoption of environmental management depend on to several internal push and external pull factors, especially where their environmental awareness is more required. The drivers are the key influences for behavior change. This section will provide the empirical evidence which various internal push and external pull factors have influenced organizations’ environmental practices. Table 2.1 below gives a summary of these:

Table 2.1  
*Illustrates Internal and External Drivers from Previous Studies*

	<b>Drivers</b>	<b>Sources</b>
<b>Internal Push Factors</b>	• Financial benefits;	Bohdanowicz, 2005; Iwanowski & Rushmore, 1994; Kirk, 1996; Lee, 2009; McKeiver & Gadenne, 2005; Mensah, 2004; Moorthy et al., 2012; Samdin, Bakori, & Hassan, 2012; Tzschentke et al., 2004
	• Corporate culture, history, norms and learning;	Roy, Boiral, & Lagacé, 2001
	• Leadership and top-level commitment;	Chan, 2011; Condon, 2004; Hillary, 2004; Roy et al., 2001; Samdin et al., 2012; Spencer, Adams, & Yapa, 2013; Tang, Amran, & Goh, 2013
	• Individual ethics;	Foster et al., 2000; Herren, Hadley, & Klein, 2010; Hoffman, 1991; Sampaio, 2009; Tzschentke et al., 2004, 2008
	• Employee attitudes;	Bruns, 1996; Buysse & Verbeke, 2003; Fleischer, 2010; Jenkins, 2004; Kirkland & Thompson, 1999; McKeiver & Gadenne, 2005; Mensah, 2014; Salimzadeh, Courvisanos, & Nayak, 2013; Quazi, 2001; Wee & Quazi, 2005
	• Economic benefits;	Bohdanowicz, 2005; Harris & Crane, 2002; Juholin, 2004; Kirk, 1998; Mensah, 2006; Moorthy et al., 2012; Park & Kim, 2014b
	• Manager's attributes;	McKeiver & Gadenne, 2005; Mensah, 2014; Salimzadeh et al., 2013
<b>External pull factors</b>	• Government: national and regulation/legislation;	Cespedes-Lorente et al., 2003; Chan & Wong, 2006; Darnall, Henriques, & Sadorsky, 2008; Delmas & Toffel, 2004; Enz & Siguaw, 1999; Foster et al., 2000; Gadenne et al., 2009; Hillary, 2004; Kasim, 2007; KamalulAriffin, Khalid, & Wahid, 2013; Kirk, 1995, 1996; Kirkland & Thompson, 1999; Le et al., 2006; Masurel, 2007; McKeiver & Gadenne, 2005; Menash, 2004; Middleton & Hawkins, 1998; Moorthy et al., 2012; Mowfforth & Munt, 1998; Quazi, 2001; Rivera, 2004; Roberts, Lawson, & Nicholls, 2006; Salimzadeh, et al., 2013; Samdin, et al., 2012; Seidel, Tedford, Cross, Wait, & Hammerle, 2009; Studer, Welford, & Hills, 2006; Tari, Tzschentke et al., 2004; Wee & Quazi, 2005; Williamson & Lynch-Wood, 2001
	• Local community;	Biondi, Frey, & Iraldo, 2000; Delmas & Toffel, 2004; Kasim, 2007; Kirk, 1996; Le et al., 2006; McKeiver & Gadenne, 2005; Nejati, Amran, & Ahmad, 2014

Table 2.1 (Continued)

• Customers, investors, shareholders;	Bansal, 2005; Bohdanowicz 2005; Buysse & Verbeke, 2003; Cespedes-Lorente et al., 2003; Clark, 1999; Delmas & Toffel, 2004; Enz & Siguaw, 1999; Er & Aydin, 2012; Foster et al., 2000; Gadenne, et al., 2009; Han et al., 2009; Henriques & Sadorsky, 1999; Kasim, 2007; KamalulAriffin et al., 2013; Kirk, 1996; Le et al., 2006; Manaktola & Jauhari, 2007; McKeiver & Gadenne, 2005; Mensah, 2014; Park & Kim, 2014a; Quazi, 2001; Rivera, 2004; Salimzadeh, et al., 2013; Studer et al., 2006; Tang et al., 2013; Tzschentke et al., 2004; Wee & Quazi, 2005
• Suppliers and trading partners;	Buysse & Verbeke, 2003; Gadenne et al., 2009; McKeiver & Gadenne, 2005; Mensah, 2014
• Public relations and marketing;	Claver Cortés, Molina Azorín, Pereira Moliner, & López Gamero, 2007; Kirk, 1995, 1998; Kirkland & Thompson, 1999; Tzschentke et al., 2004
• Insurers and other financial institutions	Buysse & Verbeke, 2003; Hillary, 2000; Kirkland & Thompson, 1999; Mensah, 2014

Source: Author

The adoption of environmental practices or the initiation of new environmentally friendly approaches in the market by an organization has come from multiple factors (Rogers, 1995). Roome (1992) and Gunningham, Kagan, and Thornton (2003) examined the pressures to change from both internal and external forces pushing toward environmental management practices to manage an organization's environmental performance. There appears to be a lack of causal understanding of factors in evoking strong green practices in the hotel sector (Klassen, 2000). Bansal and Roth (2000) suggest that the company motivations for pursuing green initiatives are driven by the need to sustain competitiveness, or to improve profitability; legitimization, or the company's desire to improve based upon established regulations, values, norms and beliefs; and ecologies of entrepreneurial action, or the need to conduct business operations in a responsible manner. Discussing about the drivers based on previous study, Kirk (1995) considers that change in an organization consists of five major motives, i.e. legislation and codes; fiscal policies; public

opinion; consumer pressure; financial advantages resulting from saving resources. The results reveal that the response of the hospitality industry is mainly those areas related to monetary benefits or financial gains i.e. energy and waste management and a fiscal/legislative requirement. Whereas the research shows that consumers are not spending more money on environmental costs this is probably very sensible. Kirk (1998) also finds that the survey results show some hotels in Edinburgh are able to yield important benefits, in terms of the effects that their activities have on the local community, to their public relations. This can make a substantial contribution to provide a marketing advantage, so perhaps they might not be fully sensible of the advantage of financial benefits.

Economic benefits resulting from cutting down operating costs and utilizing resources more efficiently were mentioned the most frequently and the major driving force of business action to implement environmental management (Bohdanowicz, 2005, 2006; Enz & Siguaw, 1999; Kirk, 1998; Mensah, 2006; Penny, 2007; Tzschentke et al., 2004). Stipanuk (2002) claims that economic benefits can be gained in hotels such as cost reduction and profit improvement through environmental sustainability, being a crucial ingredient in business. Bohdanowicz (2005) also asserts that in the hotel industry, the prospects of economic savings along with customer demand play vital roles in promoting environmental consciousness and responsible environmental management.

A growing pressure from customers had emerged as a motivator to sustain green hotels. Roberts (1996) states that green shoppers are not the same like the others; they favor selecting green products (Phillips, 1999). Further, Gustin and Weaver

(1996) concur that travelers select the hotel that supports green practices. Green consumers choose a green facility when traveling. Based on the study from Bohdanowicz (2005), she finds that customer demands are a forceful persuasion for hotels that has the ability to further environmental practices adoption in the hotel sector in Europe. This points to hoteliers' raising consciousness towards rapidly increasing concern for consumers about the natural environment, human health, corporate social responsibility (CSR), and green purchasing trends. Heung, Fei, and Hu (2006) discovered that Chinese tourists became interested in staying at an eco-certified facility. Also, Manaktola and Jauhari (2007) suggest that an increasing number of customers express that they seek out green hotels and hotels' green practices influence consumers' decisions in choosing a hotel for their staying. This was corroborated by Nabsiah, Ismail, Siti Nabiha, and Azlan (2008) who found a similarity in pressure for environmental performance improvement driven by a growing demand for green hotels in the U.S. and Latin America from customers. Recently, Ogbeide (2012) found that there are more consumers' expectations from green hotels and requirements of their practices to be even more socio-environmentally responsible.

The former studies suggest that customer expectation (Millar & Baloglu, 2011) and requirements of tour operators and travel agents (Ernst & Young, 2008; Kenan Institute Asia, 2005; Thomas Cook Group, 2013) will force hotels to going green. Consequently, marketing strategies for environmental safety and targeting these green consumers is an opportunity for the hotel industry to gain competitiveness through corporate environmental responsibility (Manaktola & Jauhari, 2007).

Foster et al. (2000) mention that the following forces put pressure on the hospitality and tourism industry to perform a more eco-friendly approach. These are consumer demand, increasing environmental regulation, managerial concern with ethics, customer satisfaction, maintenance issues related to the physical plant, and the need for aesthetics based on ethics and economics. Additionally, the increasing influence of the “green” investor, including banks that want to limit exposure to environmental risk, and the “disproportionate influence on consumer behavior” of environmental pressure groups were two other factors exerting pressure for change (Roarty, 1997: 248). In McKeiver and Gadenne’s (2005) study in Australia, the factors influencing the implementation of environmental management in SMEs were customers, supplier, legislation, local community, owner-manager attitudes, awareness, benefits of implementing an EMS, and employees. Many researchers focus on only external influences in shaping organizational activities. For example, Le et al. (2006) identify “external environment characteristics”, such as the level of competition, customer demand, and government/regulation, but perceived competition and the likelihood of adoption have a high correlation in their study, whereas organization characteristics (e.g. hotel size, location, and level of risk-taking) become weaker in their capacity for influence.

However, Hillary (2004) also highlights that “SMEs are also very skeptical of the benefits to be gained from making environmental improvements. In many cases, especially for smaller organizations, low awareness and the absence of pressure from customers (the most important driver for environmental improvements and EMS adoption) and insufficient other drivers mean that few efforts are made to address environmental issues.”

Unlike other research, Ruiz-Molina et al. (2010) added that information and communication technologies (ICT) make a contribution directly decrease the demand of supplies and energy by the hospitality industry. Moorthy et al. (2012) assert that there are the five key drivers for SMEs to go green: economic benefits, financial incentives, stakeholders demand, legislation, resource, motivation, and knowledge. Moreover, Samdin et al. (2012) have identified general factors which influence Sustainable Tourism Practices (STP) in Malaysia, namely, incentives, knowledge, training, regulation, reduced cost, top management, and formalization. The result shows that two of the factors measuring incentives and knowledge have a significant influence on STP. It concludes that if hotel managers have greater knowledge, they will have greater chance to adopt STP in their hotels.

Pressure from parent companies and customers was found to be more powerful drivers. Other drivers included public pressure, economics, and corporate culture. Frequently, these types of external pressures could be viewed as a response from top management exhibiting its environmental commitment to sustainability (Roy et al., 2001). Banerjee et al. (2003) also indicate that top management's commitment to the environment strongly acted in compliance with environmental regulations and public concern, which together with an environmental corporate strategy depended on a company's environmental orientation.

Based on institutional theory, from the expectations of society, other actors (such as the government and the public) play a pivotal role in determining organizational intentions to adopt or not adopt environmental management practices (Delmas & Toffel, 2003).

According to Polonsky, Rosenberger, and Ottman (1998), environmental pressure is also exerted by stakeholders, as demonstrated by the trend toward more investing in environmental and social responsibility is on the upswing. The key groups of stakeholder (consumers, employees, government, corporations, and shareholders) have pressured on companies in reaction to environmental pressure and to improve their environmental performance (Quazi, 2001; Wee & Quazi, 2005). The adoption of environmental initiatives is exerted by stakeholders including customers, NGOs and government amongst others who play critical roles that companies are dependent upon (Cespedes-Lorente et al., 2003; Kasim, 2007; Rivera, 2004). Furthermore, Studer et al. (2006) found that the two main actors for embarking on the adoption of environmental practices in Hong Kong by SMEs are regulators and stakeholders. However, Brown (1996) contends that in general hotels do not feel any pressure from stakeholders to embrace green actions.

Kotler, Bowen, and Makens (2006) propose that stakeholder demands have to be identified by companies and should meet minimum interests and expectations held by stakeholders. Management must act in the shareholders' interest as their agent to ensure the survival and prosperity of the company and to increase the company value in the long term to all stakeholders. According to stakeholder theory, a company to be successful can rely on how management builds and leverages a strong stakeholder relationship. A company, therefore, will not survive without the backing of key stakeholders (Elijido-Ten, 2007). Mensah's (2014) study was carried out in Ghana. He indicated that internal primary stakeholders are employees, shareholders and financial institutions; and external primary stakeholders are customers and suppliers. Thus, it is important to develop a sound comprehension of the stakeholder group's

influence on managerial decision-making that has become a driving force behind the company's commitment to ethically raising environmental initiatives and activities (Tzschentke et al., 2004).

Similarly, regulation is considered one of the best ways to drive small businesses towards environmental issues. In former studies in Malaysia, Al-Shourah (2007) identifies the drivers, including environmental value, top management support, regulations, competitive legitimacy, and employee recognition. Kasim (2007) identifies the drivers of green practices including regulation, community pressure, sectoral pressure, and economic factors. She found that the government's regulatory forces are one of the primary driving forces of green practices adoption by hotels in Malaysia. For instance, local government organizations develop a guide to environmental management for hotels and some even try to cover it with the hotel rating systems. Further, Siti Nabiha et al. (2010) identify the drivers that influence environmental management practices: regulation, customer demand, level of competition, greenness at the organizational level, and attitude towards change (level of risk taking).

However, the former factors have established the influence of G-Practices adoption while investigations of the latter factors influencing the adoption of G-Practices have proved more complex. The evidence is often contradictory, for instance, owners/managers do not always translate environmental attitudes into sustainable actions, although they may have a positive environmental attitude and be more motivated to perform better (e.g. Drake, Purvis, & Hunt, 2004; Meritt, 1998; Petts, Herd, Gerrard, & Home, 1999; Redmond, Walker, & Wang, 2008; Revell, Stokes, & Chen, 2010;

Schaper, 2002; Tilley, 1999; Williams, van Hooydonk, Dingle, & Annandale, 2000). Even though, customer pressure is the most often mentioned sources of pressure from many researchers, but Khanna and Speir (2007) find no evidence that consumer pressure plays a significant role in motivating environmental management in the U.S. It also appears that internal and external components vary significantly from country to country. For that reason, a number of drivers have been identified as a critical to understand what motivate owners/managers of SMEs to engage in more environmentally friendly ways.

#### 2.4.2 Barriers for G-Practices

Researchers have identified many confounding factors that may inevitably hinder the performance of environmental behaviors of owner-managers. A number of factors that may affect the adoption of G-Practices could be classified as “moderator”.

Barriers are factors that hamper the implementation of G-Practices. Even when motivating factors exist, there must be some active power SMEs face when designing and implementing environmentally friendly practices. Key behavior change can also be influenced by many barriers. As Table 2.2 shows, there are common barriers identified in the literature.

Table 2.2  
*Illustrates Barriers from Previous Studies*

Barriers	Sources
• Lack of finance/Lack of capital;	Ateljevic & Doorne, 2004; Best & Thapa, 2013; Condon, 2004; Doddy, 2010; Frey & George, 2010; Gerstenfeld & Roberts, 2000; Hillary, 2000; Jenkins, 2006; Lee, 2009; McKeiver & Gadenne, 2005; McNamera & Gibson, 2008; Okpara, 2011; Revell et al., 2010; Seidel et al., 2009; Taylor, Barker, & Simpson, 2003; Tsai, Wu, & Wang, 2014

Table 2.2 (Continued)

• Access to information/lack of knowledge/lack of understanding;	Ammenbery & Hjelm, 2003; Condon, 2004; Doddy, 2010; Gerstenfeld & Roberts, 2000; Herren & Hadley, 2010; Hillary, 1995, 2000; Levy & Dilwali, 2000; Luetkenhorst, 2004; McKeiver & Gadenne, 2005; Revell et al., 2010; Revell & Blackburn, 2007; Schaper, 2002; Simpson, Taylor, & Barker, 2004; Smith & Kemp, 1998; Tilley, 2000; Welford, 1994
• Low awareness of environmental impacts and risks;	Condon, 2004; Gerstenfeld & Roberts, 2000; Hillary 2004; Hutchinson & Chaston, 1994; Horobin & Long, 1996; Kane, 2010; Kasim 2009, Masurel 2007; McKeiver & Gadenne, 2005; Seidel et al., 2009; Tilley, 2000; Tzschentke et al., 2004; Vernon et al., 2003
• Lack of time;	Best & Thapa, 2013; Doddy, 2010; Frey & George, 2010; Jenkins, 2006; Herren & Hadley, 2010; Hillary, 2000; Mair & Laing, 2012; McKeiver & Gadenne, 2005; Revell et al., 2010; Roberts et al., 2006
• Lack of motivation/lack of interest;	Erdogan, 2007; Erdogan & Baris, 2007; Herren & Hadley, 2010; Hillary, 2004
• Lack of top-level commitment;	Jenkins, 2006
• Lack of internal expertise;	Ateljevic & Doorne, 2004; Condon, 2004; Hillary, 2004; Roberts et al., 2006
• Lack of infrastructure	Ateljevic & Doorne, 2004; Chan, 2008; Okpara, 2011; Tzschentke et al., 2008

Source: Author

Other barriers include supply chain routes that are long and energy intensive (Friedman & Miles, 2002; Petts, 2000; Welford & Gouldson, 1993); lack of potential to keep money and ahead of the competition (Petts, 2000); potential benefits not apparent, limited access to technology, and EMS is not a requirement (Best & Thapa, 2013).

In the hotel industry, there are the increasing adoption of environmental management in big hotel chains. Ayuso (2007) mentions that the most efficient methods for companies to improve environmental practices are formal accreditation schemes – eco-labels and environmental management systems (EMS). Chan (2008: 188)

concur that “an EMS is developed as a response to pressure to show environmental performance”. With respect to the barriers hamper the development of SMEs, a study led by Chan (2008) discovered that there are the six following factors that limit hotels in establishing green practices in Hong Kong: lack of knowledge and skills, lack of professional advice, uncertainty of outcome, certifiers/verifiers, lack of resources, and implementation and maintenance costs. Besides, some of the factors are consistent with some research studying the factors that researchers have identified as barriers of various business fields in different countries (Hillary, 2004; Levy & Dilwali, 2000; Quazi, 1999). Erdogan and Baris (2007) added that the lack of interest and awareness is a significant topic in environmental protection measures in Ankara hotels, Turkey. Likewise, in 2008, Abdul Samad et al. conducted a survey of 14 Malaysian hotels. The results showed consciousness at a low level of the need to embark on a number of green practices among hotel operators.

In SMEs which SMHs fall into, environmental management has the special characteristics of its setting. Sustainable tourism products and services are becoming a rising concern that a number of hotels are increasing to respond to customer demand by adopting G-Practices. However, small businesses are not actually aware that their actions impact on the environment or they do not take into account the need to identify these relevant environmental problems (Melton & Tinsley, 1999). There is a consensus among researchers that lack of awareness is a significant barrier that most SMEs do not want to implement sustainable practices (Friedman & Miles, 2002; Halila, 2007; Hillary, 2004; Horobin & Long, 1996; Morrison & Teixeira, 2004; Tilley, 2000) and there are no exceptions for SMEs in tourism (Kasim, 2009; Masurel, 2007; Tzschentke et al., 2004; Vernon et al., 2003).

According to Williamson and Lynch-Wood (2001), some small businesses claim that they have an awareness of environmental problems, however, other research has revealed that for many small businesses, the environment is considered something peripheral to their core business, and little attention and responsibility is given to the environmental impacts (Ammerbery & Hjelm, 2003; Chan, 2011; Hillary, 1995; Nyahunzvi & Zimbabwe, 2014; Redmond et al., 2008; Simpson et al., 2004; Tilley, 2000). Although serious environmental issues receive considerable worldwide attention, evidence shows that small businesses on average do not appear to actively get involved in the global environmental debate. It would appear that small businesses extend to be invisible to remove negative actions or behaviors in their businesses (Walker, Redmond, & Goeft, 2007); they actually do not take a stand the importance of bringing up environmental practices on a more serious note (Webster, 2000). Smith (1997) recognizes raising awareness about environmental issues among SMEs is required. It can be linked with education.

The view generally held by many SME owners is that their business activities have quite minor environmental impacts (Hillary, 1995; Holland & Gibbon, 1997; Rutherford & Spence, 1998; Smith & Kemp, 1998). Owners-managers are found to often be resource poor, time poor to manage environmental matters, lack of access to financing and labor, and the presenting problem (Welsh & White, 1981). Similarly, small business owners cannot afford to spend time and money to investigate their environmental performance or have limited access to the high cost consultancy support network (Hillary, 2000: 140).

Another common barrier is funds availability. According to Herren and Hadley (2010), the most common barrier faced by all SMEs to become more proactive green practices was the involved cost. This finding is aligned with several previous researchers on barriers to investment in SMEs (e.g. Condon, 2004; Jenkins, 2006; Lee, 2009; Revell et al., 2010; Seidel et al., 2009; Taylor et al., 2003). In the same vein, Tsai et al. (2014) and McNamera and Gibson (2008) claim that the financial incentive is one of the most major blocks for the green movement on hotels.

Besides, previous literature and research evidence with SME owner/managers' perspective suggests that the following three main barriers prevent them from engaging in good environmental practices. These are SME characteristics, resource availability (including financial, human and time), and their personal interest and knowledge of (or lack of) environmental management (Yacob & Moorthy, 2012). All of these factors are barriers for SMEs' engagement in environmental management. Indeed, research points that commonly larger organizations have greater advantages and chances to engage and receive greater benefits from environmental practices (Chan, 2008; Vernon et al., 2003) because of their greater access to financial and human resources (Kasim, 2009).

Nemasetoni and Rogerson (2005) discover that there has been an increasing attention in the study more about the active nature of small tourism and hospitality companies and the manner they interact with the society and economy. They cited three studies (Nemasetoni & Rogerson, 2005; Thomas, 2004) to show that the obstacle facing small companies in tourism includes lack of knowledge on small-sized tourism accommodations (STAs) in many countries, along with Turkey. Anecdotal evidence

proposes that smaller, independent hotels are either unaware or do not possess the financial resources to invest in business initiatives in harmony with the environment. While these initiatives are brilliant, these smaller hotels may lack the time or expertise (Herren & Hadley, 2010).

The studies so far show that tourism businesses, especially SMEs, consider not allocating any resources (i.e. time, money) to implement environmental management practices (Frey & George, 2010). Business owners work too many hours with too less time to proactively study environmental problems (Dilts & Prough, 1989; Hillary, 1999; Rutherford, Blackburn, & Spence, 2000; Schaper, 2002). Another barrier of environmental management is lack of proper infrastructure which is one of the hindrances to the development in the tourism and hospitality. Baker and Davis report that the destination or accommodation may lack the infrastructure essential to inspire green behavior (BLACKSBURG, Va., 2009).

Additionally, the influence of barriers to the implementation of G-Practices of companies was found to be important considering the characteristics of owners-managers. It was vital to note that the findings revealed statistical differences in gender, age, and level of education (Saenyanupap, 2011), and age and education (e.g. Petts, Herd, & O'hEocha, 1998; Schaper, 2002). The study has revealed that highly educated people are associated with higher levels of environmental issue, however, it is insufficiently strong to convey people to change environmental behavior (Olli, Grendstad, & Wollebaek, 2001). Age seems to be not easy to differentiate from the effect. Petts et al. (1998) note that although national surveys claim that younger people have lower levels of environmental concern than older people; in focus

groups, managers who are younger have more worried in the work environment. According to Schaper (2001), he discovered that owner/managers who are younger have a more positive attitude towards the environment in Australia. It is suggested by Olli et al. (2001) that even though younger people care more about the environment, the cohort of persons who are now elderly experienced difficulty coping with economic conditions act in a more sustainable way. There are differences between the genders. Rickinson (2001) and Zelezny (1999) indicate that compared to men, women demonstrate to have lower levels of environmental knowledge, but they display greater pro-environmental behavior. As noted above, even give a better view about demographic variables and barriers, some findings are inconsistent with the other research in various countries. Indeed, SMEs have limited company's financial resources and specific characteristics. Consequently, the author conducts an empirical study to test for the effect of funds availability on G-Practices adoption.

## **2.5 Variables Relating to the Study**

As discussed earlier, there is a wide range of drivers and barriers that are the most important part of shifting an organization to adopt G-Practices. There is a need to understand the motive factors behind the rational decision for G-Practices adoption. The researcher considers the selection of the study variables (factors influencing G-Practices) is analyzed according to institutional factors. Institutional theory can identify internal and external environmental factors as institutional factors. This can be explained by using the term of internal push and external pull factors. This study concentrates on key internal push factors in the literature that affect the adoption of G-Practices by SMHs including owner-manager attitudes (Bohdanowicz, 2005), environmental awareness (Horobin & Long, 1996; Roberts & Tribe, 2008), benefits

businesses can gain (Nicholls & Kang, 2012a), and concern of employees (Mensah, 2014). Key external pull factors include regulations (Del Brio & Junquera, 2003; Gerstenfeld & Roberts, 2000; Tang et al., 2013), green consumers (Le et al., 2006), supply chains (Merritt, 1998), local communities, and competitors (Mensah, 2014). Other research has analyzed how organizational factors (e.g. financial resources) affect SMEs' adoption of G-Practices (Gadenne et al., 2009).

Meanwhile, this research stream contributes to institutional theory by exploring how institutional pressures interact with organizational characteristics (e.g. companies' resources) in influencing managerial decisions on G-Practices adoption. Exploring how organizational factors moderate companies' reaction to institutional pressures represents a key development for the use of institutional theory while increasing its ability leads to be much more understanding of why companies pursue different environmental management practices (Delmas & Toffel, 2012). Therefore, the moderating factor that prevents the adoption of G-Practices in SMHs is funds availability (Gadenne et al., 2009). Other factors influence the adoption of G-Practices in SMHs including gender, age, education level, years of service, age of business, price per night, number of employees, number of rooms, and company location.

Moreover, many researchers suggest that such research is limited in the hotel industry in SMEs (Menash, 2014; Morrison et al., 2010; Thomas et al., 2011). Justifications for the selection of these factors are discussed in more detail below.

## **2.6 Internal Push Factors**

The internal push factors for G-Practices adoption in the hotel industry are many and varied. Key internal push factors include owner-manager attitudes, environmental awareness, benefits businesses can gain, and concern for employees. The following illustrates in more detail internal push factors for each item.

### **2.6.1 Owner-Manager Attitudes**

According to Fuller (2003: 320), small businesses are personal and reflect the personal values and commitment of the owners and company managements of SMEs may consist of a single manager (Ottesen, Foss, & Grønhaug, 2004). Individual concern for the environment from a sense of corporate citizen led to the motivation to perform ecological responsibility. Social responsibility has been a concern and must be considered by individuals (Miles, 1987). Moore, Slack, and Gibbon (2009) proclaim that social responsible behavior is mostly a factor of the personal choices and attitudes of SME owner-managers.

Previous research by Bansal & Roth (2000) has shown that in the organizational context, interpretations of environmental responsibilities are influenced by the personal values of owners and managers, encounters with customers, global market trends, future opportunities and community interest in sustainability (Grogan, 2012) and these interpretations in turn embolden organizations to take on environmental initiatives.

Furthermore, environmental concern as well as the willingness to act on this concern is strongly dependent on hoteliers' attitudes toward change and the environment,

knowledge regarding the benefits of green practices, perception of and relationship with the external environment, and organizational variables such as size, company location and financial situation (Bohdanowicz, 2005; Dewhurst & Thomas, 2003; Le et al., 2006). Others have suggested that organizations' commitment is shaped by individual attitudes of managers toward the environment (Coglianese & Nash, 2001). Further, prior studies have shown differences in attitudes towards the implementation of green practices among small business owners and managers (e.g. Battisti & Perry, 2011; Tilley, 1999).

On the bright side, SME owner/managers are worried regarding their impact on the environment (e.g. Groundwork, 1995; Roberts et al., 2006; Tilley, 1999). Revell et al. (2010) found attitudes in business about environmental measures mostly were favorable. More than 80 percent of SMEs agreed that "environmental issues should be a high priority." Further, 75 percent disagreed that small businesses can lead to an impact on the environment.

Shen and Wan (2001) suggested that environmental protection measures for hotels can be identified by hotel managers, pointing a strong possibility. In recent research, Tsai et al. (2014) discovered that Taiwanese hoteliers have significantly high eco-friendly hotel attitudes. Similarly, Tzschentke's (2008) study using qualitative research found that many small European hotel managers' environmental attitudes to employ green initiatives are in line with their own personal environmental ethics since those with environmental attitudes are predisposed to act in an environmentally friendly manner (Hines, Hungerford, & Tomera, 1986). Naffziger, Ahmed, and Montagno (2003) further argued that managers with high

levels of worry about environment will encourage them to invest more time and resources towards environmental initiatives than managers' low environmental worry. Attitudes were used as important predictors of green behavior (Laroche et al., 2001).

Conversely, according to Schaper (2002), no relationship was discovered between positive personal environmental attitudes and positive environmental performance. Tilley (1999) reported a gap between small business owners' attitudes and their environmental behavior. Furthermore, environmental management practices were perceived as an excess burden on business by some hotel managers/owners (Rutherford et al., 2000).

Based on the study from Bohdanowicz (2005), she used a survey to perform a hypothesis test about hotel environmental management. The results supported her hypothesis that in small and independent hotels, attitudes and knowledge of owners can affect environmental behavior. In general, pressure from hotel guests is not substantial enough to influence small hotels and their resource investment in environmental friendly measures is also limited. One outcome in Bohdanowicz's study shows that companies should make some environmental initiatives appeal to the green conscience of hotel guests as well as use greener alternatives to build a demand of groups within the hotel and tourism industry.

While, one researcher argues that numerous hotel developers, owners and managers do not certainly know the essence of green agenda adoption. Implementing sustainable practices will make them a satisfied attitude. Gore (1992) makes the point

that an innately distinctive attribute and usual barrier of small companies is that many decisions are liable to be the responsibility of owners and managers. So, there are inadequate data on the needs of management in terms of policies and strategies, especially when it comes to the environment, making the personal beliefs of the owners and managers very influential in decision making (Grogan, 2012). The previous findings suggest that owner-manager attitudes have implications on the adoption of G-Practices.

There is a gap. Owners/managers who possessed a positive attitude towards the environment do not appear to introduce environmental practices in their actual business. For example, they are simply unwilling to view or adjust to changes in their business operations (Shi, Peng, Liu, & Zhong, 2008). Other studies reported no relationship between environmental attitudes and behavior (e.g. Gamba & Oskamp, 1994; Lansana, 1992; Oskamp, Harrington, Edwards, Sherwood, Okuda, & Swanson, 1991). Merritt (1998) has called this paradox "... the so-called SME problem in environmental management." It can be said that there have been mixed findings produced in empirical studies.

However, the literature still remains inconclusive regarding the impacts of attitudes on behavior. With a way to help improve the validity and reliability of research outcomes, Weigel (1983) suggested that attitude-behavior studies might provide more accurate prediction by incorporating situational characteristics in order to verify attitude-behavior link. Bamberg (2003) and Iwata (2004) added that situational and personal factors can affect this relationship. Therefore, this study will focus on

the decisions made by owners/managers to go green are influenced by environmental attitudes of owner-managers proposed by institutional factors.

### **2.6.2 Environmental Awareness**

Environmental awareness is defined by Kollmuss and Agyeman (2002: 253) as “knowing of the impact of human behavior on the environment.” They further said that several cognitive and emotional limitations constrain one’s ability to be environmentally aware. Cognitive limitations include the non-immediacy of many ecological problems, slow and gradual ecological destruction and complex environmental issues which can seriously compromise an individual’s willingness to represent pro-environmentally. Emotional limitations include emotional non-involvement and emotional reactions. It is mostly thought that one’s ecological behavior may be increased by environmental consciousness of an individual. For example, people may purchase eco-labelled products, eat organic foods and take part in recycling programs due to their increased environmental awareness. Some people did not hesitate to stop using hairspray when it was discovered that chlorofluorocarbons (CFCs) released by hairspray and other aerosol propellants deplete the ozone layer. From testing hotel employees’ attitudes towards EMSs, Chan and Hawkins (2010) found that creating green awareness of each individual was crucial to help raise awareness about the environment. Based on enhanced environmental awareness of employees, they employed their knowledge in their everyday routines.

The awareness of green or sustainable practices in terms of cost reduction, production competencies, best practice, and regulatory compliance can contribute to business success. Organizations can benefit significantly from efficient resources and

effective waste management, and from improved environmental management practices. Resource efficiency means using the amount of resources (i.e. water, energy) and even the staff more efficiently (Studentforce, 2006). It also lessens the impacts on the environment.

However, many SMEs around the world have little knowledge about environmental management and do not understand the concept of environmental management (Yacob & Moorthy, 2012: 104). Thus, it is very difficult for SMEs to see a clear link between EMS implementation and the benefits (Weerasiri & Zhengang, 2012). To date, evidence has revealed that environmental management practices of SMEs are quite limited partly because small businesses focus more on their business' daily activities to which environmental issues appear to be somewhat peripheral (Studer, Tsang, Welford, & Hills, 2008).

Bohdanowicz (2005) assessed 348 Swedish and Polish hoteliers to measure the environmental awareness and adoption of initiatives. She found that the 77-90 percent range was the adoption rate of one or more environmental measures relating to energy efficiency, water conservation, and waste management, with higher rates among the Swedish operators. Nonetheless, the specific measures adopted by the Swedish and Polish hoteliers were lower, e.g. merely 62 percent and 44 percent respectively, with installing water-efficient fixtures. Operating cost savings and customer demand were the most frequently cited two reasons for such practices.

The differences in awareness of environmental issues and adoption of initiatives between types of hotels (chain and independent hotels) throughout Europe were

examined by Bohdanowicz (2006). The managers of chain property were more disposed to take an interest in and proactively manage in environmental matters and worked to build up and sustain a positive brand image.

Moreover, based on a case study conducted by Claver et al. (2007) on managers' awareness about the environmental impacts and companies are implementing environmental management, companies' environmental management can be seen as the result of strategic practices according to managers' environmental awareness. Many researchers point out that environmental awareness is considered as the most appropriate measure of G-Practices adoption.

In contrast, a survey of 104 small-sized tourism accommodations (STAs) made by Erdogan (2007) in Turkey revealed that there was no concern to implement sustainable development and resource preservation in daily business practices of such facilities. This may indicate that they do not recognize that sustainable behavior can make good business sense.

Existing empirical work is still mixed regarding the relationship between environmental awareness and G-Practices adoption. The mixed results suggest that more research is needed to provide more robust evidence of the determinants of G-Practices. Thus, the current study plans to find out whether environmental awareness influences hotels owner-managers to adopt G-Practices.

### 2.6.3 Benefits Businesses Can Gain

There are three types of benefits that could motivate business to become better environmental stewards: monetary benefits, non-monetary benefits and environmental benefits. The literature acknowledges numerous benefits for G-Practices adoption as shown in Table 2.3.

Table 2.3  
*Benefits of G-Practices*

Benefits	Sources
<b>Monetary Benefits</b>	
• Save costs;	Ayuso, 2007; Bader, 2005, Brebbia & Pineda, 2004; Graci & Dodds, 2008; Lynes & Dredge, 2006; McKeiver & Gadenne, 2005; Nidumolu, Prahalad, & Rangaswami, 2009; Tzschentke et al., 2004; Webster, 2000
• Increased profitability;	Houdre, 2008; Nicholls & Kang, 2012a; White & Stewart, 2008
<b>Non Monetary Benefits</b>	
• Increased efficiencies;	Hillary, 1999
• Competitive advantage;	Adlwarth, 2010; Butler, 2008; Carmona-Moreno et al., 2004; Claver et al., 2007; Condon, 2004; Griskevicius, Tybur, & Van den Bergh, 2010; Huybers, 2003; Lee, Hsu, Han, & Kim, 2010
• Complying with legislation;	Graci & Kuehnel, 2010; White & Stewart, 2008
• Company's reputation;	Bohdanowicz, 2005; Jenkins, 2004; Karagozolu & Lindell, 2000; Park & Kim, 2014a; Rangel, 2000
• Marketing and a better image among consumers and local community;	Han et al., 2009; Kasim, 2007; Kotler, John, & Makens, 2003; Nicholls & Kang, 2012a;
• Employee retention;	Fleischer, 2010; Jenkins, 2004; McKeiver & Gadenne, 2005; Nicholls & Kang, 2012a; White & Stewart, 2008
<b>Environmental Benefits</b>	
• Cleaner and safer working environment;	Claver Cortes et al., 2007
• Reduced emissions, water and energy	Claver Cortes et al., 2007

Source: Author

Several studies believe that environmental management has generated cost saving in the hotel sector (Blanco, Rey-Maquiera, & Lozano, 2009; Brown, 1994; Brown, 1996; Choi, Parsa, Sigala, & Putrevu, 2009; Essex & Hobson, 2001; Han & Kim, 2010; Kirk, 1995; Penny, 2007). Butler (2008) found that green hoteliers can gain benefits by lowering the cost of energy, waste, water, emission cost, operational and maintenance cost. As a result, increasing their efficient use of resources helps businesses boost their bottom line: increased profitability, their capacity to grow and employment within an organization. As illustrated by empirical study that comprehensive environmental management also enables operators to decrease environmental incidents and damage, and civil liabilities, improve efficient systems including waste and pollution, heighten employees' environmental consciousness and satisfy stakeholder expectations (Welford & Gouldson, 1993).

When businesses can do more with less resources, or when they can utilize resources efficiency, investment in environmental protection measures is positively correlated with increasing profits. This is also pertained to the growing demand for environmental commodities from clients (Rennings & Rammer, 2009). The efficient use of resources has become the most pragmatic and efficient way to increase the competitiveness of both governments and businesses. Moreover, the results from Park and Kim (2014a) are presented in consistent with former studies that the hotels have adopted environmental programs to raise a company's eco reputation in response to demand for environmentally friendly from customers (Bohdanowicz, 2005; Chan & Hawkins, 2010; Garay & Font, 2012). Functioning without environmental protection can impact long-term customer satisfaction and loyalty. Maintaining an attractive, clean and pollution-free environment is an important factor

of vocation destination decisions. Hospitality companies therefore need to ensure long-term environmental sustainability of their own locality (Bohdanowicz, Zientara, & Novotna, 2011). Strengthening the brand image of companies is one of the most common benefits of environmentally friendly practices (EFPs) adoption by hotels cited in the literature (Kotler et al., 2003). For example, research on the Costa Rican hotels showed that strengthening hotels' marketing image can provide companies a competitive advantage by participating in a sustainable tourism program (Rangel, 2000).

On the other hand, a number of hoteliers realize that the financial benefits of green initiatives cannot offset (Kang, Stein, Heo, & Lee, 2012). Simpson et al. (2004) found in their survey in the UK that environmental practices adoption or environmentally sensible development does not help most SMEs to the way they can achieve a competitive advantage. In the service industry, SMEs were relatively less capable of handling environmental problems effectively. Research by Epstein and Roy (2000) illustrated that environmental sustainability needs for SMEs should be considered as required of considerable capital investment in order to maintain competitiveness.

Empirical studies have shown that the implementation of G-Practices has bring benefits in terms of cost saving and competitive advantage. In spite of this, there is a lack of studies exploring empirically how to determine benefits business can gain of G-Practices adoption for SMHs. Thus, this study will focus on the effect of benefits business can gain on G-Practices adoption.

#### **2.6.4 Concern for Employees**

Besides, companies respond to employees' concerns. Other equally significant stakeholders are the company's employees apart from customers (Bohdanowicz et al., 2011; Buysse & Verbeke, 2003; Kirk, 1995). According to Michelin, "Few stakeholders are as vital in a business as its workers. It has been proved that adopting green practices benefits firms or organizations in various aspects including human capital. A worldwide company has to invest a great deal to respect all staff interests. Staff have a big interest in the success of the company" (The Times 100, 2006: 1). The efforts of operational changes will be associated with employees who are a functional hub and implementation team of the organizations to undertake green initiatives (Chan & Hawkins, 2010).

A company that has carried out in a more environmentally friendly manner may portray the more appealing public image, pull more clients and build a capable and dedicated functional team. This statement is supported by Dechant and Altman (1994) when they intimate that the employees' opinions of their company's environmental performance and its compatibility with their values profile affect their willingness to stay working and their pride in their work. Also, employee perceptions of a firm's CSR influence an ideal place for employee's decision to work (Greening & Turban, 2000). Employees nowadays do seem happy to work for an employer under a green business environment (Environmental Leader, 2012).

A survey of 403 senior executives from around the world made by McKinsey (1991, quoted by Fischer & Schot, 1993) found that 68 percent of them concurred that “organizations with a poor environmental record will find it increasingly difficult to recruit and retain high caliber employees.” Several authors argue that people want to work for ethical and responsible businesses that conform to their image (Akerlof & Kranton, 2005; Frank, 2003). Division Director of Environmental Affairs for Dexter Corporation further validates this finding suggesting that “college graduates are looking for more than just a pay check, they are looking for companies with which they can identify morally and philosophically” (Dechant & Altman, 1994). Anecdotal evidence within the hospitality sector, a sector that, perhaps more than any other, prides itself of “green ethics”, indicates that it has the lowest turnover rates in the world.

The finding is consistent with the results of a survey of 220 hotel employees in Orlando, USA (Kim, 2009). The results indicated that hotel employees, as a key stakeholder, have a significant and positive effect on green practices. Recently, Nejati et al.’s (2014) study found that employees have been proven to play important roles in promoting G-Practices of MSMEs. The most important thing is that employees recognize the companies’ quality performance pertained to the development of green activities. It has been agreed that industry-wide performance improvements become essential, whilst it is difficult to keep the best staff who are unable to take pride in the actions of their employer (Green Hotelier, 2003; Kim, 2009). A study of hotels in Sweden revealed that environmental management was the way to moderately build employee morale (Poksinska, Dahlgaard, & Eklund, 2003). It has also been indicated that improving environmental performance of an

organization can increase labor loyalty, reduce turnover, improve the ability to employ and maintain high quality staff, in particular targeting environmentally conscious young and motivated employees (Darnall et al., 2008; Delmas & Toffel, 2004; Hoffman, 2001; Le et al., 2006; Telle, 2006).

Moreover, the National Environmental Education Foundation's (NEEF) recent report, *The Engaged Organization Corporate Employee Environmental Education Survey and Case Study Findings* stresses, "By engaging employees, companies spark innovative changes in everyday business processes that save money and reduce environmental and social impacts while also inspiring employees to make sustainable choices at home and in their communities" ([www.ecogreenhotel.com/blog/tag/green-investing](http://www.ecogreenhotel.com/blog/tag/green-investing)).

Consequently, concern for employees about the environmental impact of organizational activities is likely to be a key factor to G-Practices adoption, which, in turn, employees help the implementation's chance for success towards G-Practices. It can introduce a framework for concern for employees towards G-Practices relationships. As viewed in this light, concern for employees is likely to affect G-Practices adoption of the hotel.

## **2.7 External Pull Factors**

Apart from the internal push factors, there is a range of external measures that can be used to assess the influence of G-Practices in an organization. So, key external pull factors include regulations, green consumers, supply chains, local communities, and

competitors. The following illustrates in more detail external pull factors for each item.

### **2.7.1 Regulations**

Legitimation refers to the desire of a company to improve the appropriateness of its actions within an established set of regulations, norms, values or beliefs (Suchman, 1995; cited in Bansal & Roth, 2000: 246). The government authorizes regulators to proclaim and enforce regulations, a type of coercive power (Delmas & Toffel, 2004). According to institutional theory, regulations are the coercive institutional pressures that are used to constrain the organization's actions or encourage organizations to undertake specific practices (Scott, 2003, 2004). The coercive pressure from governments can impose behaviors on organizations related to the needs of the environment and safety (Hoffman, 2001).

Several researchers highlight the influence of legislation and regulations that exert pressure upon companies to adopt green practices (Bonilla-Priego, Najera, & Font, 2010; Carraro, Katsoulacos, & Xepapadeas, 1996; Delmas, 2002; Majumdar & Marcus, 2001; Rugman & Verbeke, 1998). Legal compliance is becoming the primary reason for improving environmental performance (British Chambers of Commerce (BCC), 1996; Knowles, Macmillan, Palmer, Grabowski, & Hashimoto, 1999; Stabler & Goodall, 1997). The regulatory pressures from government that drive companies to comply are required in order to achieve compliance (Druker, White, & Stanworth, 2005). Indeed, many small businesses are excluded from many

regulations in order to avoid imposing unnecessary compliance costs of regulatory burdens on them (Fritze, 2013). Kasim (2007) identifies the government's regulatory force as one of the best ways to drive Malaysian hotels to adopt environmental management practices. Similarly, Seidel (2009) confirms that "environmental legislation serves as one of the most important factors motivating SMEs to invest in environmental improvements (Bansal & Roth, 2000; Masurel, 2007). SMEs often state that they will be reluctant to invest in such improvements unless they are forced to do so by law (Masurel, 2007; Williamson & Lynch-Wood, 2001)." The reason is what legitimates their authority is 'the will of the people'.

Revell et al. (2010) discovered that 60 percent of SMEs surveyed agreed that legislation was able to help guarantee a "level playing field" and that 60 percent also think there should be "more legislation to control the environmental and societal impacts of business." Thus, the most obvious factor that influences G-Practices among SMEs is legislation (Schaper, 2002). Similarly, the industry in Thailand is regulated by the environmental and safety laws which apply to the workplace. Companies must abide by these laws. Those who disobey the laws will be punished. Nevertheless, the relevant regulation does not apply to several businesses (Revell & Blackburn, 2007). There is also a lack of awareness of environmental regulations amongst SME owners/managers (Petts et al., 1999). Continuous improvement is unable to be achieved through regulations.

Whilst legislation and implementation of formal EMSs are thought to be the best drivers of environmental behavior (McKeiver & Gadenne, 2005; Stokes, Chen, & Revell, 2007), especially in hotels (Chan & Wong, 2006; Graci & Dodds, 2008), they

are surely not the whole solution. However, owner/managers of SMEs mostly overlook the current environmental standards (Gerrans & Hutchinson, 2000; Simpson et al., 2004). There is a widespread perception that compliance with legislation is both difficult and too costly to monitor and requires formalized standards, benchmarks and procedures. As a matter of course, formal EMSs are used by big business, they are rarely implemented by SMEs because they seem irrelevant and/or excessively expensive (Gunningham, 2003; Hillary, 1999; McKeiver & Gadenne, 2005).

Moreover, Vernon et al. (2003) try to focus on intentions in the public sector to promote sustainable development at the local level, indicating that these intentions are not yet prominent enough to determine the actions of tourism businesses. Berry and Ladkin (1997) state that “The mistrust on the government policies towards the worry about the cost involved in existing and potential laws and legislation further hinder a widespread implementation of environmental measures among tourism businesses.” Graci and Dodds (2008) suggested that businesses should not negate regulation on their operations, but weigh up against the benefits to enhance a hotel’s opportunity as a sustainable competitive advantage and cost saving.

Therefore, there have been mixed findings produced in empirical studies in relation to G-Practices. Whereby regulations are known as the best prediction of institutional theory applied to environmental issue, this study endeavors to find out whether the regulations influence the adoption of G-Practices in the hotel industry.

### 2.7.2 Green Consumers

Beside external pressures such as laws and regulations, consumers are widely cited as a key driver for improving the environmental management practices of tourism businesses (Bohdanowicz, 2005; Claver Cortés et al., 2007; De Burgos-Jiménez, Cano-Guillén, & Céspedes-Lorente, 2002; Hobson & Essex, 2001; Kasim, 2009; Mahilič, 2000; Rodríguez & del Mar Armas Cruz, 2007). Green consumer refers to individuals who ethical purchasing motives can influence their choices (Weaver, 2006: 62). Eco-tourists are largely concerned with wildlife, transport, conservation, use of resources, pollution, construction and planning and the practice of tourism firms (Faulk, 2000). These consumers will buy eco- friendly products and services, preferring companies that favor G-Practices (Han et al., 2009: 1). Hillary (2004) highlights the fact that for smaller organizations, the most important motivating factor for environmental improvements is pressure from customers. Darnell (2006) noted that customers are a key actor in putting pressure on companies to embrace a set of green practices and strategies.

In addition, conscious consumers are worried about the level of company interest in specific environmental issues (De Pelsmacker, Dresden, & Rayp, 2005). With that mind, one challenge for sustainable companies is dealing with the growing demand for environmental protection from consumers conducted by companies (Follows & Jobber, 2000). Sadgrove (1992) states that 39 percent of UK adults purchase eco-friendly products as much as possible and another 20 percent want them whenever they view them. Gallup's survey has also discovered that 9.5 million out of 20.8 million households in Great Britain say that they are "very concerned" or "extremely concerned" about environmental problems. Nearly all the rest express "concerned", while only 8 percent express unconcern.

Environmental issues are now receiving more attention from the customers because of the global environmental crisis and an increased awareness of climate change (Follows & Jobber, 2000). Due to heavy promotions by utilizing the media and exposures of information technology, there is effective in raising consciousness among consumers on their roles in taking part to protect and preserve the environment, as one of their roles includes green consumption (Eze, Chong, & Lee, 2011). Prior studies revealed that demand of environmentally compatible products and services from consumers continues to grow (e.g. Clark, 2009; Environmental Leader, 2009; The Star, 2010). Many authors stress that customer pressure fosters companies' efforts toward more proactive environmental strategies because they want to satisfy the needs of their customers (Delmas & Toffel, 2004; González-Benito & González-Benito, 2006; Henriques & Sadosky, 1999). For example, a survey of the largest companies in Canada revealed that the second most mentioned in terms of the source of pressure in the implementation of environmental management plan was customer pressure, behind government pressure (Henriques & Sadosky, 1996). According to Reynolds (2013), there is a shift in consumer consciousness that consumers are becoming knowledgeable about G-Practices and they need companies to engage in those practices.

On the contrary, Buysse and Verbeke (2003) found no link between customer pressure and environmental proactiveness. Other studies indicated that some companies that are more likely to adopt a reactive strategy to face pressure from customers and increase environmental investments to respond quickly and meet customer demands (e.g. Liu & Wu, 2009). Furthermore, others have discovered that

companies respond to customer demands, according to the types of information being requested. For instance, companies facing customer demand for information about sustainable products would improve input processes, while companies that faced customer demand for product certification would embrace on more fundamental shifts in their business operations, making their product packaging and design to more environmentally friendly (Sharma & Henriques, 2005). Indeed, regulatory requirements may be much less exacting than consumer preferences. A legitimately earned reputation as an environmental progressive can build strong public relations and trust within the market. It should be noted, however, that customers will have a more substantial influence on products than processes. On the consumer side, pressure from green consumer may be restricted by information gaps, partly whereas the environmental aspects are only one aspect of a product, and the “free rider” behavior of other customers. Customers may also be susceptible to the development of a sophisticated approach to marketing strategies from “greenwashing” which undermine even genuine environmental concerns (Gunningham et al., 1997).

Even though the customer is usually considered to be the main motivator, maybe companies make assumptions that in most instances, customers really have a very slight knowledge of green issues together with a low level of awareness or low priority (Fineman & Clarke, 1996; Foster & Green, 2000), so that “playing the environmental card” might not be an effective marketing strategy. In reality, the “green consumer” becomes elusive. Green consumers are not easily defined by demographic segmentation, even if such a demographic does exist (Pedersen & Neergaard, 2006).

Rivera (2002) revealed that environmental programs used in hotels were related to higher prices. The research carried out by (Baker, 1996; Dalton et al., 2008; Gustin & Weaver, 1996; Han et al., 2009; Kang et al., 2012; Munoz & Rovera, 2002), who maintain that some tourists are actively seeking green and sustainable hotels and are not reluctant to pay a higher rate to stay at a green hotel room. Sanchez-Ollero, Garcia-Pozo, and Marchante-Mera (2014) also reported that hotel guests in supporting for sustainability initiatives were quite willing to pay a little more for those experiences. For example, in a survey with 565 tourists conducted by Munoz and Rovera (2002), it was evident that about 40 percent of the respondents who perceive green issues to be severe would choose to stay at an environmentally friendly hotel, to recommend it and to spend more money on it. It really is going to depend on how much more. According to a survey done by WPP companies Cohn & Wolfe, a large majority of consumers around the world express that it is very or somewhat important for companies to be green and 35 percent are able to pay extra for green products.

Barnes (2007) also believes that although prices make customers aware, the conscientious customers choose to pay a premium price for more sustainable products and to make sure the future beings a worry-free for their children and secure communities. It is evident that hotel guests with particular needs have an effect on whether green practices are implemented or not.

A study carried out by Barsky (2008) who asks if customers certainly pay attention that hoteliers will implement green programs and whether or not it affects the price for their hotel choice. The results of its survey indicate that green initiatives are the

most compelling to luxury hotel guests, whereas these programs are least influential to economy customers who put price first. This implies that price is not the main barrier to the purchase of green if they are environmentally conscious. Seems like it doesn't mean that, but unfortunately price is still the dominating consideration in hotel choice and many guests are not yet ready to pay a higher price for staying at a hotel with green initiatives, even if the trend changes. This is supported by Kasim's (2004), and Dodds and Joppe's (2003) research indicating that people are unwilling to spend more money on green products. Also, Williams and Ponsford (2008) believe that eco-friendly destinations and products do not attract the most demanded by travelers.

Some researchers also contend that the society is "entering the era of corporate image", in which customer's purchase decisions are more based on a company's whole role in society (Forte & Lamont, 1998), i.e. how it treats employees, shareholders and local communities (Russo & Fouts, 1997). However, research has found that, on the whole, external pressure from customers, suppliers, or stakeholders to embrace G-Practices does not have significant influence on the SMEs. In Revell et al.'s (2010) study of 220 small company owner-managers/entrepreneurs, two-thirds cited customer pressure as 'not important' or 'neutral', and 78 percent professed that supplier pressure was 'not a driver' or was 'neutral'. While, 74 percent said no pressure from business stakeholders. Similarly, Kirk (1995: 1) thinks that "Many individual operators feel that they are too small to have any real effect, that these services are very price sensitive and that the customer would soon go elsewhere if asked to pay any of the cost of environmental management."

Moreover, Butler (2008) and Carrigan, Moraes, and Leek (2011) suggested that the adoption of green practices can impact individual consumer behavior and will shortly become the “norm”, but a number of researchers object to his observation. In their point of view, current customers are not interested in behaving in an environmentally responsible manner while on vacation (Goodwin & Francis, 2003) or they do not consistently consider the ‘green credentials’ of establishments (Brown, 1996; Hobson & Essex, 2001; Kasim, 2007; Sharper & Carlsen, 2004; Vernon et al., 2003).

Research by Tzschentke et al. (2008) suggests that some hoteliers believed that by holding a green plaque really had a negative impact on their environmentally-friendly establishment, while many customers associated G-Practices with reduced product and service quality. The study revealed that hotel managers believed that such action might adversely impact customer comfort and stay in the hotel (Bohdanowicz & Martinac, 2003 supported Roome, 1992). On the other hand, Stark (2009) suggests that it is necessary for hoteliers to present a green service in a way they operate that guests perceive as a personal benefit in order to keep a competitive edge.

While customer perception represents a major factor in the improvement of the quality standards of establishments (Hobson & Essex, 2001), Greenan, Humphreys, and McIvor (1997) propose that green practices should be considered in the broader context of delivering the quality of services to clients. Nevertheless, this brings up the question whether owners and managers would be motivated to raise the quality standards of their establishment without customer demand. Studies also point that environmental degradation and climate change is not an influential factor in the

travel buying decisions (Anable, Lane, & Kelay, 2006; Leiserowitz, 2006). Rather, Kang et al. (2012) argue that consumer demand and a higher willingness to pay (WTP) for green products is not quite clear while earlier research done in these area has also delivered mixed results. Whether customers are a driver or barrier to implementing environmental protection measures is still unknown and more research is needed to examine the issue.

### **2.7.3 Supply Chains**

Supply chain pressures are also a strong external force in driving organizational and behavioral change (Baden et al., 2009; Ciliberti, Baden, & Harwood, 2009; Lee, 2008; Yu & Bell, 2007). A supply chain is defined by Mentzer, DeWitt, Keebler, Min, Nix, Smith, and Zacharia (2001) as “a set of three or more entities (organizations or individuals) directly involved in the upstream and downstream flows of products, services, finances, and/or information from source to customer.” Broadly, companies can utilize their buying power as a purchaser to force suppliers. This has been identified as a key component for the success in influencing large companies and SMEs to change their environmental behavior. In industries, the interchange between purchasers and sellers creates innovation inducements to remain competitive and to react quickly to market trends (Gunningham & Sinclair, 1997). Therefore, it is driven by incentives to encourage buyers to require their suppliers to improve environmental performance that would be effective.

Environmental performance is used for the selection of the supplier. Company's expectations for environment responsibility are distinctly conveyed to each supplier. Suppliers should be educated by the company about environmental issues and be

involved in the early stages of product development. Companies can use their buying power to influence their suppliers or open the door to adopt a variety of strategies, exerting pressure down the supply chain and the way in which that pressure is applied may influence how their suppliers respond. Supply chain management strategies can vary in the extent to which environmental performance criteria are included when making purchasing decisions, the specificity of the required environmental management systems, and the supplier's compliance with such requirements is audited by the buyer company (Jorgensen & Knudsen, 2006; Wee & Quazi, 2005).

The government has difficulties in regulating SMEs directly. So, government policy pressure through the supply chain may prove to be an important and effective complementary strategy. Yet, there is a need for supply chain pressure to be connected with a spiritual partnership for preventing suppliers to perceive new and heavy persecution on acquiring data. The use of established working relations with suppliers to achieve quality management goals could go well beyond any current practices of using unregulated which that sort out low performers, and create pressure on them, but were unproductive in improving standards, setting meaningful goals and setting priorities for action (Gunningham & Sinclair, 1997).

As the results of the interviews and the workshop discussion, it was identified that environmental management is being increasingly influenced by supply chain pressures in the coming years. The data required to report on environmental activities from the suppliers are beginning to be requested by many big companies; this will force the need for reporting methods, and offer an actual financial incentive for the businesses involved. If large firms are creating pressure on buyers and their SME

suppliers regarding CSR in the future, it is possible to believe that SMEs will face difficulty in complying unless companies help them reach the respective goals. An empirical study by Baden et al. (2009: 429) on the attitudes and behaviors of 103 SMEs in UK supports this view: “Most said that the inclusion of social and environmental requirements as preconditions to supply would increase their motivation to engage in CSR (82% for environmental criteria and 55% for social criteria). However, a quarter would be put off tendering and 12% thought that such criteria would be counter productive.” Meanwhile, Studer et al. (2008) studied SMEs in Hong Kong and revealed that the most efficient influencer for social and environmental change was supply chain pressure.

In contrast, Merritt (1998) summarized a research in 1994-1996 and reported that there have been little or no significant effects on SME behavior from supply chain pressure and environmental management strategies. He suggested that there are limits on both potential “drivers” in how much future practice in SMEs is likely to be influenced by them. In some sectors in their supply chain, many small suppliers form an absolute barrier to change. In addition, Baden et al. (2009) found that if SMEs do not get their expected rewards for meeting customers’ requirements, they are less likely to adopt more progressive practices to better environmental performance. This may raise concerns about a “ceiling effect” from supply chain pressure.

Empirical studies have produced somewhat mixed results, but overall there has been consistent evidence of the relationship between supply chains and environmental management. Researchers have identified and mentioned the importance of supply chains as a critical factor of environmental management and performance. In the

literatures, supply chains have only gained little attention from the researchers in the hotel industry. Very few studies have attempted to investigate supply chains as adoption driver. Without this pressure, it can see environmental issues very low among companies' priority. Therefore, supply chains are surmised to influence the adoption of G-Practices positively.

#### **2.7.4 Local Communities**

Local communities can also impose coercive pressure on companies through voters in elections (local and national), via environmental activists within environmental NGOs, and citizen lawsuits (Delmas & Toffel, 2004). Many studies have revealed that the desire to enhance or sustain relationships within their communities can influence on decisions in the adoption of better green practices by companies (Florida & Davison, 2001). In a 1992 survey of 700 companies, most companies indicated that community group pressure positively influenced their environmental plan adoption decisions (Henriques & Sadorsky, 1996). Similarly, based on a 1993 survey of 200 corporations and general counsel, a majority indicated that “pressure from community activists had affected their companies’ conduct — sometimes forcing a reduction in pollution” (Lavelle, 1993). Local involvement and supporting the community is vital for most companies, and becoming more eco-friendly can heighten public image, improve community relations, and show value of companies ([www.earthshare.org/greening-business.html](http://www.earthshare.org/greening-business.html)).

This finding is consistent with the investigation of Florida and Davison (2001) into why environmental management practices and instituted pollution prevention programs had been embraced by some companies. They revealed that these programs

adoption and the dynamic engagement of companies with local community stakeholders had a positive relationship (Florida & Davison, 2001).

In addition, there was a high proportion of these facilities that reported sharing information with neighbors and environmental groups, meeting with community leaders, participating in community meetings, and involving neighbors and community groups in their environmental initiatives, compared to those facilities that had not adopted an environmental management practice or implemented a pollution prevention program.

Some communities can inspire better companies' environmental performance than others. Greater numbers of minority populations, low incomes, and low education in the communities are exposed to higher pollutants and harmful toxic emissions (Arora & Cason, 1999; Brooks & Sethi, 1997; Khanna & Vidovic, 2001). Hamilton (1999) observed that in communities with higher voting rates and in states with more people in environmental interest groups (Maxwell, Lyon, & Hackett, 2000), toxic emissions have been greatly fallen among facilities as both agents may be more inclined toward collective action. With the demand of social responsibility from communities and environmental interest groups, the image and reputation of the company can be damaged by boycotts and bad publicity. According to Gunningham and Sinclair (1997), as one industry representative mentioned "companies generally recognize that it is better to get onto the front foot and actively demonstrate to the community that they are doing the right thing in terms of environmental practice, rather than continually having to react to community pressure in ways which appear negative and unresponsive."

However, Iraldo, Testa, and Frey (2010) claimed that in general, SMEs have normal or good relations with public authorities. However, based on the actual or potential environmental damages, they are probably afraid that local community might have a negative response toward information. For this reason, SMEs are rather suspicious (when not scared) about the environmental statement diffusion to the public.

The aforementioned arguments support the view that there is a positive relationship between local communities of G-Practices adoption and environmental performance in organizations. Thus, local community pressure is proposed to be a potential factor influencing the adoption of G-Practices. The absence of pressure from local communities can contribute to the failed effort to boost green initiatives as well as result in the deterioration of the environmental performance.

#### **2.7.5 Competitors**

Green practices adoption can also be shaped by pressure from competitors (Bremmers, Omta, Kemp, & Haverkamp, 2007). One study discovered that companies with small competitors were less apt to minimize their impact on the environment than companies in more competitive markets (Darnall, 2009). Empirical studies have discovered that companies tend to increasingly adopt an innovation from competitive pressure (Sigala, 2006). Due to competitive pressure, these programs (e.g. environmentally friendly programs, green products, and green marketing programs) have been rapidly adopted by companies without careful studies of the impact (Jennings & Zandbergen, 1995). Companies may facilitate mimetic isomorphism. For instance, multinationals are broadly recognized as key

agents in the diffusion of practices across national borders by transmitting organization techniques to subsidiaries and other organizations in the host country (Arias & Guillen, 1998). In practice, eco-friendly hotels can encourage a large number of rivals to adopt their greening practices (Dieleman & deHoo, 1993). Companies may also simply mimic what they regard as the best practices of successful leading companies to achieve added value.

The literature suggests that factors influencing G-Practices adoption can be competitive pressure. With facing uncertainty, competitors are included as one of the relevant determinants of the extent of G-Practices adoption. This needs to further explore both in theory and in practices.

## **2.8 Moderator Effect**

A moderator effect exists when connections between an independent variable and a dependent variable is moderated by different levels of another variable (Baron & Kenny, 1986). Lindley and Walker (1993) suggest that a moderator is a third variable that will affect the strength of the relationship between a dependent and independent variable, or it can affect the correlation of two variables from positive to negative or vice versa.

It should be noted that moderators and predictors are at the same level in respect of their causal roles. This indicates that they are exogenous variables to dependent variables in the model (Kim, Kaye, & Wright, 2001). In multiple regression, the moderation effects are indicated by the interaction between the moderator and independent variable.

The institutional literature highlights organizational factors to a firm that can moderate the effects of institutional pressures on firm behavior (Scott, 2005). In this study, the moderating variable is funds availability. The section below gives more details.

### **2.8.1 Funds Availability**

In spite of the adoption of environmental practices to make cost reduction initiatives, many actual or perceived internal financial situation may be a barrier to companies' behavior change (see Fischer & Schot, 1993). A number of studies have found that financial worry about the elevated cost is one of the major perceived obstacles for SMEs in green practices implementation. Raar (2000) claims that SMEs do not have better processes adopted when dealing with limited financial resources. Palmer (2000), for instance, has argued that a relevant barrier to environmental improvement is limited financial resources. The cost of implementation is the most often cited reason as a hindrance for sustainable practices. However, answering difficult questions regarding business activities and embracing the use of programs that the "three Rs" (as previously mentioned) can really save a lot of money. The studies so far point that tourism businesses may not be willing to expend enough time, money and effort into transforming businesses towards implementing sustainable practices due to resource constraints (Frey & George, 2010).

Financial resources remain limited since the majority of SMEs are pursuing a business strategy for survival. They suffer from financial hardship like late bill payments and lack of access to loan financing; they lack the agility to adapt to changes in market dynamics and lack the capability to attract the necessary financial support. Accordingly, the adoption of full-scaled EMS, such as the ISO 14001

model, or the installation of pollution abatement technologies by SMEs, tends to be expensive. Besides, another issue of concern is the need for investment capital through process improvement and innovation. The lack of accessibility to financial resources in SMEs, therefore, is often attributed to a supply and demand component. On the supply side, the difficulty SMEs face in getting banks lending because the banks perceive them as high risk. On the demand side, SMEs frequently lack adequate financial statements, have improper accounting methods, deficient business plans and insufficient knowledge to present the business case in the most favorable possible light to their financing sources (Ogujiuba, Ohuche, & Adenuga, 2004). In order to cope with these problems, the financial providers, the SMEs and the concerned government agencies, therefore, urgently need to strengthen flows of information among them.

As SMEs in tourism have limited financial capital available for investment in green practices, the author should pay especial attention to owner-managers' personal values and attitudes. They might have more substantial incentives to influence the development of proactive environmental practices than cost reduction efforts alone (Zschiegner, 2011).

On the other hand, the research done by Biondi et al., (2000) showed that direct financial cost is not a major barrier of implementing an EMS. The indirect costs are the amount of time management spent (labor time) and limited human and technical resources to do with environmental problems so as to make more serious obstacles. According to Rivaud-Danset (2002), among continental European companies, the innovative activity is not mostly hampered by their lack of financial resources.

Furthermore, interview with one of SME owners on Samui Island in Surat Thani, due to the truly environmentally conscious and business impact on the environment, he brings green projects such as recycling, avoiding toxic chemicals, growing organic vegetables to manage in his resort that most activities require little or no capital (www.manager.co.th). In fact, he expects the adoption of environmental practices to make him feel good about himself. Here, then, raise the question whether funds availability is a barrier to the adoption of G-Practices still remain unclear and the author will test the effect.

### **2.8.2 Demographic Characteristics**

One line of examines owner-manager characteristics (such as age, gender and education) as factors of institutional pressures affecting companies' perception and responsiveness in terms of adopting management practices. According to Moran (2004), some researchers identify owner-manager personal characteristics as the factors that influence environmental attitudes and behaviors and are therefore liable to influence the shape and direction of the business. Acutt and Geno (2000) also state that environmental attitudes are affected by demographic factors such as age, gender and education. However, empirical evidences of the relationship between demographics and indicators of green concerns appear inconclusive (Van Liere & Dunlap, 1980).

A positive correlation exists between age and environmental concerns. Some studies reveal that older people are inclined to express a strong environmental attitude. One explanation for the positive correlation between older age and environmental

behavior concentrates on a prevalent conservation ethic during the Depression era. Many seniors today who lived through the “Depression-era” make a conscious effort to reduce their waste (Hallin, 1995). Nevertheless, Van Liere and Dunlap’s (1980: 183) review of the aspect of environmental concern stated that “age is negatively correlated with environmental concern.” This finding was supported by results from Hsu and Roth’s (1996) study in which younger Taiwanese community leaders showed higher environmental attitudes and environmental knowledge scores than other adult age groups from the study. A range of studies indicates that younger people are more prone to be sensitive to environmental issues (Fransson & Gärling, 1999; Klineberg, McKeever, & Rothenbach, 1998; Straughan & Roberts, 1999; Van Liere & Dunlap, 1980), and in a widely cited academic paper two explanations support this claim. Van Liere and Dunlap (1980) discovered that younger people are inclined to be more aware and concerned about environmental health. Likewise, Straughan and Roberts (1999) support the argument that there are more inclined to embrace a green attitude towards environmental protection, mainly the younger generations because they are noticeably aware the harmful effects of environmental degradation, and it is perceived that the problem will be grown worse with their age.

Empirical studies on gender and green behaviors again present mixed patterns. Van Liere and Dunlap (1980) review studies on this subject and make a conclusion that there appears to be no absolute relationship between gender and green behaviors. Similarly, Bhate and Lawler’s (1997) study for the effects of gender on green behavior has indicated no significant relation. However, Coyle’s (2005: 81) research concludes that “women typically express a more positive attitude toward the environment than men.” There is a gender difference between male and female in

environmental attitudes. It is found that men show more negative attitudes toward the environment than women (Tikka, Kuitunen, & Tynys, 2000). Numerous studies in general indicate that females place a higher importance on environmental friendliness. Klineberg et al. (1998) suggest that gender does not influence environmental concerns and mention that compared to men, women are more environmentally friendly (Banerjee & McKeage, 1994; Jones & Dunlap, 1992; Laroche et al., 2001; McIntyre, Meloche, & Lewis, 1993; Stern, Dietz, Abel, Guagnano, & Kalof, 1993). Besides, Roberts's empirical evidence (1996) points that females are more environmentally conscious because of their links to traditional gender roles involving housework, shopping, and recycling. They also tend to naturally show a maternal consideration for the health and welfare of the next generation. Green occurs predominantly in female. This tendency also explains that government's green activities (i.e. regulations or laws) are supported by female (Vaske, Donnelly, Williams, & Jonker, 2001). They may be something to that, but the researcher thinks women also just tend to be pro authority. And all the authorities now say people have to have green attitudes. Vaske et al. (2001) assert that compared to male, females have higher levels of environmentally oriented and then support environmental regulations for forest protection. Meanwhile, Arcury and Christianson (1990) show that males are more concerned about being green than females. Probably depends a lot on the demographic.

Furthermore, education does appear to have an impact on environmental behaviors. It seems that the relation between education and green issues appears more consistently in the research than relationships with other demographic characteristics. People with a high level of education generally are prone to be eco-responsible because,

presumably, they gain more exposure to environmental information (Klineberg et al., 1998). Maybe they are exposed to more indoctrination. Besser (1999) found a link between demographics of business operator and business success in terms of sustainability, i.e. small business owners who possess higher levels of education and business experience are most prone to exhibit the commitments to the communities as local or global actors. Newell and Green (1997) investigate a racial effect on concerns for the environment and discover that the more education a person holds, the better of serious environmental concerns. Vaske et al. (2001) also show that those who possess a college education are more concerned about environmental issues than those who do not. Contra the aforementioned research, a survey of Kentucky adults indicated that there is no significant difference in attitudes towards the environment among various levels of education (Kentucky Environmental Education Council, 2005). Bhate and Lawler (1997) report that the education factor and green behaviors are independent and not significantly associated.

Therefore, a review of preceding studies on demographic characteristics for predicting green concerns or green behaviors found that the evidence for a link between demographic variables and environmentally conscious behavior appears inconsistent and inconclusive. Demographic predictors can be viewed as a weak motive of people's perception of green, but a review of the literature, it is still worth the time because it provides a better understanding of G-Practices in the hotel industry.

## 2.9 Gaps in the Literature

Reviewing literature has not found the research related to the drivers and barriers to engage SMEs in environmental initiatives in the Thai hotel industry. There is a lack of empirical studies that investigate the influence of both internal push factors and external pull factors on the adoption of G-Practices. The relevant research of the drivers and barriers in environmental management was mostly found in different countries and many industries such as manufacturing and chemical (Chin & Pun, 1999; Khanna & Speir, 2007; Quazi, 1999).

Many researches have investigated G-Practices adoption drivers but each research shows different results. Some consistent findings have emerged from the literature. For example, the majority of literatures suggest that the adoption and implementation of environmental management practices are not influenced by customers, but other research indicates that the motivation for the implementation of environmental management are often due to pressure from customers (Clark, 1999; Foster et al., 2000; Le et al., 2006; McKeiver & Gadenne, 2005; Mensah, 2014; Quazi, 2001; Wee & Quazi, 2005), suppliers (Blamey, 2000; Morrison, Cushing, Day, & Speir, 2000), shareholders (Delmas & Toffel, 2004), government legislation (Bohdanowicz, 2005; Reynolds, 2013), insurers, and financial institutions (Chan, 2008; Chan & Wong, 2006; Donaldson & Preston, 1995; Hillary, 2000). However, relatively few studies have explored owner-manager attitudes and supply chains in the hotel industry (Jackson, 2010).

Companies have been slow to adopt environmental management due to numerous barriers. A study led by Chan (2008) found that there are six factors that limit the

deployment of green practices in hotels in Hong Kong. These barriers are lack of knowledge and skills, lack of professional advice, uncertainty of outcome, certifiers/verifiers, lack of resources, and implementation and maintenance costs, which there are some factors that are consistent with some research studying the factors that researchers have identified as barriers of various business fields in different countries (Hillary, 2004; Levy & Dilwali, 2000; Mary & Fayad, 2009; Quazi, 1999). Nevertheless, studies in many industries found out the factors which influence the implementation are different even in the same country (Crocker, 2012; Mezher & Zrelk, 2000). It can be seen that both drivers and barriers to environmental management in different industries in each country are different. The findings are inconclusive and inconsistent.

Additionally, a close review of the literature reveals some degree of difference that organizational factors moderate how owner-managers perceive and response to institutional pressures (Delmas & Toffel, 2012). There is a lack of research to investigate organizational factors that moderate the relationship between institutional pressures and the adoption of G-Practices. This research then will investigate organizational characteristics (funds availability) that moderate this relationship.

The purpose of this research, therefore, aims to find the answer if studying SMEs in the Thai hotel industry context. Limited studies have explored on small and medium hotels in Thailand. Thus, this study intends to fill or bridge the gaps by ascertaining the influence of institutional pressures on the adoption of G-Practices by SMHs in Southern Thailand and the impact of additional organizational characteristics including the role of funds availability.

## **2.10 Underpinning Theory of Adoption of G-Practices**

This study aims to examine the prominence and the extent of the adoption of G-Practices by SMHs in Southern Thailand and to determine influencing factors, e.g. internal push factors, external pull factors and moderator, on G-Practices adoption. The author has reviewed many theories, concepts, documents and related research in preparation for this thesis. Change is essential to the improvement of environmental performance and behavior. The following question then arises: How are change outcomes accomplished? A substantial factor in this change is institutional theory. Change depends on the strategic response to institutional pressures (Oliver, 1991). Drivers and barriers emerge from the external and internal environment to foster organizational behavior change and adaptability.

Thus, to understand how institutional theory works in practice, the author has to look at the interaction between these three pillars (normative, coercive and mimetic) as they balance out. The author takes institutional theory and legitimacy (DiMaggio & Powell, 1983) as the useful lens to justify why change occurs due to increasing pressures for environmental management and research framework will then be presented.

### **2.10.1 Institutional Theory**

Institutional theory is the most widely accepted theory of organization change. It focuses on addressing the interaction between organizations and their environments. Institutional theory posits that institutions can be seen as a crucial element in the environment. Institutions are defined as “regulative, normative, and cognitive structures and activities that provide stability and meaning for social behavior”

(Scott, 1995: 33). It is claimed that the influence of “three pillars” (regulative, normative, and cognitive) of organizational pressures emerges from external sources that surround them or from within the organization itself (Zucker, 1987; Scott, 2001). These pressures foster the tendency of organizations towards conformity with institutional norms.

Institutions are identified to be law enforcement, judicial authorities, administrative agencies, customs, governments, regulators and behavior enforcing organizations, competitors, more legitimated organizations, professions, educational systems, interest groups, public opinion, society, norms, culture and ethics (DiMaggio & Powell, 1983; Meyer & Rowan, 1977; Scott, 1995, 2001). In order to survive, organizations have to adapt to institutional expectations that reflect an alignment of corporate and societal values (Meyer & Rowan, 1977). Institutions put forth a compelling influence over organizations called isomorphism. Isomorphism is a process of interaction that influences one organization to look more alike other organizations facing within same environment circumstances (DiMaggio & Powell, 1983; Hawley, 1968). This leads to homogeneity in organizational structures or policies. For instance, organizations try to model themselves after organizations they consider successful.

The principle tenets of institutional theory, which include the organizational pursuit of legitimacy and status (Meyer & Rowan, 1977), the institutionalization of processes or structures into a rule-like status (Zucker, 1977), the development of community-wide regulatory rules, normative standards and cognitive beliefs (DiMaggio & Powell, 1983) and the diffusion of rules, norms and beliefs that

constitute action (Clemens & Cook, 1999). Several researchers have utilized institutional theory to describe a broader range of phenomena, including organizational structure (Tolbert & Zucker, 1983), culture (Tolbert, 1988), response to external pressures (D'Aunno, Sutton, & Price, 1991; Oliver, 1991), the effect of institutions on individuals within organizations (Meyerson, 1994), organizational change (Greenwood & Hinings, 1996; Kraatz & Zajac, 1996) and spread and adoption of good practices (Guler, Guillén, & Macpherson, 2002; Schneper & Guillén, 2004).

Institutional theory is founded on a belief that individual behavior and organizational structures depend on the institutional environment, and the actors and external environment in which the organization's activities occur (DiMaggio & Powell, 1983; Meyer & Scott, 1983; Selznick, 1957, 1966). Smircich (1983) also contends that organizations are influenced by environments as external variables. Furthermore, Scott (1998) states that organizations cannot exist without the need for adaptation to ongoing and unavoidable environmental changes. Environment can include the technology, politics, social and cultural forces and economy, and these create awareness and adaptation to the environment within organizations in order to receive organizational legitimacy (endorsed by institutional actors) and support for the survival of the environment (Deephouse, 1996; DiMaggio & Powell, 1983; Meyer & Scott, 1983; Zucker, 1977). Hence, organizations should, at least partially, adopt and adhere to rules and practices made by environmental pressures.

Institutional theory is aimed to explain how individual behavior and organizational structures are influenced by technological, social, cultural, political and economic

forces surrounding organizations (Fogarty, 1996) and how organizational structures and processes are put into practice in gaining organizational legitimacy and stability (Daft, 2004). Suchman (1995: 574) characterizes legitimacy as “a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions.” An organization’s legitimacy is based on its actions to be socially acceptable and in line with the commonly held values, beliefs and norms of the organization’s stakeholders and the environment (Goodrick & Salancik, 1996; Granovetter, 1985; Kostova, Roth, & Dacin, 2008; Meyer & Rowan, 1977; Oliver, 1997; Sonpar, Pazzaglia, & Kornijenko, 2009; Suchman, 1995). Institutional theory posits that organizational legitimacy and support relies on a congruence between stakeholders’ expectations and organizational responses. Conversely, failure to conform to externally imposed requirements such as laws, accreditation criteria and professional standards are liable to lead to organization non-survival and unsustainability. When organizations response to uniform institutional pressures and conform to social norms in order to receive beneficial organizational structures and processes, increased legitimacy, resources and survival capabilities for operations are rewarded to the organizations (Oliver, 1997; Yang & Konrad, 2010). Therefore, institutional pressures are intended as pressures towards the adoption of legitimated models/practices.

Also, DiMaggio and Powell (1983) have highlight that the three main kinds of isomorphic pressure exerted on organizations by institutions are normative, coercive and mimetic. Normative pressure refers to the change of organizations because of the process of professionalization such as education and training, and professional

networks. Coercive pressure refers to formal rules, since laws and penalties ensure the compliance of the organizations. Mimetic pressure refers to the imitation of other organizations that are perceived to be successful. The institutional pressures then lead to a homogeneity of organizational structures, strategies and procedures in the institutional environment (DiMaggio & Powell, 1983; Meyer & Rowan, 1977; Scott, 1995). Hence, the isomorphism can be a crucial element for the organizations while the similarity is able to facilitate the inter-organizational trading and support the internal workings by incorporating socially acceptable rules (Fonseca, 2003). However, this concept contrasts with the concept of a differentiated strategy that is mainly employed by companies for the purpose of increasing profitability.

Further, the statement was supported by Delmas and Toffel (2012: 238) in their conclusion that “Persistent heterogeneity among various firms within the same industry might be attributed to differences in the composition of their organizational fields. For example, companies situated in different states would face different institutional pressures, which could result in dissimilar organizational practices. Differing levels of institutional pressure could also lead to heterogeneous activities during any specific period, but ultimately these are purported to result in common organizational structures and practices to ensure legitimacy.” As a result of the studies employing institutional theory to understand green practices adoption, few emphasize on the persistence of differences among organizations that share common organizational fields. While researchers have studied how institutional pressures affect the decisions of companies to adopt green practices, there remains a scarcity in current literature how organizational factors such as the characteristics of individual owner-managers (Bansal & Roth, 2000; Cordano & Frieze, 2000), companies’ resources (Darnall & Edwards, 2006;

Sharma, 2000; Sharma & Vredenburg, 1998) and so forth moderate these relationships.

The findings are consistent with many of the recent developments within institutional sociology, a field which shows regulatory, normative, and cognitive factors in shaping organizational change that could lead towards the adoption of specific organization practices is more important than the efficiency of their technical processes (Dimaggio & Powell, 1983; Lounsbury, Fairclough, & Lee, 2012). Institutional theory have been applied by the number of authors to examine companies' environmental strategies and practices. Jennings and Zandbergen (1995) dispute that coercive forces (e.g. regulations and regulatory enforcement) are the major driver for companies' environmental management practices and make companies implement same practices in each industry. Delmas (2002) suggested to identify and analyze, from an institutional perspective, the factors that led companies' decisions to adopt ISO 14001 in Europe and in the U.S. She explained how the regulatory, normative, and cognitive aspects of a specific country's institutional environment affect the costs and potential benefits for ISO 14001 adoption, and how this would lead to the difference across countries in adoption rates. Other researchers have researched how companies operating in different organizational fields operate under the different types of institutional pressures.

Besides, institutional theory used in the vast majority of studies in the environmental area. These studies reveal that it has a great deal of concern with the pressures from the institutional environment influencing the tourism companies to adopt green practices. Researchers utilize the analysis model of institutional theory and their

constructs, i.e. three sources of institutional pressures (coercive, normative and mimetic pressures), while measuring the effect of these pressures on the tourism organization's behavior and performance, and the effect of the social legitimacy given by the social actors and the reflexes from these effects in the organizational performance. Thus, the implication of normative, coercive, and mimetic pressures for understanding hotel responsiveness in this study is:

#### **2.10.1.1 Normative Pressure**

Normative pressure stems from “professionalization as the collective struggle of members of an occupation to define the conditions and methods of their work” (DiMaggio & Powell, 1983: 152). There are two sources of professionalization which DiMaggio and Powell see as important to isomorphism. One is formal education in a university and the second, the expansion of professional networks of personnel within organizations resulting a group of professionals or individuals (i.e. managers and key staff) who hold a similar status in organizations, and have the same opinions is built that may “shape organizational behavior” (DiMaggio & Powell, 1983: 153). Normative influences come from values and norms (Scott, 1995). Professions try to form normative control through the regulation of norms in the organizational field. The professional environment defines what is valued and expected by organizational members. Compliance is enforced through a sense of social responsibility in the members of professions (Scott, 2001). Thomas (1989) points out that a company will depend on professional specialists when dealing with environmental change and uncertainty.

Cheng and Yu (2008) propose that the organizational adoption of new practices is related to personality traits of owners and managers. Social origin and educational imprint have an effect on an individual's values, priorities and perspectives. For that reason, it is probable that these aspects also impact on the way an individual operates individually as well as collectively. In this study, the representative actors of normative pressures (perceived internal) are owner-manager attitudes, environmental awareness, benefits businesses can gain, and concern for employees.

### **2.10.1.2 Coercive Pressure**

Coercive pressure is a form of pressure that derives from the form of systems, persuasion, policies, rules and regulations. Coercive isomorphism is considered coercive pressure as it results from formal and informal forces exerted by those organizations that firms are dependent upon, and from the society's expectations (DiMaggio & Powell, 1983: 150). For instance, policies or sanctions are used by government to hold companies under control represent a form of coercive isomorphism. In addition, rules and regulations set through law are necessary and beneficial for organizations to live up to these sets of policies and to obtain legitimacy. Coercive pressures put on organizations such as government regulations or laws (DiMaggio & Powell, 1983), customers (Teo, Oh, Liu, & Wei, 2003), supply chains (Seidel et al., 2009), and local communities (Kasim, 2007).

Among the researchers, Jennings and Zandbergen (1995) initially use institutional theory to describe the adoption of environmental management practices by companies. They dispute that coercive forces (e.g. regulations and regulatory enforcement) are the major driver for companies' environmental management

practices and companies have implemented similar practices in each industry, leading them to become more alike one another. It is aligned with most institutional theorists (i.e. Jennings & Zandbergen) who assert that companies sharing the same organizational field appear to have the similar effects by institutional pressures that make companies resemble each other.

Some companies are coerced into considering the adoption of practices or activities to minimize a legal penalty (Grewal & Dharwadkar, 2002) and sanction (Scott, 1995). In times of economic uncertainty, there is an increased focus on the role of government, whilst the external environment alters and requires the business to make adjustment accordingly (Bohdanowicz, 2006; Le et al., 2006). Prior studies also stress the role of government in encouraging environmental management practices among hotel companies (e.g. De Burgos-Jiménez et al., 2002; Kasim, 2007; Rodríguez & del Mar Armas Cruz, 2007) and SMEs (Kasim, 2009; Tzschentke et al., 2008). Companies need to follow the regulations in order to fulfill compliance.

Manaktola and Jauhari (2007) stated that a company's environmental performance has become one of the product attributes for consumers' purchase decision. This environmental performance includes G-Practices used by companies such as water disposal or use of an alternate energy source, etc. There is a sign of increased awareness of the environmental ills done by regular business among people. Many more clients are seeking out ethical companies through their purchase (de Pelsmacker et al., 2005).

A sanction or a threat can coerce organizations into being more environmentally responsive as a major company needs its supplier to carry out an environmental code of conduct (Meyer & Rowan, 1977).

Furthermore, local communities can impose direct coercive pressure upon companies through voters in elections (local and national), via environmental activists within environmental NGOs, and citizen lawsuits (Delmas & Toffel, 2004). Many studies have shown that the desire to improve or maintain community relationships influences a company's decision to undertake environmental management practices. As aforementioned, the representative actors of coercive pressure are regulation, green consumers, supply chains, and local communities.

### **2.10.1.3 Mimetic Pressure**

Mimetic pressure is a form of pressure that arises when organizations face uncertainty and anxiety and makes organizations become similar (Scott, 1995). Mimetic isomorphism suggests that uncertainty fosters imitation. Increasing environmental uncertainty is a key force in the instigation of such mimetic behavior. Mimetic isomorphism decreases uncertainty and increases an organization's legitimacy for the purpose of survival (DiMaggio & Powell, 1983; March & Olsen, 1976; Meyer & Rowan, 1977; Tolbert & Zucker, 1983). DiMaggio and Powell (1983: 152) remark that, "Organizations tend to model themselves after similar organizations in their field that they perceive to be more legitimate or successful. The ubiquity of certain kinds of structural arrangements can more likely be credited to the universality of mimetic processes than to any concrete evidence that the adopted model enhance efficiency."

In addition, mimetic isomorphism can provide the organization's perceived benefits as receiving best practices (Cyert & March, 1963; Daft, 2004). Mimetic pressures emerge from the pragmatic need to copy the behaviors of prestigious companies in the industry (Rivera, 2004); however, small companies mimic each other. According to Jennings and Zandbergen (1995), programs (environmentally friendly, green products and environmental marketing programs) are put into practices by companies without considering the impacts merely because they face competitive pressure. In this study, mimetic pressure is pressure from competitors.

Based on institutional theory, from the expectations of society, other actors (such as the government and the public) become an obvious factor in shaping adoption intention or inducing over-compliance to green programs by facilities (Delmas & Toffel, 2003). Institutional theory, which suggests organizations are social systems, is utilized as a theoretical framework to explain why organizations adopt practices, policies, and procedures (DiMaggio & Powell, 1983; Scott, 2001).

Institutional theory offers perspectives that delineate the social influences and firm characteristics driving an organization's response towards the adoption of green practices. From the institutional perspective, economic rationality is not enough to make decisions in an organization (DiMaggio & Powell, 1991). A company's green initiatives can be justified beyond rational economic choices as it gains its legitimacy through the social construction process. In order to better understand companies' environmental management choices, it may be necessary to study the role of institutional pressures. In order to gain legitimacy, companies will come to mimic

(the process of isomorphism discussed earlier) the competitors' and trade groups' norms and actions, as well as adjust to the expectation of external factors such as government and the public.

Thus, the author describes how these normative, coercive, and mimetic pressures arising from sources of external or internal to the organization for the purpose of promoting environmental and social responsibility may affect companies' decisions to adopt green practices that organizations must adhere. These pressures include external institutional pressures, i.e. forces operating outside companies at the macro- and inter-organizational level (regulation, consumers, supply chains, local communities, and competitors) within which companies maneuver (DiMaggio & Powell, 1983); and internal institutional pressures, i.e. forces operating inside companies such as owner-manager attitudes, awareness, and employees (Campbell, 2007). There may well be other factors that can trigger organizations to adopt G-Practices, but they are beyond the scope of this paper. While businesses have awakened to the fact that there are external and internal institutional pressures compelling companies to operate in an environmentally and socially responsible fashion, their responses vary greatly (Oliver, 1991).

For this reason, the current study will use institutional theory as a theoretical underpinning to elicit and understand how internal push and external pull factors influence G-Practices adoption among organizations. Also, funds availability is viewed as the moderating factor for how owner-managers perceive and respond to this pressure. The moderating factor can magnify or minimize the influence of institutional pressures on hotel companies' decisions to adopt G-Practices.

Moreover, the author holds a belief that building on institutional theory for the purpose of this study is the best course of action. Applying institutional theory to study green practices is aligned with prior research (e.g. Babiak & Trendafilova, 2011; Brammer et al., 2012; Clemens & Douglas, 2006). While there has been more social awareness of organizational wrongdoing and the explicit environmental demands, institutional theory predicts that minimizing their impact on the environment and presenting good environmental performance can lead companies to gain legitimacy (Bansal, 2005; Bansal & Clelland, 2004). Based on the above, the author contents that institutional pressures have a positive effect on the adoption of G-Practices.

## **2.11 Theoretical Framework**

The theoretical framework is the structure that can hold or support a theory of a research study. The theoretical framework introduces and describes the theory that provides explanations why the research problem under study exists such as environmental and social actions. The theoretical framework makes sense of the relationship among several factors relevant to the study. The theoretical framework also is conceptual model. The theoretical framework will be used to elaborate the interrelationships among the variables that are considered to be integral to the dynamics of the situation being investigated. A conceptual framework helps postulate or hypothesize and test certain relationships.

The theoretical or conceptual framework is a schematic diagram that displays both independent variables and a dependent variable. Those variables are then used to form a test in this study.

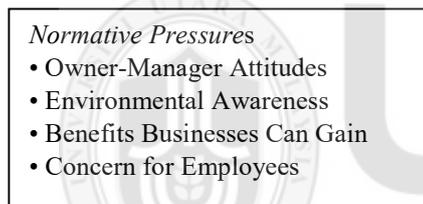
The majority of existing studies analyzed in the previous section reveals that there are various determinants that affect the decision of a company towards G-Practices adoption. Some of them are internal factors such as owner-manager attitudes and environmental awareness, while some are external factors such as regulators and customers. Nevertheless, only a limited amount of work has been carried out on presenting the theoretical framework encompassing the most important determinants of G-Practices adoption under three institutional factors.

As mentioned earlier, institutional theory identifies institutional factors which can be internal and external environmental factors. This framework is in a modified form of the existing frameworks from the literature review as discussed in the previous section; there are ten independent variables (internal push factors: owner-manager attitudes, environmental awareness, benefits businesses can gain, and concern for employees; external pull factors: regulations, green consumers, supply chains, local communities, competitors and funds availability) that are developed to identify their relationship with dependent variable (adoption of G-Practices).

The theoretical framework for the development of the adoption of G-Practices by SMHs in Southern Thailand is given in Figure 2.1. The framework indicates that institutional factors of companies are associated with the level of G-Practices

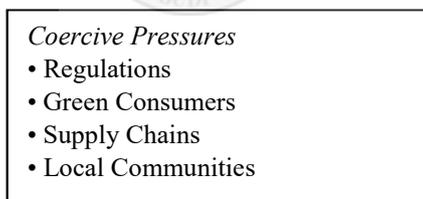
adoption as well as establishing the moderating role of funds availability between this relationships.

### Internal Push Factors

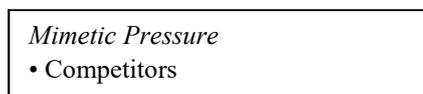


H1

### External Pull Factors

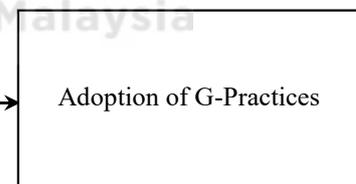
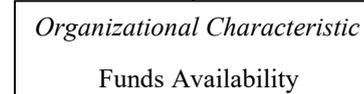


H2



H4

H5



H3

Figure 2.1  
*Theoretical Framework*

The basic reason for developing a theoretical framework based on institutional theory is to explain the key drivers behind the adoption of G-Practices by SMHs. Drawing on institutional theory, in particular the seminal work of Meyer and Rowan (1977) and DiMaggio and Powel (1983), this paper attempts to relate a theory using the concepts of isomorphism to provide a theoretical underpinning for a practical application. In doing so the study will investigate the relationships between aspects of institutional theory and the adoption of G-Practices and argue that the adoption of G-Practices, as a management tool, can be explained through the concepts of nominative, coercive, and mimetic aspects of organizational isomorphism (DiMaggio & Powell, 1983).

From the seminal works of early theorists (DiMaggio & Powell, 1983; Meyer & Rowan, 1977; Scott, 1987; Zucker, 1977) institutional theory has been considered to a fact-based framework as a legitimate vehicle for studying business phenomena. Theories are applied to provide a model to understanding human thoughts and make predictions about future behaviors. Much of the research focuses on the description of business practices and has failed in developing appropriate theories. However, the paper will seek to narrow the gap as stated above or at least bring up the interest in developing and testing a theory explaining G-Practices. This provides a model to test the institutional theory/G-Practices adoption relationship and then incorporating the moderating effects in this relationship.

From research framework as given in Figure 2.1, it reveals that G-Practices adoption will be influenced by independent variables, i.e. internal push factors: owner-manager attitudes, environmental awareness, benefits businesses can gain, and

concern for employees; external pull factors: regulations, green consumers, supply chains, local communities, and competitors; and moderating variable, i.e. funds availability. Essentially, the theoretical framework postulates that internal push factors and external pull factors can directly and positively influence owner-managers to adopt G-Practices. The researcher viewed normative pressure and coercive pressure as multi dimension. This study further proposes that funds availability is directly and negatively related with the adoption of G-Practices. In addition, the framework postulates that funds availability moderates the relationship between internal push factors, external pull factors, and the adoption of G-Practices. Although these environment factors can be monitored, organizations need to be proactive rather than be often forced to react to the impact of these factors.

## **2.12 Hypotheses Development**

This paragraph provides clarifying institutional pressures. The institutional pressures can be classified as internal and external, and these will be utilized to measure the institutional pressures exerted on SMHs. Through elaborations in the previous paragraph the institutional pressures could be classified in normative, coercive, and mimetic pressure.

Institutional theory is apt to be particularly useful in designing research that determines the relationships between institutional forces and G-Practices adoption because the tourism and hospitality industry is institutionalized.

The important aspect of institutionalism is focused on isomorphism. DiMaggio and Powell (1983) suggest three types of isomorphic pressure on organizations:

normative, coercive, and mimetic and mention that these three types of isomorphism are the main drivers by institutions.

Following the aforementioned discourse, it can be seen that SMHs simply act reciprocally to internal push factors, external pull factors, and moderating factor. The researcher first discusses its potential direct effect on the adoption of G-Practices. From that basis, the researcher then hypothesizes the moderating effect of funds availability that influences firms' decision to adopt G-Practices under institutional factors. Therefore, the researcher proposes research hypotheses as follows.

### **2.12.1 Direct Effects Hypotheses of Internal Push Factors**

#### **a. Owner-manager Attitudes and G-Practices Adoption**

Attitudes frequently were used to predict green behavior (Kaiser et al., 1999; Laroche et al., 2001). Environmental concern as well as the willingness to act on this concern is strongly dependent on hoteliers' attitudes toward change and the environment, knowledge regarding the benefits of green practices, perception of and relationship with the external environment, and organizational variables such as size, company location and financial situation (Bohdanowicz, 2005; Dewhurst & Thomas, 2003; Le et al., 2006). The relationship between environmental attitudes and many aspects of environmental behavior among managers has been investigated in a number of studies. Tsai et al. (2014) found that hoteliers have significantly high attitudes on an eco-friendly hotel. Also, Park and Kim (2014a) showed that more positive attitudes from hotel executives toward green practices adoption bring greater

involvement in environmental management for their organization. The evidence supports this prediction, which leads to the first hypothesis.

H1a: There is a positive relationship between owner-manager attitudes and G-Practices adoption.

### **b. Environmental Awareness and G-Practices Adoption**

Prior studies have revealed a positive relationship between environmental awareness and environmental practices for SME owner/managers (Peters & Turner, 2002; Williamson & Lynch-Wood, 2001, cited in Gadenne et al., 2009). Other studies such as Sharma (2000) and Sharma, Pablo, and Vredenburg (1999) argue various environmental practices and strategies of a company and these are dependent on how managers interpret and act on environmental themes and issues as it identifies opportunities or threats.

In contrast, a survey by Erdogan (2007) revealed that there was no concern to implement sustainable development and resource preservation in daily business practices of such facilities. This may indicate that they do not recognize that sustainable behavior can make good business sense. Previous studies show mixed evidence. Hence, this study hypothesizes that:

H1b: There is a positive relationship between environmental awareness and G-Practices adoption.

### **c. Benefits Business Can Gain and G-Practices Adoption**

The pressure for environmental improvement in hotels can be perceived which is driven by a need to protect the local environment. The companies will have the

opportunity to minimize operating costs (Bowe, 2005; Nidumolu et al., 2009), sustain competitive advantage (Adlwarth 2011; Chan, Chiou, & Lettice, 2011; Griskevicius et al., 2010), comply with legislation, pertain growing demand by customers for environmentally friendly programs (Bohdanowicz, 2005; Chan & Hawkins, 2010; Garay & Font, 2012; Le et al., 2006), utilize operational efficiency, retain staff, improve brand image, and wider public and media relations that these are some of the perceived benefits of pursuing sustainability that can drive towards a low carbon future (Corporate Watch 2007). It is thus proposed that:

H1c: There is a positive relationship between benefits businesses can gain and G-Practices adoption.

#### **d. Concern for Employees and G-Practices Adoption**

According to Michelin, “Few stakeholders are as vital in a business as its workers. It has been proved that adopting green practices benefits firms or organizations in various aspects including human capital. A worldwide company has to invest a great deal to respect all staff interests. Staff have a big interest in the success of the company” (The Times 100, 2006: 1). The efforts of operational changes will be associated with employees who are a functional hub and implementation team of the organizations to undertake green initiatives (Chan & Hawkins, 2010). Researchers (e.g. Nejati et al., 2014) mention that the most significant influence for Micro, Small and Medium-Sized Enterprises (MSMEs) to implement environmental practices is employees. Similarly, Kim (2009) found that hotel employees, as a key stakeholder, have a significant and positive effect on green practices. The most important thing is that employees recognize the companies’ quality performance related to the development of green activities. It is thus proposed that:

H1d: There is a positive relationship between concern for employees and G-Practices adoption.

### **2.12.2 Direct Effects Hypotheses of External Pull Factors**

#### **a. Regulations and G-Practices Adoption**

The government role in enforcing strict regulations to ensuring firms' compliance encourage G-Practices in resolving environmentally sensitive issues. The importance of environmental problem has become increasingly important, which has been widely recognized by academics (Simpson, Power, & Samson, 2007). The government authorizes regulators to proclaim and enforce regulations, a type of coercive power (Delmas & Toffel, 2004) that are a crucial engine driving organizations to initiate environmental management practices (Kilbourne et al., 2002). Kim and Choi (2013: 159) state that government regulations exert a power in the hotel industry that influence hotels to implement G-Practices. Kasim (2007) identifies the government's regulatory force as one of the best ways to drive Malaysian hotels to adopt environmental management practices. Similarly, Seidel (2009) asserts that environmental legislation serves as one of the most important factors motivating SMEs to invest in environmental improvements (Bansal & Roth, 2000; Masurel, 2007).” SMEs often state that they will be reluctant to invest in such improvements unless they are forced to do so by law” (Masurel, 2007; Williamson & Lynch-Wood, 2001). Accordingly, this study hypothesizes that:

H2a: There is a positive relationship between regulations and G-Practices adoption.

## **b. Green Consumers and G-Practices Adoption**

Customers are widely cited as a key driver for improving the environmental management practices of tourism businesses (Bohdanowicz, 2005; Claver Cortés et al., 2007; Kasim, 2009; Rodríguez & del Mar Armas Cruz, 2007). According to Reynolds (2013), there is a shift in consumer consciousness that consumers are becoming knowledgeable about green practices and they need companies to engage in those practices. Other studies indicated that some companies that are more likely to adopt a reactive strategy to face pressure from customers and increase environmental investments to respond quickly and meet customer demands (e.g. Liu & Wu, 2009). Today, the influence of consumers for hotels to adopt G-Practices is increasing. Based on empirical findings, it is hypothesized that:

H2b: There is a positive relationship between green consumers pressure and G-Practices adoption.

## **c. Supply Chains and G-Practices Adoption**

There is an increasing attention for companies to supply chain has become an important part of large corporations' wider sustainability strategies when it comes to addressing a number of concerns that threaten business operations. Larger companies are under growing pressure from customers, regulators and communities. Large companies involve small producers and SMEs in their value chains. This pressure then has transmitted to SMEs. SMEs, in general, have limited resources which institutional pressure leads to environmental activities of compliance. It has been found to have less impact than green efforts that are directed from internal stimulation and based on the resources and capabilities of companies (Darnall et al.,

2008). However, there is still a lack of study in supply chains in the hotel industry.

Hence, this research proposes that:

H2c: There is a positive relationship between supply chains pressure and G-Practices adoption.

#### **d. Local Communities and G-Practices Adoption**

The local community was seen as the least influential in the implementation of environmental initiatives in hotels (Sucheran, 2013). Many studies have revealed that the desire to enhance or sustain relationships within their communities can influence on decisions in the adoption of better green practices by companies (Henriques & Sadorsky, 1996). This finding is consistent with the investigation of Florida and Davison (2001) into why some companies had adopted environmental management practices and instituted pollution prevention programs. They revealed that the adoption of these programs and the dynamic engagement of companies with local community stakeholders had a positive relationship.

According to Gunningham and Sinclair (1997), as one industry representative said “companies generally recognize that it is better to get onto the front foot and actively demonstrate to the community that they are doing the right thing in terms of environmental practice, rather than continually having to react to community pressure in ways which appear negative and unresponsive.” Communities and environmental interest groups demand social responsibility from firms and can affect a firm’s image and reputation through boycotts and negative publicity. Thus, this study proposes that:

H2d: There is a positive relationship between local communities and G-Practices adoption.

#### **e. Competitors and G-Practices Adoption**

Firms are more likely to respond by matching their rivals' behavior. Many organizations work in an environment that includes pressures from their competitors that induce organizations to adopt green initiatives to combat competition and gain competitive advantages (Canning & Hanmer-Lloyd, 2001; Carter & Ellram, 1998). One study discovered that companies with small competitors were less apt to minimize their impact on the environment than companies in more competitive markets (Darnall, 2009). Empirical studies have discovered that companies tend to increasingly adopt an innovation from competitive pressure (Sigala, 2006). According to Chan and Wong (2006), Manaktola and Jauhari (2007), and Wolfe and Shanklin (2001), hotels have recently started to advance themselves in environmental issues in order to gain a competitive edge. Thus, companies may simply mimic the environmental activities of competitors, especially the successful companies in their industries. Taking previous research into consideration competitors were added to the analyses. It can be expected that competitors positively influence the adoption of G-Practices.

H2e: There is a positive relationship between competitors and G-Practices adoption.

#### **2.12.3 Direct Effect Hypothesis of Funds Availability**

In spite of the adoption of environmental practices to make cost reduction initiatives, many actual or perceived internal financial situation may be a barrier to companies'

behavior change (see Fischer & Schot, 1993). A number of studies have found that financial worry about the elevated cost is one of the major perceived obstacles for SMEs in green practices implementation. The studies so far point that tourism businesses may not be willing to expend enough time, money and effort into transforming businesses towards implementing sustainable practices due to resource constraints (Frey & George, 2010).

On the other hand, the research done by Biondi et al., (2000) showed that direct financial cost is not a major barrier of implementing an EMS. The indirect costs are the amount of time management spent (labor time) and limited human and technical resources to do with environmental problems so as to make more serious obstacles. According to Rivaud-Danset (2002), among continental European companies, the innovative activity is not mostly hampered by their lack of financial resources. However, fund availability produced mixed results and therefore, the researcher cannot conclude that this factor has a crucial barrier on G-Practices adoption. The hypothesis proposes that:

H3: There is a negative relationship between funds availability and G-Practices adoption.

#### **2.12.4 Moderating Effects Hypotheses**

Based on the literature provided, fund availability is one of the most widely mentioned barriers to implement environmental management practices (Doody, 2010). This is a reason to select this variable as a moderator by the researcher and it is aligned with Gadenne et al.'s (2009) study. Also, the objective of this study is to test the moderating effects of funds availability on the relationship between internal

push factors, external pull factors and the adoption of G-Practices. Thus, the researcher can write the hypotheses as follows.

H4a: Funds availability moderates the relationship between owner-manager attitudes and G-Practices adoption.

H4b: Funds availability moderates the relationship between owner- manager's environmental attitudes and G-Practices adoption.

H4c: Funds availability moderates the relationship between benefits businesses can gain and G-Practices adoption.

H4d: Funds availability moderates the relationship between concern for employees and G-Practices adoption.

H5a: Funds availability moderates the relationship between regulations and G-Practices adoption.

H5b: Funds availability moderates the relationship between green consumers pressure and G-Practices adoption.

H5c: Funds availability moderates the relationship between supply chains pressure and G-Practices adoption.

H5d: Funds availability moderates the relationship between local communities and G-Practices adoption.

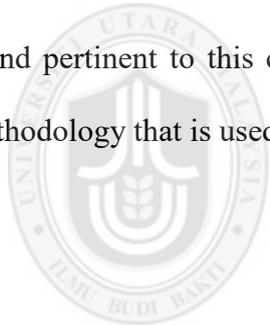
H5e: Funds availability moderates the relationship between competitors and G-Practices adoption.

## **2.13 Summary**

This chapter has examined the existing literature on the factors of G-Practices in the hotel industry. The review discusses major drivers and barriers that influence the

adoption of G-Practices and highlights organizational characteristics, including the funds availability. The findings of these studies indicated that the factors of G-Practices may not be consistent across different industries and different countries. Considerable further empirical research is necessary. Although most previous studies are based on American and Western hotel businesses, there are some significant ideas used as fundamental issues to determine the factors that contributing or influencing to the successful towards G-Practices adoption by SMHs in Thailand.

As part of this study, this paper presents the emergence of a new development model to cover concepts, theory, and components. It is a hybrid model which is the combined version of existing models and shows the full array of the key components, found pertinent to this current study. The following chapter discusses the research methodology that is used in the analysis of the research questions.



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## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter discusses the methodological background of the study to examine G-Practices adoption implemented by hotels from the hotel owner-managers' perception. The methodological option relies a lot on the research problems and objectives (Mouton, 1998). So, the methodology of this study is based on the research problems and study objectives as pointed out in Chapter one. Quantitative method is the best suited in this study. This chapter is categorized into: (1) research design, (2) source of data, (3) population and sample size, (4) data collection procedure, (5) research instrument, (6) translation of the questionnaire questions, (7) pilot study, and (8) data analysis procedures.

#### **3.2 Research Design**

A research design according to Mugenda and Mugenda (2003) is a framework that will guide methods for data collection and analysis. As this research is based on exploration rather than discovery and will apply a concept/model that already exists from previous studies, the methodology will be quantitative research, because, that is better to have a larger sample size to obtain such increased reliability and simplified findings. The major characteristics of quantitative research are a focus on deduction, confirmation, theory/hypothesis testing, explanation, prediction, standardized data collection, and statistical analysis (Johnson & Onwuegbuzie, 2004: 18).

The study adopted the survey research design. This study is cross-sectional in nature where data are collected once in order to answer the research questions concerning the current status of the subjects in the study (Sekaran, 2010). It attempts to examine the relative importance of the independent variables as the factors that leading towards successful adoption of G-Practices. In this scenario, an attempt is made to determine whether owner-manager attitudes, environmental awareness, benefits businesses can gain, concern for employees, regulations, green consumers, supply chains, local communities, and competitors may influence the adoption of G-Practices by SMHs in Southern Thailand. The moderating variable is funds availability.

### **3.3 Source of Data**

The author used and analyzed primary sources in this study. The collection of primary data was accomplished through questionnaires. The selected site for this study was Phuket and Krabi. Both are situated on the Andaman Sea coast and are known for beautiful beaches and stunning limestone scenery, filled with many restaurants and accommodations. This makes Phuket and Krabi Thailand's top five popular tourist destinations. More than 80% say that international tourists come to visit Phuket and Krabi from total southern provinces. The population in Phuket and Krabi were collected from [tourismthailand.org/marketing](http://tourismthailand.org/marketing) database. There are approximately 611 enterprises registered in the Phuket and Krabi Municipal area and suburbs. The reason why the author selected these sites was because of the relevance of population for this current study. The field survey was conducted to collect data from target owner-managers of SMHs in Phuket and Krabi.

### **3.4 Population and Sample Size**

This section presents an overview of the sampling methods and identifies the selected sampling strategy and sample size.

#### **3.4.1 Overview of Sampling Methods**

Sampling is a process or technique of selecting units (e.g. people, organizations) from a population of interest to participate in the study; it is the process of selecting a number of individuals for a study in such a way that the group of individual represents the large group from which they are selected (Ogula, 2005). According to Gofton and Ness (1997), sampling methods are divided into two types: probability sampling and non-probability sampling. A sampling technique of this research is a stratified random sampling as a type of probability sampling technique.

Stratified random sampling is the most efficient method of sampling when a researcher desires to get a representative sample of a population (Hunt & Tyrrell, 2001). It involves categorizing the members of the population into mutually exclusive and collectively exhaustive groups. An independent simple random sample is then drawn from each group. Stratified random sampling is used where it is believed that there are key segments with different characteristics, such as behavior or attitudes. The sample is organized on a proportionate or disproportionate basis. Proportionate stratified sampling means that the proportion of the various groups or strata match the relative population proportions. The major advantage of the approach is that it can provide the most representative sample of a population (Hunt & Tyrrell, 2001). However, in case of making detailed analyses within a relatively

small stratum and/or compare strata to each other, proportionate stratified sampling may not yield sufficient numbers of cases in any of the strata for such analyses.

### **3.4.2 Selected Sampling Strategy and Sample Size**

Stratified random sampling is preferred in this study due to three main reasons. Firstly, it is the most representative of a population. Secondly, it produces results that are both largely unbiased and accurate. Thirdly, it can provide greater precision and cost-saving than a simple random sample of the same size due to the required smaller sample.

Related to the issue of sampling is the description of the unit of analysis. The unit of analysis is the major entity or object that researchers are analyzing in their studies and about which generalizations are to be made (Creswell, 2009; Lan, 2004). It is the ‘what’ or ‘who’ that is being studied. Units of analysis are essentially the things the researchers examine in order to create summary descriptions of them and explain differences among them. This research considers the organization as the unit of analysis.

A sample is “a smaller (but hopefully representative) collection of units from a population used to determine truths about that population” (Field, 2005). Sample size determination involves establishing the number of observations to include in a statistical sample while ensuring representativeness. Determining the sample size for a finite population is discussed below.

The ever increasing demand for research has created a need for an effective method of determining sample size needed to be representative of a given population. Krejcie and Morgan is a commonly employed method in estimating sample size in research. Krejcie and Morgan (1970) used the following formula to determine sampling size.

$$s = X^2 NP(1 - P) + d^2 (N - 1) + X^2 P(1 - P)$$

$s$  = required sample size

$X^2$  = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841).

$N$  = the population size

$P$  = the population proportion (assumed to be .50 since this would provide the maximum sample size).

$d$  = the degree of accuracy expressed as a proportion (.05).

The population of this study include owner-managers of SMEs/SMHs in Phuket and Krabi. The common criterion used to distinguish between medium and small businesses is the number of employees. Classification of lodging properties is based on many types such as price, star rating, number of rooms, location, ownership, distinctiveness of style, offerings, or amenities. This study suggested by the Tourism Authority of Thailand (TAT) that the size of hotels is measured by average room rates. With regard to prices, hotels below 500 Baht will be classified budget hotels, 500-999 Baht hotels are classified as above budget hotels, and 1,000-1,499 Baht hotels are classified as midscale hotels.

The sampled hotels were selected from currently operating hotels in order to identify a range of hotels from budget accommodation to midscale hotels as SMHs which SMEs fall into where the total population was 611 SMEs/SMHs. The study population is a subset of this population that comprises the small and medium hotels in Phuket and Krabi by using Krejcie and Morgan's (1970) formula above for sample size calculation. In this study, the unit of analysis is the organization and the owner-manager has been the key respondent to represent his/her business. 236 hotels were selected to participate in the survey through the methodology of proportionate stratified random sampling and then random sampling was utilized in order to pick the specified number of participants from each of the seven strata (each district). Within the seven strata, both small and medium hotels were included in the sample. Determining the number of samples to be collected, the researcher used Excel to get a random sample (236 selected samples). Table 3.1 shows the selection of sample from each district to achieve the required precision depending on the population proportion using proportionate stratified random sampling.

Table 3.1  
*Sample Size*

Location	Population		Proportionate Stratified Sample	
	Frequency	Percent	Frequency	Percent
<b>Phuket</b>				
Kathu	140	23%	54	23%
Thalang	24	4%	9	4%
Phuket City	171	28%	66	28%
<b>Krabi</b>				
Koh Lanta	66	11%	26	11%
Krabi City	185	30%	72	30%
Nuea Khlong	14	2%	5	2%
Aou Luk	11	2%	4	2%

<b>Total</b>	<b>611</b>	<b>100%</b>	<b>236</b>	<b>100%</b>
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Source: <http://www.tourismthailand.org/marketingdatabase>

### 3.5 Data Collection Procedure

Once the sample was selected, the next procedure involved the method of questionnaire distribution. Questionnaires are administered as the research instruments/tools to be used to gather data from a large number of people. Self-administered questionnaires were conducted to collect data. Personal presentation of questionnaires to individual respondents was preferable because the researcher could build rapport with the respondents. Also, the researcher could help explain or clarify particular items that they were unclear. Questionnaires were distributed to owner-managers of SMHs in Phuket and Krabi for firsthand information for processing towards answering the research questions. The questionnaire was divided into three sections below.

**Section 1** was developed to cover the extent to which their business engages in the current green activities or practices. The statements focus on six features: energy, water, recycling, clean air, health promotion and EMS. Respondents were asked which of these environmental measures have been adopted or undertaken within one's establishment. The participants were asked to indicate the actual frequency on a five-point Likert scale ranging from extremely to not at all adoption.

**Section 2** of the questionnaire comprised of various questions that aimed to gather data from owner-managers' opinions and perceptions on the factors (internal, external and moderating) influencing organizations to adopt G-Practices. All items

that motivated and restrained hotels to adopt G-Practices were measured using a five-point Likert scale to which the owner-managers have to respond to each item by indicating their level of agreement or disagreement.

**Section 3** was used to capture the characteristics of the hotels and the personal details of respondents, including gender, age, education level, years of service, age of business, price per night, number of employees, and company location. The questionnaire was close-ended questions and checklist with one-choice answers.

All respondents would be given one week to complete the questionnaires. Respondents completed a questionnaire and returned it in September and October 2015. Those who did not reply initially were followed up over the phone or by sending them a reminder email. The two months were spent in the data collection.

The additional follow-up attempts were made on those who did not complete the questionnaire after the email reminders were sent. There was evidence to indicate that non-respondents might not return the questionnaire within a specified period of time, they were given an additional week and then asked to accomplish their task; however, the extension did not work out the way they were planned. Data for the actual study also were reused the sample of pilot test (30 samples) for further analysis.

### **3.6 Research Instrument**

Prior to data collection, the researchers need to design a research instrument. Quantitative research allows for broad-based generalization theory-testing. The questionnaire is said to be the most popular and widely used research instrument for

survey approach (Altinay & Paraskevas, 2008). The development of research questions was based on the research objectives and adapted from prior research in this field. Before finalization of the questionnaire content and wording, items were assessed through the content validity of the scale by the Tourism Authority of Thailand (TAT) as well as three academics who are familiar with the area of environment management and hotels. The four experts evaluated all items in the scale, focusing on whether the items adequately captured all the information needed to answer the research questions. Minor adjustments in question wording were made based on their comments to improve the clarity of the survey.

The questionnaire includes 79 closed-ended questions. The identification of the level of institutional factors influences on G-Practices adoption and respondents need to mark their level of agreement or disagreement using a Likert scale. The survey instrument used in this study is a five-point Likert scale as appropriate. Five-point Likert scales are perhaps most commonly used (Sclove, 2001). Generally, a five-point Likert scale was applied to measure response opinion on each scale item, where “1” as “strongly disagree” and “5” as “strongly agree”. Using Likert scaling could take out the subjective judgements by respondents because Likert scaling is a non-comparative scaling technique and is unidimensional (Oppenheim, 1966). Table 3.2 below summarizes the variables, sources of scale, total number of items, and questions number.

Table 3.2  
*Measures of the Study*

<b>Variables</b>	<b>Sources of Scale</b>	<b>No. of Items</b>	<b>Questions No.</b>
<b>Adoption of G-Practices</b>	Author; Nicholls & Kang, 2012a, 2012b	21	1 - 21

**Internal Push Factors**

Owner-Manager Attitudes	Laroche et al., 2001	10	21 – 31
Environmental Awareness	Author; McKeiver & Gadenne, 2005	8	32 - 39
Benefits Businesses Can Gain	McKeiver & Gadenne, 2005; Nicholls & Kang, 2012a	11	40 - 50

Table 3.2 (Continued)

Concern for Employees	Author	4	51 - 54
<b>External Pull Factors</b>			
Regulation	Gadenne et al., 2009; Njibu & Juma, 2014	4	55 - 58
Green Consumers	Gadenne et al., 2009; Khanna & Speir, 2007	4	59 - 62
Supply Chains	Author; Gadenne et al., 2009	4	63 - 66
Local Communities	Author	4	67 - 70
Competitors	Khanna & Speir, 2007	3	71 - 73
<b>Moderator</b>			
Funds Availability	Fischer & Schot, 1993; Gadenne et al., 2009	6	74 - 79
Owner-Manager Characteristics and Organizational Information	Gender, age, education level, years of service, age of business, price per night, number of employees, number of rooms, and company location.		

**3.6.1 Adoption of G-Practices**

Twenty-first items were used to measure the adoption of G-Practices. Respondents were asked to show the extent to which their hotel business implements the listed green activities or practices in harmony with the global environment. Items included six key areas: energy efficiency, water conservation, waste management, air purification, health promotion and EMS. Items capturing the level of G-Practices adoption created by the author and adapted from previous studies by Nicholls and Kang (2012a, 2012b) were 10 items and 11 items respectively. A five-point Likert

scale ranging from '1' "not at all" to '5' "extremely" was used to measure the items.

Table 3.3 shows the items used to measure the adoption of G-Practices.

Table 3.3  
*Items Constituting the Adoption of G-Practices Scale*

---

**Energy efficiency**

1. Low-energy light bulbs in guestrooms.
2. Energy-efficient lighting in public areas, e.g. sensors.
3. Keycard-controlled power in guestrooms.

**Water conservation**

4. Water efficient fixtures in guest bathrooms.
5. Encouraging hotel guests to reuse towels.
6. Dual-flush toilets.

**Waste management**

7. Sorting waste in guest rooms.
8. Recycling waste materials (cardboard, paper, cans, plastics, glass etc.).
9. Purchase of environmentally friendly cleaning products (e.g. biodegradable, reusable, recyclable, etc.).
10. Purchase of organically grown foods.
11. Buy in bulk to reduce the amount of packaging.
12. Encouraging guests to be eco-friendly.
13. Incorporating environmental messages in their products.
14. Donation of used hotel furniture.

**Air purification**

15. Planting live plants.
16. Provision of designated non-smoking rooms.

**Health promotion**

17. Provision of a healthy menu with minimal chemical additives.

18. Encouraging car-pooling whenever if possible for hotel's guests.

#### **EMS**

19. Provision of environmental training sessions for employees.

20. Conducting an audit, e.g. energy, water.

21. Having a written policy.

---

Source: Author; adapted from Nicholls & Kang (2012a, 2012b)

### **3.6.2 Owner-Manager Attitudes**

Given the rising perceived importance of the environment warning, Laroche et al. (2001) determined the level of attitudes by whether individuals considered environmentally-friendly decision-making to be necessary to themselves or the whole society. The 10 items used in the questionnaire were adapted from Laroche et al. (2001). Respondents were asked to indicate their attitudes towards environmental issues. Items capturing the environmental attitudes of owner-managers were tested by Baker, Davis, and Weaver (2014). A five-point Likert scale ranging from '1' "strongly disagree" to '5' "strongly agree" was used to measure the items. Baker et al. (2014) indicated a reliability coefficient of 0.87 in "severity of environmental problem" and 0.84 in "inconvenience of being environmentally friendly". Table 3.4 shows the items used to measure owner-manager attitudes.

Table 3.4

*Items Constituting the Owner-Manager Attitudes Scale*

---

1. House built in a new area should be built around trees, which should not be cut down.
2. Our country has so many trees that there is no need to recycle paper.
3. With so much water in this country, we do not see why people are worried about leaky faucets.
4. We have so much electricity that we do not have to worry about conservation.
5. Non-returnable bottles and cans just create litter and should be banned.

6. Recycling is too much trouble.
7. Since we live in such a big country, any pollution we create is easily spread out and therefore is no concern to me.
8. There is nothing the average citizen can do to help stop environmental pollution.
9. Trying to control pollution is much more trouble than it is worth.
10. Our modern highly processed foods are bad for our health.

---

Source: Adapted from Laroche et al. (2001)

### 3.6.3 Environmental Awareness

In addition to the abovementioned definition of Kollmuss and Agyeman (2002), environmental awareness can be viewed as an individual's attention and sensitivity to environmental problems (McHenry, 1992: 1150; Soukhanov, 1992: 2140). Environmental awareness was measured by eight items. Respondents were asked to indicate their environmental awareness in relation to operational costs, production efficiency, best practice, and increased regulatory focus. Eight items were obtained from McKeiver and Gadenne's (2005) study, and measured on a five-point Likert scale, ranging from '1' "strongly disagree" to '5' "strongly agree". The prior alpha score reported for this instrument was 0.79 (McKeiver & Gadenne, 2005). Table 3.5 shows the items used to measure environmental awareness.

Table 3.5  
*Items Constituting the Environmental Awareness Scale*

- 
1. We take sufficient environmental action to meet legislation.
  2. Our company does not have an environmental impact.
  3. Reducing our environmental impact can have significant cost benefits.
  4. Improving environmental performance usually improves production efficiency.
  5. Business environmental initiatives are of benefit to the hotel.
  6. It is clear what represents 'best practice' in environmental performance.

7. It is clear how legislation affects us.
8. There are currently commercial benefits to my company in having an environmental policy.

---

Source: Author; adopted from McKeiver & Gadenne (2005)

### **3.6.4 Benefits Businesses Can Gain**

Benefits Businesses Can Gain were measured by 11 items. Respondents were asked to indicate their perception on benefits businesses can gain towards the adoption of G-Practices, i.e. increasing cost savings, increasing profits, competitive advantage, enhancing customer relations, improving employee morale, reducing waste, emissions, building a cleaner environment and hotel image. In this research, benefits businesses can gain were captured using an instrument developed by Nicholls and Kang (2012a), and McKeiver and Gadenne (2005) with six items and five items respectively, and measured on a five-point Likert scale, ranging from '1' "strongly disagree" to '5' "strongly agree". The previous composite reliability score reported for this instrument was 0.79 (McKeiver & Gadenne, 2005). Table 3.6 shows the items used to measure benefits businesses can gain.

Table 3.6  
*Items Constituting the Benefits Businesses Can Gain Scale*

- 
1. Increase cost saving.
  2. Increase profitability
  3. Increase efficiency.
  4. Give us a marketing advantage over our competitors.
  5. Enhance hotel's image.
  6. Improve customer satisfaction.
  7. Improve relationship with the community.
  8. Improve employee morale.
  9. Complying with legislation.
  10. Create a cleaner working environment.
-

11. Reduce carbon emissions.

---

Source: Adopted from Nicholls & Kang (2012a); McKeiver & Gadenne (2005)

### 3.6.5 Concern for Employees

Concern for employees was measured by four items. Respondents were asked to indicate if they take the actions regarding employees' concerns. The author decided to develop own questions with items capturing concern for employees. The items were measured on a five-point Likert scale, ranging from '1' "strongly disagree" to '5' "strongly agree". Table 3.7 shows the items used to measure concern for employees.

Table 3.7  
*Items Constituting the Concern for Employees Scale*

- 
1. Employee concerns always affect productivity.
  2. We act upon any environmental matters suggested by employees.
  3. Employee concerns are an important part of our work.
  4. Employees tend to look for an environmentally friendly business.
- 

Source: Author

### 3.6.6 Regulations

Regulations have been described as a major factor that influences hotels to adopt G-Practices. The four items were used to measure regulations. Respondents were asked to indicate the extent to which governmental regulators threaten to or actually impede their company's operations. Four items (with two items and two items respectively) were based on the work of previous studies by Gadenne et al. (2009), and Njibu and Juma (2014). A five-point Likert scale ranging from '1' "strongly disagree" to '5' "strongly agree" was used to measure the items. The previous alpha

score reported for this instrument was 0.76 (Gadenne et al., 2009). Table 3.8 shows the items used to measure regulations.

Table 3.8  
*Items Constituting the Regulations Scale*

- 
1. Government pressure imposes environmental & safety-related behavioral demands on our business.
  2. Our business has established collaborative partnership with the govt agents to protect the environment.
  3. Environmental legislative requirements impact on our business.
  4. Environmental legislation is not relevant to our business.
- 

Source: Adopted from Gadenne et al. (2009); Njibu & Juma (2014)

### **3.6.7 Green Consumers**

Various green business enthusiasts are dependent on consumer demand. Organizations should become more environmentally responsible because they can stay ahead of the competition and even survive in the marketplace (Bennett, 1991; Charter & Polonsky, 1999; Darnovsky, 1996; Day & Arnold, 1998). Green consumers were measured by four items. Respondents were asked to indicate the extent to which environmental issues affect green buying decision to stay in a green hotel of customers. Four items (with two items and two items respectively) in this scale were developed from Gadenne et al.'s (2009), and Khanna and Speir's (2007) study. A five-point Likert scale ranging from '1' "strongly disagree" to '5' "strongly agree" was used to measure the items. The previous alpha score reported for this instrument was 0.75 (Gadenne et al., 2009). Table 3.9 shows the items used to measure green consumers.

Table 3.9  
*Items Constituting the Green Consumers Scale*

- 
1. Environmental issues critically affect the buying decisions of our customers.
  2. Our customers often mention environmental factors when making choices.
-

- 
3. Customers desire for environmental friendly products.
  4. Customers are willing to spend more money on green products.
- 

Source: Adopted from Gadenne et al. (2009); Khanna & Speir (2007)

### 3.6.8 Supply Chains

Supply Chains were measured by four items. Respondents were asked to indicate the extent to which hotels are incorporating Eco awareness into the supply chains environmental concern. Three items in this scale were developed by the author and the rest item is adapted from Gadenne et al.'s (2009) study. A five-point Likert scale ranging from '1' "strongly disagree" to '5' "strongly agree" was used to measure the items. The previous alpha score reported for this instrument was 0.75 (Gadenne et al., 2009). Table 3.10 shows the items used to measure supply chains.

Table 3.10  
*Items Constituting the Supply Chains Scale*

- 
1. We obtain information from our suppliers about their environmental management practices.
  2. Supply chains' environmental concerns have impacted on our business.
  3. Supply chain requirements can play an important role in improving environmental performance.
  4. Environmental issues are considered to be very important for our supplier.
- 

Source: Author; adapted from Gadenne et al. (2009)

### 3.6.9 Local Communities

Local Communities were measured by four items. Respondents were asked to indicate the extent to which local communities put pressure on hotel businesses regarding environmental practices as part of a new environmental initiative. All items in this scale were developed by the author. A five-point Likert scale ranging from '1' "strongly disagree" to '5' "strongly agree" was used to measure the items. Table 3.11 shows the items used to measure local communities.

Table 3.11

*Items Constituting the Local Communities Scale*

---

1. Pressure from community activists has affected our company's conduct.
  2. Local communities put pressure on companies that have bad environmental practices.
  3. Green projects have always been led by community members.
  4. Our business is most likely to be committed to communities in the local.
- 

Source: Author

### **3.6.10 Competitors**

Competitors were measured by three items. Respondents were asked to indicate the extent to which competitors put pressure to implement G-Practices. All items in this scale were developed from Khanna and Speir's (2007) study. The items were measured on a five-point Likert scale, ranging from '1' "strongly disagree" to '5' "strongly agree". The previous alpha score reported for this instrument was 0.853 (Khanna & Speir, 2007). Table 3.12 shows the items used to measure competitors.

Table 3.12

*Items Constituting the Competitors Scale*

---

1. Investing in products differentiate our products.
  2. Improving environmental performance helps us keep up with competitors.
  3. Environmentally friendly actions result in product innovations.
- 

Source: Adopted from Khanna & Speir (2007)

### **3.6.11 Funds Availability**

Despite the potential of G-Practices adoption to generate by reducing costs, several real or perceived internal financial obstacles may hinder firms to adopt G-Practices. Risk and uncertainty in the performance of certain technologies and management practices may result in the firm's reluctance to invest in G-Practices. Funds

availability was measured by six items. Respondents were asked to indicate the extent to which money is a huge problem when it comes to environmental improvement by companies. Five items in this scale were based on the previous work by Fischer & Schot (1993; cited in Gunningham & Sinclairand, 1997) and one item is adopted from Gadenne et al. (2009). A five-point Likert scale ranging from ‘1’ “strongly disagree” to ‘5’ “strongly agree” was used to measure the respondents’ answers. The items used to measure funds availability are shown in Table 3.13.

Table 3.13  
*Items Constituting the Funds Availability Scale*

- 
1. Non-comprehensive cost-benefit analysis methods.
  2. Short-term profit calculations resulting in low tolerance for longer payback periods of equipment investment.
  3. A lack of capital investment flexibility due to low profit margin.
  4. A lack of understanding in predicting future liability costs (e.g. waste disposal).
  5. Economies of scale preventing smaller firms from investing in waste reduction options (e.g. technologies).
  6. Making changes to improve environmental outcomes is too expensive for our business.
- 

Source: Adopted from Fischer & Schot (1993); Gadenne et al. (2009)

### **3.7 Translation of Questionnaire Questions**

The translation follows the Brislin’s model, which is reckoned to be the most reliable method for developing an equivalent translated instrument (Yu, Lee, & Woo, 2003).

The instrument was translated into Thai. Brislin (1970) underlines the importance of the quality of the translation and the equivalence between two languages, saying that it is possible to control this step of the process. The Brislin’s model for translating and back-translating instrument emerged as the most popular method for cross-

cultural research (Brislin, 1970; Jones, Lee, Phillips, Zhang, & Jaceldo, 2001). According to the translation of this instrument, a bilingual professional translates the document from its original English into the target language. Then another bilingual professional is asked to translate back from the target language to English and is also an independent translator. This is necessary to assure the equivalence between the original version and the translated version. Thus, the second translator performs a blind back-translation into the original English text. Version of both translations (the original and the back-translated documents) is then compared in order to validate the content of the instrument. This process is repeated until an equivalent level and clear indication.

In order to reduce the opportunity to occur aberrations in measurement and get precise answers from the respondents without missing anything important, the questionnaire was, at first, prepared in English, then translated into Thai. Dr. Chatpat who is a native Thai speaker and a Thai lecturer who is excellent in English helps check Thai version of questionnaire. The questionnaire is then delivered to an independent party to translate back to English. Further, Assoc. Prof. Narumon and Dr. Malee who are experienced lecturers within the hotel industry are asked to check whether the translations seem appropriate and the language used due to their specialization in the field.

### **3.8 Pilot Study**

Piloting involves administering a draft questionnaire to a small sample of subjects drawn from the same groups as those to whom the final version will be administered, and then going through the questions again with the subject to check that the meanings are clear and unambiguous, exactly what they mean by the answers they

provide, and whether they are happy with the way the questions are asked (Gofton & Ness, 1997). The pilot test talks about the accuracy of measurement instrument in measuring the variables. This study was carried out in two phases:

1. Expert opinion
2. Pilot study

Total four experts were requested to refine and validate measures for each concept. Three experts from academics and one from TAT. The experts were asked to give comments on initial 21 items of G-Practices constructs, 52 items of internal push and external pull factors, and 6 items of funds availability. The major comments were related to adjusting the details of the wording. The wording of some questionnaire items, then was changed (usually by rewording) to make it clearer and more precise since the original questionnaire was translated into Thai language by the author. Suggestions were received to eliminate some overlap items.

The pilot test was conducted by using a convenient sample of thirty (30) owner-managers from SMHs in Phuket and Krabi. The version of the questionnaire which was first pilot tested with thirty (30) owner-managers carried out in order to check, clarify and define the final form, meaning, order, structure and so on of a survey questionnaire before the commencement of actual study.

After a pilot phase was complete, the reliability of the test (instrument) was calculated by using the pilot study data. One of the selection criteria of past instruments was internal consistency of the scales. This can be checked by considering Cronbach's alpha reliability coefficients. The result of the measures of

the pilot study is shown in Table 3.14. The reliability estimates ranged from .819 to .870 and generally, a value of 0.7 can be considered sufficient for research purposes (Nunnally, 1978). This means that the scales can be regarded as relatively reliable. Also, eight items (7 items from reliability analysis with Cronbach's Alpha and one item from exploratory factor analyses) were dropped from the survey questionnaire. The final version of the questionnaire is given in Appendix D on page 260.

Table 3.14  
*Reliability Coefficient for Multiple Items in Pilot Study (n=30)*

<b>Variables</b>	<b>Number of items</b>	<b>Alpha (<math>\alpha</math>)</b>
G-Practices	21	.837
Owner-Manager Attitudes	10	.869
Environmental Awareness	8	.851
Benefits Business Can Gain	11	.859
Concern for Employees	4	.826
Regulations	4	.827
Green Consumers	4	.825
Supply Chains	4	.835
Local Communities	4	.823
Competitors	3	.819
Funds Availability	6	.870

### **3.9 Data Analyses**

The collected data were edited, coded and organized using statistical package for social science (SPSS version 20). The quantitative data were analyzed using various

statistical tests; the descriptive statistics used to analyze the adoption were Percentage, Mean and Standard Deviation. Inferential statistics were employed to test the relationship between independent and dependent variables. The empirical data analysis follows a two-step approach. First, to measure the goodness of data, reliability and validity tests are compulsory (Sekaran & Bougie, 2010). Cronbach's alpha is used to measure the internal consistency or reliability of the questionnaire (Nunnally, 1978). Content validity is used to determine through a panel of experts and a field test. This assessment is best performed by experts (in content or instrument development) who evaluate whether the questionnaire content accurately assesses all fundamental aspects of the topic. Also, factor analysis is employed to determine whether the factor model is correct and needed to measure the validity (Field, 2009). Then, the hypothesized relationships between the constructs were analyzed. The statistics used for testing on independent variables, moderating variable, and dependent variable was multiple regression analysis. The analyzed data was summarized and presented in the form of tables and graphs that essentially illustrate both descriptive and inferential statistical results.

### **3.9.1 Tests of Validity and Reliability**

Before hypotheses testing, validity and reliability tests were conducted. Content validity was examined before data gathering occurred by presenting the scale items to three academics, including TAT who examined the scale items, and all necessary changes were made. To examine convergent validity, factor analysis was used.

### **3.9.1.1 Content Validity**

Based on the objectives of this study to answer its questions, the validity of a survey instrument uses content validity. Content validity refers to the subjective agreement among professionals that a scale logically appears to accurately reflect what it purports to measure. The content of the scale appears to be adequate. When it appears evident to experts that the measure provides adequate coverage of the concept, a measure has face validity (Zikmund, 1991: 263). Content validity is usually evaluated through judgment-based decisions on how well each of the items in the scale measures the construct of interest (Kerlinger, 1986; Nunnally, 1978).

In this study, the researcher worked with academics who are experts in this field of research, including TAT in order to understand more correctly G-Practices in many aspects and assure accurate and complete results.

### **3.9.1.2 Factor Analysis**

Factor analysis, including variations such as component analysis and common factor analysis, is a statistical technique that is designed to analyze interrelationships among a large number of variables and to explain these variables in terms of their common underlying dimensions (factors). The objective is to discover a way of condensing the information contained in a number of original variables into a smaller set of variates (factors) with a minimum loss of information (Hair, Anderson, Tatham, & Black, 1995). In addition to the statistical base for the correlations of the data matrix, the factor analyst must also ensure that the data matrix has sufficient correlations to justify the application of factor analysis. If visual inspection reveals no substantial

number of correlations greater than 0.3, then factor analysis is probably inappropriate.

Exploratory Factor Analysis (EFA) is the tools to analyze the correlations of a large number of variables to define the underlying structure by identifying factors (i.e. groups of highly correlated variables) assumed to represent dimensions in the data. These dimensions can guide in creating new composite measures to reduce the number of variables. These dimensions may also correspond to concepts that cannot be adequately described by a single measure.

As another model for determining the appropriateness of factor analysis, some measures examine the entire correlation matrix. Pallant (2010) suggests that in the Kaiser-Meyer-Olkin (KMO) and Bartlett's test, the KMO value should all be more than 0.5 at a bare minimum if the sample is adequate. As for Bartlett's test of sphericity, it should have a significant value that is less than 0.05 for factor analysis to be suitable.

### **3.9.1.3 Reliability**

The next step is to ascertain the reliability of the constructs to make sure that they are free from error and therefore yield consistent results. One of the aspects of reliability is called internal consistency and it is used in this research across time and across the various items that measure the same concept or variable (Sekaran & Bougie, 2010). Cronbach's alpha coefficients is the most widely used criterion to assess the reliability of a multiple-item measurement. To ensure the internal consistency of the measurement instruments, reliability analysis is conducted on the factors extracted

using Nunnally's (1978) recommendation. The instruments employed in basic research have a reliability of about 0.70 or better. According to Sekaran and Bougie (2010), overall reliability of a questionnaire and values over 0.80 is considered as good, it is still acceptable if the range in 0.70 and those less than 0.60 are poor. However, in the present study, a minimum reliability (Cronbach's alpha) value of 0.70 is set, following Nunnally's guidelines. Table 3.15 provides a summary of the test method used in this study.

Table 3.15  
*Construct Tests and Test Method*

Construct test	Test method
Content validity	<ul style="list-style-type: none"> <li>▪ Expert opinion and field test</li> </ul>
Convergent validity	<ul style="list-style-type: none"> <li>▪ Factor analysis</li> <li>▪ Correlation analysis</li> </ul>
Reliability	<ul style="list-style-type: none"> <li>▪ Cronbach's Alpha</li> <li>▪ Item-to-total correlation</li> </ul>

### 3.9.2 Descriptive Statistics

Once a large set of data has been collected, descriptive statistics are applied to convey the important aspects of the distribution of the data. Descriptive statistics are numbers that are used to describe data in a study and summarize about the sample and the measures. Data are analyzed using descriptive statistic tools. The descriptive tools include percentages, means and standard deviation.

### **3.9.3 Correlation Analysis**

Correlation addresses the direction of the relationship between variables. The most statistic used to measure the correlation is a Pearson Product-Moment Correlation Coefficient (Pearson's  $r$ ). A positive value (+1) indicates a positive correlation. Similarly, a negative value (-1) indicates a negative correlation (Pallant, 2010). The further a correlation lies from zero, the stronger the correlation. A zero correlation means that two variables aren't related to each other at all (DeCoster, 2004). Many assumptions need to be made for the correlation analysis: level of measurement, related pairs, independence of observations, normality, linearity, homoscedasticity, and missing data; in fact, generating scatterplot enables the researcher to check linearity and homoscedasticity. For an appropriate analysis of the correlation, it should be known that small correlations may give statistical significance in large samples ( $N = 100+$ ) (Pallant, 2010).

### **3.9.4 Analysis of Variance (ANOVA)**

The one-way Analysis of Variance (ANOVA) is utilized with one categorical independent variable and one continuous variable. The independent variable can consist of any number of groups (levels). When the means of more than two groups or populations are to be compared, one-way analysis of variance (ANOVA) is the appropriate statistical tool. This bivariate statistical technique is referred to as "one-way" because there is only one independent variable (even though there may be several levels of that variable) (Zikmund, 1991: 510).

### **3.9.5 Regression Analysis**

“Multiple regression analysis is a statistical technique that can be used to analyze the relationship between a single dependent (criterion) variable and several independent (predictor) variables. The objective of multiple regression analysis is to use the independent variables whose values are known to predict the single dependent value selected by the researcher. Each predictor is weighted, the weights denoting their relative contribution to the overall prediction” (Hair et al., 1995: 85). Multiple regression is applied to analyze the direct relationship between internal push factors, external pull factors and funds availability as a moderator related to the adoption of G-Practices by SMHs and to test the hypotheses of this study.

### **3.9.6 Multicollinearity**

Multicollinearity is a problem that occurs with regression analysis when there is a high correlation of at least one independent variable with a combination of the other independent variables (Hair, Black, Babin, & Anderson, 2010; Pallant, 2010). When variables are highly correlated in a multiple regression analysis it is difficult to identify the unique contribution of each variable in predicting the dependent variable because the highly correlated variables are predicting the same variance in the dependent variable. In this situation, the “overall” p-value may be significant but the p-value for each predictor may not be significant.

Multicollinearity can be accessed by examining the tolerance and Variance Inflation Factor (VIF) are two collinearity diagnostic factors that can help us identify

multicollinearity. Multicollinearity exists when tolerance is below 0.1; and VIF is greater than 10.

For this study, multicollinearity was tested by first conducting a correlation analysis with all variables and then computed the tolerance and VIF level for the independent variables. The correlation matrix of the independent variables is examined to find out if there exists a high correlation between the variables. Some statisticians say correlations above 0.7 indicate multicollinearity, and others (e.g. Hair et al., 2010) say that correlations above 0.9 indicate multicollinearity.

### **3.10 Summary**

This chapter described and justified the methodological background of this research study, including research design, data collection procedures, data analysis procedures and measurement of variables with details to be discussed. This study used a quantitative methodology to produce statistical results. In the quantitative approach, the use of the questionnaire survey was to obtain information from owner-managers of SMHs in Phuket and Krabi. This was applied to investigate the cause and effect relationships of the factors that influence companies to adopt G-Practices and investigate how funds availability moderates how companies perceive and respond to institutional pressures. The next chapter will provide results of a detailed analysis of data and findings of the study.

## CHAPTER 4

### DATA ANALYSIS AND FINDINGS

#### 4.1 Introduction

This chapter describes the analysis of data, presents and discusses the research findings outlined in Chapter three. The findings related to the research questions and hypotheses that guided the study. Data were analyzed to identify, describe and explore the relationship between internal push factors, external pull factors and funds availability on G-Practices adoption. Quantitative measures for the surveys are presented and descriptive statistics are provided. It begins with the general description of respondents' demographic profiles and their business, followed by testing the validity and reliability of the construct in the second section. Finally, detailed presentation of results relating to each of the nineteen hypotheses is highlighted.

#### 4.2 Response Rate

During September-October 2015, the total questionnaires were handed out to 236 hotel owner-managers. As direct efforts spent to approach respondents, out of which 157 were completed and returned, where 12 were excluded because of incomplete or missing data. Therefore, a total of 145 completed questionnaires was used for empirical analysis. The response rate would be 66.5%. Respondents 1-126 returned their questionnaire within the first week of distribution, whereas respondents 127-145 only did after sending follow-up emails and phone call up to a few weeks after the first set. Babbie (1990) suggested that a 50% response rate is generally

regarded as acceptable, 60% is regarded as good and 70% is normally regarded as very good. So, this study has a good response rate.

Prior to processing on the data, the data recorded on the questionnaire is usually transferred into a computer database. Accordingly, complete responses to the survey instrument were entered into the SPSS. All data entry was double-checked by the researcher to ensure an error-free data set was being analyzed. Then, the data were purified.

### **4.3 Non-response Bias**

To protect against possible response bias between respondents and non-respondents, a t-test was used to compare means for early and late groups of owner-manager respondents corresponding to the test for non-response bias by Armstrong and Overton (1977). The mean values differ significantly between early and late respondents, indicating the presence of underlying differences between respondents and non-respondents (Armstrong & Overton, 1977). The results obtained are displayed in Table 4.1, where there were no significant differences between the means of owner-managers who responded early ( $n = 126$ ) and those who responded late ( $n = 19$ ) in regard to G-Practices ( $p = 0.247$ ), owner-manager attitudes ( $p = 0.444$ ), benefits business can gain ( $p = 0.953$ ), concern for employees ( $p = 0.131$ ), regulations ( $p = 0.231$ ), green consumers ( $p = 0.172$ ), supply chains ( $p = 0.257$ ), local communities ( $p = 0.508$ ), competitors ( $p = 0.152$ ), and funds availability ( $p = 0.425$ ). The researcher could conclude that late respondents might approximate non-respondents to some degree because if the researcher had not made extra efforts to reach these people, they would have been non-respondents and therefore generalized

the findings to the population. Non-response bias was not a major concern in this study.

Table 4.1  
*T-test Results Comparing Group Means for Early and Late Respondents*

Variable	n	Early response <i>M</i> ( <i>SD</i> )	n	Late response <i>M</i> ( <i>SD</i> )	t-value	p-value (2-tailed)	Mean difference
G-Practices	126	3.38 (.859)	19	3.62 (.817)	1.162	0.247	0.244
Owner-Manager Attitudes	126	4.53 (.623)	19	4.65 (.427)	0.767	0.444	0.114
Environmental Awareness	126	3.88 (.657)	19	4.18 (.440)	2.587	0.014	0.302
Benefits Business Can Gain	126	4.08 (.615)	19	4.07 (.673)	-0.059	0.953	-0.009
Concern for Employees	126	3.31 (.841)	19	3.62 (.810)	1.518	0.131	0.313
Regulations	126	3.59 (.891)	19	3.79 (.625)	1.221	0.231	0.200
Green Consumers	126	3.27 (.997)	19	3.61 (1.065)	1.371	0.172	0.339
Supply Chains	126	3.02 (1.007)	19	3.30 (1.019)	1.139	0.257	0.283
Local Communities	126	2.98 (.910)	19	3.13 (.940)	0.664	0.508	0.149
Competitors	126	3.60 (.906)	19	3.91 (.744)	1.440	0.152	0.314
Funds Availability	126	2.79 (.761)	19	2.64 (.746)	-0.800	0.425	-0.149

#### 4.4 Profile of the Respondents and Hotels

The purpose of this section is to provide information on the profiles of owner-managers and their hotels in Phuket and Krabi. The owner-manager's characteristics and company's characteristics are summarized and presented in Table 4.2 and Table 4.3 each respectively. The results of demographic profiles is provided in Appendix E on page 273.

Table 4.2  
*Background information of Hotel Owner/Managers*

Characteristic	N	%
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<b>Informant</b>		
Owner	34	23.4%
Manager	111	76.6%

Table 4.2 (Continued)

<b>Gender</b>		
Male	60	41.4%
Female	85	58.6%
<b>Age of respondent</b>		
20-29	14	9.7%
30-39	69	47.6%
40-49	38	26.2%
50-59	16	11.0%
60-69	8	5.5%
<b>Education</b>		
Secondary	1	0.7%
High school	10	6.9%
Diploma	5	3.4%
Bachelor degree	105	72.4%
Post graduate degree	24	16.6%
<b>Years of service</b>		
0-1	17	11.7%
2-5	63	43.4%
6-10	38	26.2%
11-15	11	7.6%
>16	16	11%
<b>Charge per room</b>		
<500 Baht	10	6.9%
500-999 Baht	56	38.6%
1,000-1,500 Baht	79	54.5%
<b>No. of employee</b>		
<50 employees	91	62.8%
50-200 employees	54	37.2%
<b>Location</b>		
Kathu	33	22.8%
Thalang	2	1.4%
Phuket City	44	30.3%

Krabi City	55	37.9%
Koh Lanta	11	7.6%

The findings presented in Table 4.2 suggested that over half (76.6%) of the sample were managers and 23.4% were owners. 41.4% of them were male, while 58.6% were female. The most frequent age group comprised 30 to 39 years old (47.6%), followed by 40 to 49 years old (26.2%) and 50 to 59 years old (11%). The group under 29 years old (9.7%) and over 60 years old (5.5%) had low number. The majority of respondents (72.4%) held bachelor's degrees, while 16.6% possessed master degrees. The respondents were primarily quite educated. Less than one year service had 11.7%, 2-5 year service had 43.4%, 6-10 year service had 26.2%, 11-15 year service had 7.6% and more than 16 year service had 11.0%. In terms of charge per room, 6.9 percent were less than 500 Baht, 38.6% were 500-999 Baht and 54.5% were more than 1,000 Baht. Number of employees were less than 50 (62.8%) and 50-200 (37.2%). Regarding to the location, the largest number of respondents were located in Krabi city (37.9%), followed by Phuket city (30.3%), Kathu (22.8%), Koh Lanta (7.6%) and Thalang (1.4%) respectively. The management positions and respondents' years of experience show that they have such a knowledge of the main drivers, barriers and various G-Practices under investigation by the researcher. The author discovered that the support of top-level managers/owners and enough knowledge of environmental management are key factors to achieve effective implementation of G-Practices.

Table 4.3  
*Characteristics of Hotels*

<b>Characteristics</b>	<b>M</b>	<b>SD</b>
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Age of company	9.36	8.327
Number of rooms	71.12	58.686

As shown in Table 4.3, the sample as a whole included a range of ages of the hotels from less than 1 to 46 with a mean age of  $M = 9.36$  ( $SD = 8.33$ ), indicating that most of the hotels are relatively well established. The average number of rooms was  $M = 71$  ( $SD = 58.69$ ).

#### 4.5 Standards, Awards and Memberships

This section describes that the implementation of green practices for business certified green within the Thai hotel industry has not gained widespread acceptance. The study reveals that most hotels, especially those in Krabi city, have received Thai Hotel Standard. 22.2% of the hotels are not certified with any green organization, 0.9% of the hotels are certified with the International Organization for Standardization (ISO) and 1.7% of the hotels have green leaf certification. These facts indicate that the standards and voluntary environmental programs have not been widely adopted by SMHs. A number of actions must be performed to move SMHs toward sustainability and more environmentally responsible behavior. Table 4.4 presents the list of standards.

Table 4.4  
*Receiving Standards (Multiple Responses)*

Standard	Responses		Percent of Cases
	N	Percent	
Never receiving any standard	52	22.2%	35.9%
Thai Hotel Standard	73	31.2%	50.3%
Thailand Tourism Standard	9	3.8%	6.2%
Green Leaf Environmental Standard	4	1.7%	2.8%

Smoke-free Hotel Standard	28	12.0%	19.3%
Clean Food Good Taste	31	13.2%	21.4%
Thai Spa	6	2.6%	4.1%
ISO 14001 Standard	2	.9%	1.4%
Other Standards	29	12.4%	20.0%
<b>Total</b>	<b>234</b>	<b>100.0%</b>	<b>161.4%</b>

Respondents were given the list to rate the relevance of G-Practices (see Table 4.5). SMHs cited “sorting waste in guest rooms” ( $M = 4.26$ ) as a major action in their daily operations, followed by “dual-flush toilets” ( $M = 4.10$ ), “purchase of environmentally friendly cleaning products (e.g. biodegradable, reusable, recyclable, etc.)” ( $M = 3.78$ ), “water efficient fixtures” ( $M = 3.65$ ), “purchase in bulk to reduce packaging” ( $M = 3.51$ ), “provision of a healthy menu with minimal chemical additives” ( $M = 3.39$ ), “encouraging guests to reuse towels” ( $M = 3.37$ ), “conducting an audit, e.g. energy, water” ( $M = 3.37$ ), “having a written policy” ( $M = 3.31$ ), “purchase of organically grown foods” ( $M = 3.25$ ), “provision of environmental training sessions for employees” ( $M = 3.01$ ), “incorporating environmental messages in their products” ( $M = 2.99$ ), and “donation of used hotel furniture” ( $M = 2.92$ ). Also, encourage guests to be eco-friendly appeared to be the least action for SMHs ( $M = 2.78$ ).

Table 4.5  
*Items in Measuring of G-Practices in Declining Order by Mean Score*

<b>Item</b>	<b>Mean</b>
Sorting waste in guest rooms.	4.26
Dual-flush toilets.	4.10
Purchase of environmentally friendly cleaning products (e.g. biodegradable, reusable, recyclable, etc.).	3.78
Water efficient fixtures.	3.65

Energy-efficient lighting in public areas, e.g. sensors	3.51
Purchase in bulk to reduce packaging.	3.51
Provision of a healthy menu with minimal chemical additives.	3.39
Encouraging guests to reuse towels.	3.37
Conducting an audit, e.g. energy, water.	3.37
Having a written policy.	3.31
Purchase of organically grown foods.	3.25
Provision of environmental training sessions for employees.	3.01
Incorporating environmental messages in their products.	2.99
Donation of used hotel furniture.	2.92
Encouraging guests to be eco-friendly.	2.78

Additionally, Table 4.6 reveals the reasons ranked in order of lesser importance. Respondents' top three ranked reasons in terms of environmental awareness were "business environmental initiatives are of benefit to the hotel" ( $M = 4.34$ ), "there are currently commercial benefits to my company in having an environmental policy", and "improving environmental performance usually improves production efficiency" ( $M = 4.10$  and  $4.08$  respectively). Taking sufficient environmental action to meet legislation was the least important part ( $M = 3.45$ ).

Table 4.6  
*Rank of Environmental Awareness in Declining Order by Mean Score*

<b>Item</b>	<b>N</b>	<b>Mean</b>
Business environmental initiatives are of benefit to the hotel.	145	4.34
There are currently commercial benefits to my company in having an environmental policy.	145	4.10
Improving environmental performance usually improves production efficiency.	145	4.08

It is clear what represents ‘best practice’ in environmental performance.	145	3.97
It is clear how legislation affects us.	145	3.95
Reducing our environmental impact can have significant cost benefits.	145	3.89
Our company does not have an environmental impact.	145	3.54
We take sufficient environmental action to meet legislation.	145	3.45

Table 4.7 identifies the rankings of the benefits in descending order of importance as perceived by the questionnaire respondents. The benefit with the highest mean value (4.47) was a “cleaner working environment”; with 50.3% of respondents expressed strong agreement. The least beneficial was “increase efficiency” (3.70). Only 22% of respondents felt that environmental performance improved while increasing efficiency. “Creating cleaner working environment”, “reducing carbon emissions”, and “improving the image of the hotel” was the top three main benefits of G-Practices cited by survey respondents. Thus, it could be concluded that a good company image was one of the most important assets of a hotel company that created a competitive advantage in the market.

Table 4.7  
*Rank of Benefits Business Can Gain in Declining Order by Mean Score*

<b>Item</b>	<b>N</b>	<b>Mean</b>
Create cleaner working environment.	145	4.47
Reduce carbon emissions.	145	4.37
Enhance hotel’s image.	145	4.30
Improve relationship with the community.	145	4.14
Complying with legislation.	145	4.12

Improve customer satisfaction.	145	4.09
Improve employee morale.	145	4.02
Increase cost saving.	145	3.97
Give us a marketing advantage over our competitors.	145	3.88
Increase profitability.	145	3.82
Increase efficiency.	145	3.70

#### 4.6 Tests of Validity and Reliability

Testing reliability and validity of the measurement scales is an important step before using them in subsequent analyses. It is necessary to ensure that the scales measured the target constructs with an acceptable level of reliability and validity. The following section will thus discuss validity and reliability. The researcher establishes the criteria thresholds used in this study to be in line with generally used rules of thumb in factor analysis. Table 4.8 below summarizes the five threshold values.

Table 4.8  
*Criteria Thresholds Used in This Study*

Criteria	>=
Item-to-total correlation per item	0.3
Factor loading per item	0.5
Measure of sampling adequacy	0.5
Explained variance	50%
Cronbach's Alpha	0.7

##### 4.6.1 Validity

Test of validity is deemed necessary for a research instrument to assess that the different constructs of the study are sufficiently well defined. A study is valid if its measure actually measures what they claim to, and if there are no logical errors in drawing conclusions from the data. Two types of validity for this work are important, namely the content validity and the construct validity. In In this research, factor

analysis was conducted to measure the variable and to identify which items were appropriate for each variable.

As mentioned in a previous chapter, the validity of these measures is examined using data from Phuket and Krabi. This is particularly important where the measurement instrument is borrowed. Although convergent and discriminant validity have confirmed the borrowed measurements, it needed to re-examine the validity of these measures. This is because this study was conducted in the Thai context while previous studies were undertaken by researchers in the United States and Western Europe. There are several published literatures relevant to G-Practices from other countries, especially in the West, which environment and cultures, as a whole, tend to vary from one another.

Factor analysis is a data reduction technique in which purposes to get a small number of variables (preferably uncorrelated) from a large number of variables (most of which are correlated to each other) and to characterize the correlations between the variables (Hair et al., 2010). Factor analysis (EFA) is a preferred purification step of scale. The result of the factor analysis is used as the tools for hypothesis testing. Using SPSS to run the factor analysis, the data are appropriate for the running of factor analysis that the strength of inter correlations should exceed 0.3 (value less than 0.3 and then such item is deleted); Bartlett's test of sphericity value should be statistically significant (i.e.  $p \leq 0.05$ ); and Kaiser-Mayer-Olkin measure of sampling adequacy (KMO) value should be 0.5 or higher (Hair et al., 2010; Williams, Brown, & Onsman, 2010).

#### **4.6.1.1 Results of Exploratory Factor Analysis**

After the instrument was piloted, eight items were dropped. This resulted in an instrument with a reduced number of questions containing 71 items. For factor analysis purposes, the items in the questionnaire were grouped into two parts. The first part was the adoption of G-Practices consisting of 17 items in Section A of the questionnaire. The second part contained all influencing variables located in Section B of the questionnaire and composed of 54 items. These were grouped into 10 subscales: Owner-manager attitudes (7 items), Environmental awareness (8 items), Benefits business can gain (11 items), Concern for employees (4 items), Regulations (3 items), Green consumers (4 items), Supply chains (4 items), Local communities (4 items), Competitors (3 items), and Funds availability (6 items). A summary of the results of each factor analysis is provided in Appendix F on page 276-308.

##### **(i) Adoption of G-Practices**

An exploratory factor analysis (EPA) was performed to identify the main constructs. Seventeen items relating to G-Practices adoption were factor analyzed using principal component analysis with varimax (orthogonal) rotation. The Kaiser-Meyer-Olkin measure of sampling adequacy value was 0.823, above the recommended value of 0.5 (Hair et al., 2010; Williams et al., 2010), and Bartlett's test of sphericity was significant ( $p = .000$ ). But in the communalities table, two items were below the criteria level of 0.5. Therefore, these items were considered for removal for the next step of factor analysis. Also, this has been achieved unidimensionality when the measuring items have acceptable loading factors for the respective latent construct.

In the next step, another exploratory factor analysis (EFA) was conducted. The remaining fifteen items relating to G-Practices adoption were factor analyzed using principal component analysis with varimax (orthogonal) rotation. Table 4.9 reveals the Kaiser-Meyer-Olkin measure of sampling adequacy value of 0.817, above the recommended value of 0.5 (Hair et al., 2010; Williams et al., 2010), and Bartlett's test of sphericity was significant ( $p = .000$ ). Factor analysis was adequate for this data. In order to decide the number of factor to be extracted, three methods were used: 1) a cut point of 0.3 and no significant cross loading criteria, 2) scree plot tests, and 3) the latent root criterion (i.e. Eigenvalue greater than one). The output from a principle components analysis is shown in Appendix F on page 276.

Using the latent root criterion, the analysis yielded four factors with eigenvalues of more than 1, explaining a total of 69% of the variance for the entire set of variables. Each item loaded significantly (minimum of 0.5 for a sample size of 120 following Hair et al., 1998). Factor 1 was labeled green conservative practices due to the high loadings with the following items: dual-flush toilets; encouraging guests to reuse towels; provision of environmental training sessions for employees; purchase of environmentally friendly cleaning products (e.g. biodegradable, reusable, recyclable, etc.); incorporating environmental messages in their products. This first factor explained 21.03% of the variance. Factor 2 derived was labeled environmental system practices. This factor was labeled as such due to the high loadings by the following factors: having a written policy; conducting an audit e.g. energy, water; energy-efficient lighting in public areas, e.g. sensors; encouraging guests to be eco-friendly; water efficient fixtures. The variance explained by this factor was 18.72%. Factor 3 represented green support and waste control practices due to the high

loadings by the following items: donation of used hotel furniture; purchase in bulk to reduce packaging; sorting waste in guest rooms. The variance explained by this factor was 15.33%. Finally, Factor 4 focused on green health practices due to the high loadings by the following items: provision of a healthy menu with minimal chemical additives; purchase of organically grown foods. The variance explained by this factor was 13.92%. All tests were passed and further analysis of the results.

Table 4.9  
Factor Analysis on G-Practices Adoption

Items	Component			
	Factor 1	Factor 2	Factor 3	Factor 4
<b>Green Conservative Practices</b>				
1. Dual-flush toilets.	.735			
2. Encouraging guests to reuse towels.	.733			
3. Provision of environmental training sessions for employees.	.731			
4. Purchase of environmentally friendly cleaning products (e.g. biodegradable, reusable, recyclable, etc.).	.644			
5. Incorporating environmental messages in their products.	.518			
<b>Environmental System Practices</b>				
6. Having a written policy.		.788		
7. Conducting an audit, e.g. energy, water.		.741		
8. Energy-efficient lighting in public areas, e.g. sensors.		.683		
9. Encouraging guests to be eco-friendly.		.542		
10. Water efficient fixtures.		.504		

Table 4.9 (Continued)

<b>Green Support and Waste Control Practices</b>				
11. Donation of used hotel furniture.			.806	
12. Purchase in bulk to reduce packaging.			.688	
13. Sorting waste in guest rooms.			.540	
<b>Green Health Practices</b>				
14. Provision of a healthy menu with minimal				.866

chemical additives.

15. Purchase of organically grown foods.

.854

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<b>Measure of sampling adequacy</b>	.817
<b>Explained variance</b>	69%
<b>Cronbach's Alpha</b>	.904

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### **(ii) Owner-Manager Attitudes**

An exploratory factor analysis was employed. Ten items relating to the owner-manager attitudes were submitted to an exploratory factor analysis with varimax rotation. From Table 4.10, the KMO measure of sampling adequacy shows a value of 0.69, indicating greater than above the recommended value of 0.5 (Hair et al., 2010; Williams et al., 2010), and Bartlett's test of sphericity was significant ( $p = .000$ ). The factor analysis was useful with the data. The output from a principle components analysis is shown in Appendix F on page 281.

Using the latent root criterion, two factors with eigenvalues greater than one were extracted. The total variance explained by these factors is 62.12%. Each item loaded significantly (minimum of 0.5 for a sample size of 120 following Hair et al., 1998) onto its factor. With regard to an interpretation of the factors, Factor 1 was named severity of environmental problems due to the high loadings by the following items: our country has so many trees that there is no need to recycle paper; we have so much electricity that we do not have to worry about conservation; there is nothing the average citizen can do to help stop environmental pollution; with so much water in this country, we do not see why people are worried about leaky faucets; since we live in such a big country, any pollution we create is easily spread out and therefore is no concern to me. The variance explained by this factor was 38.48%. Factor 2 was

labeled inconvenience of being environmental friendly due to the high loadings by the following items: house built in a new area should be built around trees, which should not be cut down; recycling is too much trouble. The variance explained by this factor was 23.65%. All reliability and validity tests were passed.

Table 4.10  
*Factor Analysis on Owner-Manager Attitudes*

Items	Component	
	Factor 1	Factor 2
<b>Severity of Environmental Problems</b>		
1. Our country has so many trees that there is no need to recycle paper.	.789	
2. We have so much electricity that we do not have to worry about conservation.	.722	
3. There is nothing the average citizen can do to help stop environmental pollution.	.704	
4. With so much water in this country, we do not see why people are worried about leaky faucets.	.697	
5. Since we live in such a big country, any pollution we create is easily spread out and therefore is no concern to me.	.668	
<b>Inconvenience of Being Environmental Friendly</b>		
6. House built in a new area should be built around trees, which should not be cut down.		.885
7. Recycling is too much trouble.		.679

Table 4.10 (Continued)

<b>Measure of sampling adequacy</b>	.691
<b>Explained variance</b>	62.12%
<b>Cronbach's Alpha</b>	.782

### (iii) Environmental Awareness

An exploratory factor analysis (EFA) with varimax rotation was executed for the eight items relating to environmental awareness. From Table 4.11, KMO measure of sampling adequacy shows a value of 0.855, indicating greater than above the recommended value of 0.5 (Hair et al., 2010; Williams et al., 2010), and Bartlett's test of sphericity was significant ( $p = .000$ ). The factor analysis was adequate for this data. The output from a principle components analysis is presented in Appendix F on page 285.

Using the latent root criterion, two factors with eigenvalues greater than one were extracted. The total variance explained by these factors is 66.46%. Each item loaded significantly (minimum of 0.5 for a sample size of 120 following Hair et al., 1998) onto its factor. With regard to an interpretation of the factors, Factor 1 was named cost-benefit environmental awareness due to the high loadings by the following items: improving environmental performance usually improves production efficiency; business environmental initiatives are of benefit to the hotel; reducing our environmental impact can have significant cost benefits; there are currently commercial benefits to my company in having an environmental policy; it is clear what represents 'best practice' in environmental performance. The percentages of the variance were 37.32%. Factor 2 represented general environmental awareness due to the high loadings by the following items: we take sufficient environmental action to meet legislation; it is clear how legislation affects us; our company does not have an environmental impact. The percentages of the variance were 29.14%. All reliability and validity criteria were met.

Table 4.11  
*Factor Analysis on Environmental Awareness*

Items	Component	
	Factor 1	Factor 2
<b>Cost-benefit Environmental Awareness</b>		
1. Improving environmental performance usually improves production efficiency.	.861	
2. Business environmental initiatives are of benefit to the hotel.	.788	
3. Reducing our environmental impact can have significant cost benefits.	.766	
4. There are currently commercial benefits to my company in having an environmental policy.	.700	
5. It is clear what represents 'best practice' in environmental performance.	.624	
<b>General Environmental Awareness</b>		
6. We take sufficient environmental action to meet legislation.		.837
7. It is clear how legislation affects us.		.762
8. Our company does not have an environmental impact.		.645
<hr/>		
<b>\Measure of sampling adequacy</b>	.855	
<b>Explained variance</b>	66.46%	
<b>Cronbach's Alpha</b>	.859	

#### (iv) Benefits Business Can Gain

Again, eleven items relating to benefits business can gain were submitted to an exploratory factor analysis with varimax rotation. From Table 4.12, the KMO measure of sampling adequacy shows a value of .899, indicating greater than above the recommended value of 0.5 (Hair et al., 2010; Williams et al., 2010), and Bartlett's test of sphericity was significant ( $p = .000$ ). The factor analysis was useful with the data. The output from a principle components analysis is shown in Appendix F on page 289.

Using the latent root criterion, two factors with eigenvalues exceeding one were extracted. The total variance explained by these factors is 72.81%. Each item loaded significantly (minimum of 0.5 for a sample size of 120 following Hair et al., 1998) onto its factor. With regard to an interpretation of the factors, Factor 1 was labeled core benefits due to the high loadings by the following items: increase profitability, increase efficiency; increase cost saving; give us a marketing advantage over our competitors; enhance hotel's image; improve customer satisfaction. The variance explained by this factor was 38.86%. Factor 2 was named basic benefits due to the high loadings by the following items: reduce carbon emissions; create cleaner working environment; improve relationship with the community; improve employee morale; complying with legislation. The variance explained by this factor was 33.95%. All criteria were fulfilled.

Table 4.12  
Factor Analysis on Benefits Business Can Gain

Items	Component	
	Factor 1	Factor 2
<b>Core Benefits</b>		
1. Increase profitability.	.880	
2. Increase efficiency.	.851	
3. Increase cost saving.	.791	
4. Give us a marketing advantage over our competitors.	.777	
5. Enhance hotel's image.	.675	
6. Improve customer satisfaction.	.613	
Table 4.12 (Continued)		
<b>Basic Benefits</b>		
7. Reduce carbon emissions		.865
8. Create cleaner working environment.		.851
9. Improve relationship with the community.		.774
10. Improve employee morale.		.684
11. Complying with legislation.		.517

<b>Measure of sampling adequacy</b>	.899
<b>Explained variance</b>	72.81%
<b>Cronbach's Alpha</b>	.938

**(v) Concerns For Employees**

Table 4.13 presents four items relating to concerns for employees. The KMO measure of sampling adequacy shows a value of 0.689, indicating greater than above the recommended value of 0.5 (Hair et al., 2010; Williams et al., 2010), and Bartlett's test of sphericity was significant ( $p = .000$ ). The factor analysis was useful with the data. The output from a principle components analysis is shown in Appendix F on page 293.

Using the latent root criterion, only one factor with eigenvalues greater than one was extracted. The total variance explained by these factors is 63.32%. Each item loaded significantly (minimum of 0.5 for a sample size of 120 following Hair et al., 1998) onto its factor. All reliability and validity criteria were met for this factor.

Table 4.13  
*Factor Analysis on Concern For Employees*

<b>Items</b>	<b>Component</b>
1. Employee concerns always affect productivity.	.873
2. We act upon any environmental matters suggested by	.863

employees.	
3. Employee concerns are an important part of our work.	.721
4. Employees tend to look for an environmentally friendly business.	.712
<hr/>	
<b>Measure of sampling adequacy</b>	.689
<b>Explained variance</b>	63.32%
<b>Cronbach's Alpha</b>	.804
<hr/>	

**(vi) Regulations**

The factor “regulations” was operationalized as document in Table 4.14. It was composed of three items. The KMO measure of sampling adequacy shows a value of 0.693, indicating greater than above the recommended value of 0.5 (Hair et al., 2010; Williams et al., 2010), and Bartlett’s test of sphericity was significant ( $p = .000$ ). The factor analysis was useful with the data. The output from a principle components analysis is presented in Appendix F on page 295.

Using the latent root criterion, only one factor with eigenvalues exceeding one was extracted. The total variance explained by these factors is 72.09%. Each item loaded significantly (minimum of 0.5 for a sample size of 120 following Hair et al., 1998) onto its factor. All reliability and validity criteria were fulfilled.

Table 4.14  
*Factor Analysis on Regulations*

<b>Items</b>	<b>Component</b>
1. Our business has established collaborative partnership with the govt agents to protect the environment.	.785

2. Environmental legislative requirements impact on our business.	.701
3. Environmental legislation is not relevant to our business.	.677
<b>Measure of sampling adequacy</b>	.693
<b>Explained variance</b>	72.09%
<b>Cronbach's Alpha</b>	.789

### (vii) Green Consumers

Table 4.15 shows four items of the factor “green consumers”. The KMO measure of sampling adequacy shows a value of 0.829, indicating greater than above the recommended value of 0.5 (Hair et al., 2010; Williams et al., 2010), and Bartlett’s test of sphericity was significant ( $p = .000$ ). The factor analysis was useful with the data. The output from a principle components analysis is shown in Appendix F on page 297.

Using the latent root criterion, only one factor with eigenvalues greater than one was extracted. The total variance explained by these factors is 81.16%. Each item loaded significantly (minimum of 0.5 for a sample size of 120 following Hair et al., 1998) onto its factor. The reliability and validity tests were passed.

Table 4.15  
*Factor Analysis on Green Consumers*

Items	Component
1. Environmental issues critically affect the buying decisions of our customers.	.693
2. Our customers often mention environmental factors when making choices.	.839
3. Customers desire for environmental friendly products.	.881
4. Customers are willing to spend more money on green products.	.833
<b>Measure of sampling adequacy</b>	.829
<b>Explained variance</b>	81.16%
<b>Cronbach's Alpha</b>	.921

### (viii) Supply Chains

Table 4.16 illustrates four items and test values relating to supply chains. The KMO measure of sampling adequacy shows a value of 0.814, indicating greater than above the recommended value of 0.5 (Hair et al., 2010; Williams et al., 2010), and Bartlett's test of sphericity was significant ( $p = .000$ ). The factor analysis was useful with the data. The output from a principle components analysis is presented in Appendix F on page 299.

Using the latent root criterion, only one factor with eigenvalues greater than one was extracted. The total variance explained by these factors is 76.53%. Each item loaded significantly (minimum of 0.5 for a sample size of 120 following Hair et al., 1998) onto its factor. All passed the tests.

Table 4.16  
*Factor Analysis on Supply Chains*

Items	Component
1. Environmental issues are considered to be very important for our supplier.	.929
2. We obtain information from our suppliers about their environmental management practices.	.900
3. Supply chain requirements can play an important role in improving environmental performance.	.860
4. Supply chains' environmental concerns have impacted on our business.	.805
<b>Measure of sampling adequacy</b>	.814
<b>Explained variance</b>	76.53%
<b>Cronbach's Alpha</b>	.896

#### **(ix) Local Communities**

The factor "local communities" was composed of four items. From Table 4.17, the KMO measure of sampling adequacy shows a value of 0.717, indicating greater than above the recommended value of 0.5 (Hair et al., 2010; Williams et al., 2010), and Bartlett's test of sphericity was significant ( $p = .000$ ). The factor analysis was useful with the data. The output from a principle components analysis is shown in Appendix F on page 301.

Using the latent root criterion, only one factor with eigenvalues greater than one was extracted. The total variance explained by these factors is 63.83%. Each item loaded significantly (minimum of 0.5 for a sample size of 120 following Hair et al., 1998) onto its factor. The factor passed the reliability and validity tests.

Table 4.17  
*Factor Analysis on Local Communities*

Items	Component
1. Green projects have always been led by community members.	.892
2. Our business is most likely to be committed to communities in the local.	.816
3. Local communities put pressure on companies that have bad environmental practices.	.780
4. Pressure from community activists has affected our company's conduct.	.695
<b>Measure of sampling adequacy</b>	.717
<b>Explained variance</b>	63.83%
<b>Cronbach's Alpha</b>	.808

#### (x) Competitors

Table 4.18 shows three items of the factor “competitors”. The KMO measure of sampling adequacy shows a value of 0.705, indicating greater than above the recommended value of 0.5 (Hair et al., 2010; Williams et al., 2010), and Bartlett’s test of sphericity was significant ( $p = .000$ ). The factor analysis was useful with the data. The output from a principle components analysis is shown in Appendix F on page 303.

Using the latent root criterion, only one factor with eigenvalues greater than one was extracted. The total variance explained by these factors is 77.35%. Each item loaded significantly (minimum of 0.5 for a sample size of 120 following Hair et al., 1998) onto its factor. As can be seen, all reliability and validity criteria were fulfilled.

Table 4.18  
*Factor Analysis on Competitors*

Items	Component
1. Improving environmental performance helps us keep up with competitors.	.915
2. Environmentally friendly actions result in product innovations.	.865
3. Investing in products differentiate our products.	.857
<hr/>	
<b>Measure of sampling adequacy</b>	.705
<b>Explained variance</b>	77.35%
<b>Cronbach's Alpha</b>	.852

#### **(xi) Funds Availability**

The factor “funds availability” was made up of six items. An exploratory factor analysis (EFA) with varimax rotation was executed for the six items relating to funds availability. From Table 4.19, the KMO measure of sampling adequacy shows a value of 0.744, indicating greater than above the recommended value of 0.5 (Hair et al., 2010; Williams et al., 2010), and Bartlett’s test of sphericity was significant ( $p = .000$ ). The factor analysis was useful with the data. The output from a principle components analysis is shown in Appendix F on page 305.

Using the latent root criterion, two factors with eigenvalues greater than one were extracted. The total variance explained by these factors is 74.95%. Each item loaded significantly (minimum of 0.5 for a sample size of 120 following Hair et al., 1998) onto its factor. With regard to an interpretation of the factors, Factor 1 was labeled funds availability due to the high loadings by the following items: non-comprehensive cost-benefit analysis methods; short-term profit calculations resulting in low tolerance for longer payback periods of equipment investment; a lack of

capital investment flexibility due to low profit margin; a lack of understanding in predicting future liability costs (e.g. waste disposal). The variance explained by this factor was 41.21%. Factor 2 was named cost push due to the high loadings by the following items: making changes to improve environmental outcomes is too expensive for our business; economies of scale preventing smaller firms from investing in waste reduction opinions (e.g. technologies). The variance explained by this factor was 33.74%. As can be seen, all reliability and validity criteria were fulfilled. However, the researcher decided that these two items (cost push) should be classified in funds availability, because the component has a greater influence on the selected factor (Hair et al., 2006).

Table 4.19  
*Factor Analysis on Funds Availability*

Items	Component	
	Factor 1	Factor 2
<b>Funds Availability</b>		
1. Non-comprehensive cost-benefit analysis methods.	.903	
2. Short-term profit calculations resulting in low tolerance for longer payback periods of equipment investment.	.898	
3. A lack of capital investment flexibility due to low profit margin.	.662	
4. A lack of understanding in predicting future liability costs (e.g. waste disposal).	.619	
<b>Cost Push</b>		
5. Making changes to improve environmental outcomes is too expensive for our business.		.902
6. Economies of scale preventing smaller firms from investing in waste reduction opinions (e.g. technologies).		.838

Table 4.19 (Continued)

<b>Measure of sampling adequacy</b>	.744
<b>Explained variance</b>	74.95%
<b>Cronbach's Alpha</b>	.806

Based on the exploratory factor analysis on the main variables proposed in the theoretical framework, the results indicated dimensions that are different from the original dimension. Variables such as G-Practices produced four dimensions. Owner-manager attitudes, environmental awareness and benefits business can gain produced two dimensions each. Table 4.20 presents the comparison between the original dimension and the new dimensions after factor analysis.

Table 4.20  
*Comparison between Original and New Dimensions*

<b>Original Dimension</b>	<b>New Dimension</b>
G-Practices	G-Practices
• Energy Efficiency	• Green Conservative Practices
• Water Conservation	• Environmental System Practices
• Waste Management	• Green Support and Waste Control Practices
• Air Purification	• Green Health Practices
• Health Promotion	
• Environmental Management System	
Owner-manager Attitudes	Severity of Environmental Problems
	Inconvenience of Being Environmental Friendly
Environmental Awareness	Cost-benefit Environmental Awareness
	General Environmental Awareness
Benefits Business Can Gain	Core Benefits
	Basic Benefits
Concern for Employees	Concern for Employees
Regulations	Regulations
Green Consumers	Green Consumers
Supply Chains	Supply Chains

#### **4.6.2 Reliability**

Internal consistency reliability assesses whether items of a construct are consistent with one another, in that they represent one, and just one construct (Kerlinger, 2000). To ensure that only a single construct is being measured, the score for each item within that construct is correlated with the total score. Appropriately called Corrected Item-Total Correlations (CITC), they are used to check that each item contributes sufficiently to its construct. According to Kerlinger (2000), items within a construct should be correlated with the construct itself with a value of 0.3 or higher. All values are in the acceptable range. Apart from CITC, Cronbach's alpha is widely applied to measure the internal consistency of a construct (Cronbach, 1987).

Reliability is the extent to which an experiment, test, or measuring procedure yields the same results on repeated trials. Cronbach's alpha is the current standard statistic for assessing the reliability of a scale composed of multiple items. That is met in this research where a five-point Likert scale was used to measure variables. Cronbach's alpha measures internal consistency by looking at the interrelation between items on a scale, where an alpha value of 0.70 or more generally implies reliability of the scale measurements (Creswell, 2005).

Table 4.21 provides the Cronbach's alpha reliability coefficient values for the revised data collection instrument following a pilot test. As illustrated in Table 4.20, the alpha coefficients ranged from 0.782 to 0.938 which measure eleven constructs, including G-Practices, owner-manager attitudes, environmental awareness, benefits business can gain, concerns for employees, regulations, green consumers, supply

chains, local communities, competitors, and funds availability. All yielded a Cronbach's alpha of higher than the index of reliability test (0.70), which concurs with Nunnally's (1978) suggestion. The output is appended in Appendix G on page 309.

Table 4.21  
*Reliability Coefficients of Variables*

<b>Variables</b>	<b>Number of items</b>	<b>Alpha (<math>\alpha</math>)</b>
G-Practices	15	.904
Owner-Manager Attitudes	7	.782
Environmental Awareness	8	.859
Benefits Business Can Gain	11	.938
Concern for Employees	4	.804
Regulations	3	.789
Green Consumers	4	.921
Supply Chains	4	.896
Local Communities	4	.808
Competitors	3	.852
Funds Availability	6	.806

#### **4.7 Descriptive Analysis**

Descriptive statistics are employed to identify the basic features of the data in the study. They provide simple summaries about the sample and the measurements.

##### **4.7.1 Major Variables (M, SD)**

For ease of interpretation, the range of five-point Likert scales was categorized into equal sized categories of low, moderate and high. Thus, scores of less than 2.33 [4/3

+ lowest values (1)] is considered as low; scores of 3.67 [highest value (5) – 4/3] is considered high and those in between considered moderate.

As illustrated in Table 4.22, the mean value for owner-manager attitudes, environmental awareness and benefits business can gain was 4.55, 3.92 and 4.08 (based on a five-point Likert scale) respectively; indicating that respondents tended to perceive a high level of G-Practices adoption. Likewise, with the mean value of 3.35, 3.65, 3.31, 3.06, 3.00, and 3.64, respondents' perception on their hotels generally experienced a moderate level of pressures from employees, regulations, green consumers, supply chains, local communities, and competitors. However, funds availability had the mean value at a moderate level. In terms of G-Practices, the mean value was at a moderate level. The descriptive statistics for the adoption of G-Practices constructs are computed as shown in Table 4.22 below.

Table 4.22  
*Descriptive Statistics of Variables*

<b>Variables</b>	<b>M</b>	<b>SD</b>
Owner-Manager Attitudes	4.55	.601
Environmental Awareness	3.92	.640
Benefits Business Can Gain	4.08	.621
Concern for Employees	3.35	.841
Regulations	3.65	.993
Green Consumers	3.31	1.009
Supply Chains	3.06	1.010
Competitors	3.64	.890
Funds Availability	2.77	.758
G-Practices	3.41	.855

#### 4.7.2 Degree of G-Practices Adoption as Perceived by Hotel Owner-Managers

Even though it was not part of the purpose of the research study, demographic variables in this data set were intended to explain variations in respondents and to measure for any influence on the research results. The demographic data consisted of gender, age, education, years of service, and charge per room. The One-Way Analysis of Variance (ANOVA) was applied to test the difference between these variables. Test results are summarized in Table 4.23 below. As a result, it was found that the degree of G-Practices adoption as perceived by the respondents did not differ by gender ( $F = 1.075$ ;  $p = .302$ ), education ( $F = .308$ ;  $p = .873$ ) and years of service ( $F = 2.428$ ;  $p = .051$ ). Nevertheless, the degree of G-Practices adoption perceived were found in a number of different ages ( $F = 2.616$ ;  $p = .038$ ) and sizes of hotels ( $F = 7.808$ ;  $p = .001$ ). It is therefore concluded that the different degree of G-Practices adoption tended to be perceived by the respondents with different ages and sizes of hotels. The respondents from different categories, however, tended to perceive a similar degree of G-Practices adoption.

Table 4.23  
*Different of Among Groups on the Adoption of G-Practices*

<b>Variables</b>	<b>Categories</b>	<b>M</b>	<b>F</b>	<b>p</b>
<b>Gender</b>	Male	3.50	1.075	.302
	Female	3.35		
<b>Age</b>	20-29	2.93	2.616	.038*
	30-39	3.31		
	40-49	3.62		
	50-59	3.69		
	60-69	3.61		
<b>Education</b>	Secondary	3.07	.308	.873
	High school	3.47		

Diploma	3.08
Bachelor degree	3.44
Post graduate degree	3.34

Table 4.23 (Continued)

<b>Years of service</b>	0-1	2.98	2.428	.051
	2-5	3.36		
	6-10	3.65		
	11-15	3.74		
	>16	3.28		
<b>Charge per room</b>	<500 Baht	3.01	7.808	.001**
	500-999 Baht	3.14		
	1,000-1,500 Baht	3.66		

Notes: Significant level at \* $p < .05$ ; \*\* $p < .01$

#### 4.8 Correlation Analysis

Correlation is a bivariate measure of association (strength) of the relationship between two quantitative/numerical variables, the Pearson's  $r$  being the most common measure adopted. It ranges from negative (-1) to positive (+1) coefficient values. Cohen (1988) sets a cutoff point for .30 for the correlation between the coefficients to be significant, while Rowntree (1987) formed guidelines for interpreting the correlation value ranges. Correlations have different strengths:  $\pm .00$  to  $\pm .20$  exhibits very weak and no relationship/correlation;  $\pm .20$  to  $\pm .40$  weak and low relationship/correlation;  $\pm .40$  to  $\pm .70$  a moderate relationship/correlation;  $\pm .70$  to  $\pm .90$  strong and high relationship/ correlation; and  $\pm .90$  to  $\pm 1.0$  very strong and high relationship/correlation. As a rule of thumb, multicollinearity problem arises in a multiple regression model when  $r$  is greater than 0.80 (Allison, 1999; Cooper & Schindler, 2003).

A Pearson product-moment correlation coefficient was computed to assess the relationship between all variables in the study. As shown in Table 4.24 below, the results revealed the correlation coefficients among constructs ranged  $r = -0.033$  to  $r = 0.733$ . Many of the variables comprising a construct were moderately correlated with each other. The values of the correlation coefficient of each variable showed positively and significantly correlated with the G-Practice constructs, indicating that those with higher levels of these variables tended to have higher G-Practices adoption. Funds availability was negatively correlated with G-Practices adoption, but not significant.

In addition to the above analysis, correlation coefficient should be below 0.8 to avoid multicollinearity. Since the correlation coefficients in Table 4.24 are all less than 0.8, the researcher can assume that there is no problem with multicollinearity among independent variables in this current study.

Table 4.24  
*Pearson Correlation Matrix of Study Variables*

Variables	ATT	AWA	BF	EMP	REG	GRC	SC	LC	COMP	FA	GP
ATT	1										
AWA	.247**	1									
BF	.277**	.628**	1								
EMP	.018	.387**	.213*	1							
REG	.130	.494**	.294**	.636**	1						
GRC	.010	.380**	.216**	.712**	.575**	1					
SC	.000	.161	.066	.728**	.437**	.733**	1				
LC	.023	.242**	.103	.660**	.582**	.550**	.560**	1			
COMP	.287**	.520**	.412**	.572**	.674**	.690**	.484**	.612**	1		
FA	.046	-.163	-.056	.087	.053	-.096	.091	.114	.113	1	
GP	.216**	.393**	.226**	.422**	.448**	.398**	.393**	.401**	.476**	-.033	1

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).

Notes: ATT= Attitudes; AWA= Awareness; BF= Benefits; EMP= Employees; REG= Regulations; GRC= Green Consumers; SC= Supply Chains; LC= Local Communities; COMP= Competitors; FA= Funds Availability, GP=G-Practices.

#### 4.9 Regression Analysis for Variables Predicting the Adoption of G-Practices

Multiple regression analysis, often referred to simply as regression analysis, examines the effects of multiple independent variables (predictors) on a single outcome (dependent) variable. Regression calculates a coefficient for each independent variable, as well as its statistical significance, to estimate the effect of each predictor on the dependent variable, with other predictors held constant. The researcher thus designs a multiple regression study looking at the effects of attitudes, environmental awareness, benefits, employees, regulations, green consumers, supply chains, local communities, competitors and funds availability on G-Practices adoption.

In order to answer the first, second and third research questions, multiple regression was conducted to predict whether the ten predictor variables individually impact on the adoption of G-Practices. The overall model explained 38 percent of variance ( $R^2$ ) in the adoption of G-Practices, which was revealed to be statistically significant ( $F = 6.224, p = .000$ ). As shown in Table 4.25, an inspection of individual predictors revealed that severity of environmental problems ( $\beta = 0.33, p < .01$ ), cost-benefit environmental awareness ( $\beta = 0.34, p < .05$ ), and supply chains ( $\beta = 0.24, p < .05$ ) had significant positive regression weights, indicating hotel owner-managers with higher levels of these factors were more prone to have higher total G-Practices adoption levels. Inconvenience of being environmental friendly ( $\beta = -0.24, p < .05$ ) had a significant negative weight, indicating hotel owner-managers with higher levels of this factor was more prone to have lower total G-Practices adoption levels. The findings only supported three hypotheses H1a, H1b, and H2c as predicted.

Overall, the results of this test are that, except for (attitudes, environmental awareness and supply chains), all other independent variables of institutional theory do not seem to have significant effects on the prediction of G-Practices adoption. The fact that hypotheses H1c, H1d, H2a, H2b, H2d, H2e and H3 were rejected.

Multicollinearity is a problem that can occur with regression analysis when there is a high correlation of at least one independent variable with a combination of the other independent variables. For the regression of independent variables, the variance inflated factor (VIF) and tolerance value were examined to detect multicollinearity. It is generally believed that any variance inflation factor (VIF) exceeds 10 and tolerance value lower than 0.10 indicates a potential problem of multicollinearity (Hair et al., 2010). Table 4.25 reveals the Tolerance and VIF values for independents variables. As indicated by Table 4.25, the output indicates no multicollinearity problem among all independent variables on the dependent variable.

Table 4.25  
*Summary of Multiple Regression Analysis of Factors Influencing the Adoption of G-Practices*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	.425	.699		.608	.544		
Severity of Environmental Problems	.328	.105	.254	3.106	.002	.704	1.420
Inconvenience of Being Environmental Friendly	-.241	.096	-.222	-2.513	.013	.604	1.656
Cost-benefit Environmental Awareness	.341	.159	.268	2.141	.034	.302	3.314
General Environmental Awareness	.076	.102	.071	.744	.458	.519	1.926

Core Benefits	.051	.146	.042	.348	.728	.322	3.107
Basic Benefits	-.128	.179	-.090	-.718	.474	.297	3.366
Concern for Employees	.112	.139	.110	.804	.423	.252	3.964
Regulations	.051	.097	.059	.523	.602	.372	2.688
Green Consumers	-.159	.123	-.187	-1.290	.199	.224	4.465
Supply Chains	.242	.103	.286	2.353	.020	.319	3.132
Local Communities	.076	.101	.081	.753	.453	.406	2.462
Competitors	.169	.131	.176	1.291	.199	.253	3.960
Funds Availability	-.145	.089	-.128	-1.618	.108	.752	1.329

a. Dependent Variable: G-Practices

#### 4.10 Moderator Analysis

In order to answer the fourth research question, moderated regression analysis is applied for testing moderating effects. This is a regression based technique that is used to identify the moderator variable. Generally, moderator effects are indicated by the interaction of X and M in explaining Y. The approach recommended by Hayes (2013) is followed. The regression equation is estimated:

$$Y = i_1 + b_1X + b_2M + b_3XM + e_Y$$

In this equation, if (the interaction between the independent variable and moderator variable) is not statistically significant, then M is not a moderator variable (the interaction of the predictors), it is just an independent variable. If it is statistically significant, then M will be a moderator variable, and thus moderation is supported. In addition, if  $b_3$  is positive (the interaction effect is positive), then it means that the more positive M is, the more positive becomes the effect of X on Y (or alternatively, the more negative M is, the more negative effect of X on Y becomes). Conversely, if  $b_3$  is negative, then the more positive M is, the more negative the effect of X on Y

becomes (or alternatively, the more negative M is, the more positive effect of X on Y becomes).

In this part, the association between internal push factors, internal pull factors and G-Practices adoption is expected to vary based on the firm's funds availability. To test the interaction effect, SPSS and PROCESS developed by Andrew F. Hayes which does the centering and interaction terms automatically was used. Results in Table 4.26 illustrate that funds availability effect significantly moderates the negative relationship between cost-benefit environmental awareness and G-Practices adoption ( $b = -0.54, t(141) = -3.45, p = .0007$ ), between regulations and G-Practices adoption ( $b = -0.19, t(141) = -3.16, p = .0019$ ), between green consumers and G-Practices adoption ( $b = -0.15, t(141) = -2.21, p = .0283$ ), between supply chains and G-Practices adoption ( $b = -0.19, t(141) = -2.34, p = .0202$ ), as well as between competitors and G-Practices adoption ( $b = -0.18, t(141) = -2.71, p = .0074$ ). The relationship between cost-benefit environmental awareness, regulations, green consumers, supply chains, and competitors with G-Practices adoption becomes lower with increasing constraint funds.

Table 4.26  
*Output of Moderator Analysis*

Variable	Beta	t-value	p-value	R <sup>2</sup>
Funds Availability	-.0715	-.5699	.5697	.0571
Severity of Environmental Problems	.3099	4.0219	.0001	
Interaction	.0438	.2006	.8413	
Funds Availability	.0048	.0373	.9703	.0131
Inconvenience of Being Environmental Friendly	.1303	1.4735	.1429	
Interaction	-.1263	-.6272	.5316	
Funds Availability	.1175	1.2071	.2294	.2220
Cost-benefit Environmental Awareness	.5747	5.8510	.0000	
Interaction	-.5419	-3.4582	.0007***	

Funds Availability	-.0355	-.3222	.7478	.1419
General Environmental Awareness	.3664	3.9766	.0001	
Interaction	-.1850	-1.5013	.1355	
Funds Availability	-.0333	-.2643	.7919	.0574
Core Benefits	.2868	2.6366	.0093	
Interaction	.0132	.0571	.9545	
Funds Availability	-.0718	-.5219	.6025	.0553
Basic Benefits	.2541	2.2726	.0246	
Interaction	.3218	1.3067	.1934	
Funds Availability	-.1829	-1.6052	.1107	.2091
Concern for Employees	.3997	4.3577	.0000	
Interaction	-.1731	-1.7803	.0772	
Funds Availability	-.1503	-1.6293	.1055	.2534
Regulations	.3350	4.9055	.0000	
Interaction	-.1972	-3.1608	.0019**	
Funds Availability	-.0766	-.6552	.5134	.1908
Green Consumers	.3551	5.7780	.0000	
Interaction	-.1561	-2.2159	.0283*	
Funds Availability	-.2116	-1.8466	.0669	.2026
Supply Chains	.3505	5.1018	.0000	
Interaction	-.1962	-2.3487	.0202*	
Funds Availability	-.1301	-1.1835	.2386	.1692
Local Communities	.3648	4.0519	.0001	
Interaction	-.0592	-.5969	.5515	
Funds Availability	-.1617	-1.6859	.0940	.2677
Competitors	.4247	5.9237	.0000	
Interaction	-.1847	-2.7191	.0074**	

Notes: Significant level at \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

To facilitate interpretation of the results, graphs showing the interactions were plotted (Aiken & West, 1991). Plotting interaction effects on a graph aids the interpretation of moderation effects and provides a means to investigate how the relation of Y and X changes across levels of the moderator variable (see Figure 4.1, 4.2, 4.3, 4.4 and 4.5).

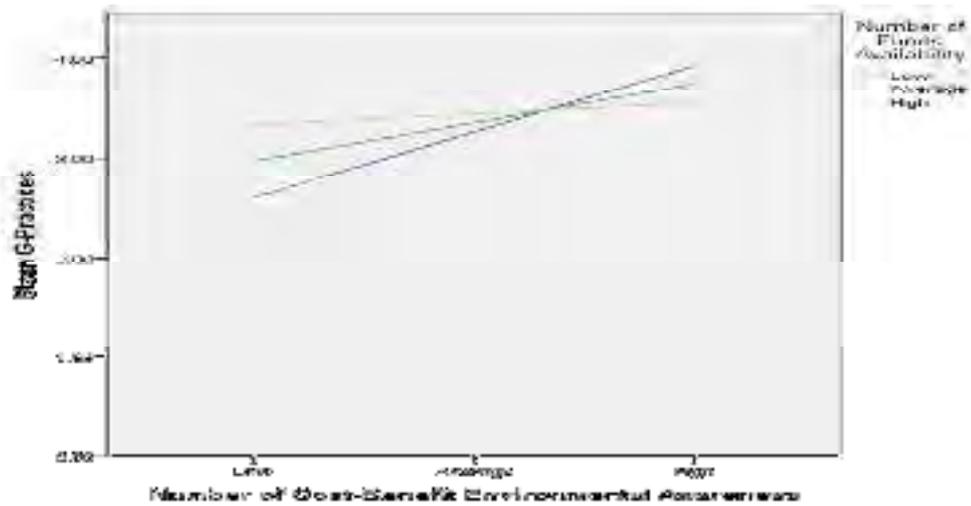


Figure 4.1  
*The Graph of Moderation Effect of Funds Availability Levels on the Relationship Between Cost-Benefit Environmental Awareness and G-Practices Adoption*

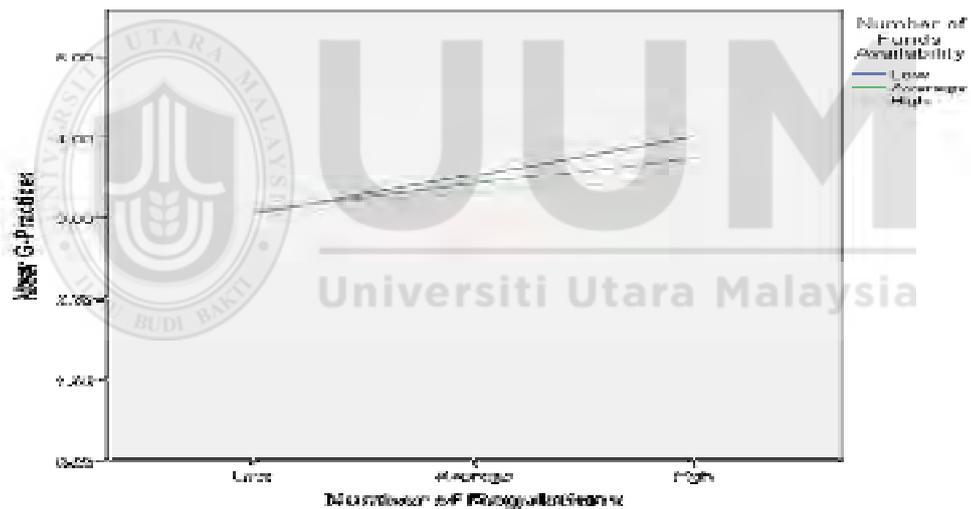


Figure 4.2  
*The Graph of Moderation Effect of Funds Availability Levels on the Relationship Between Regulations and G-Practices Adoption*

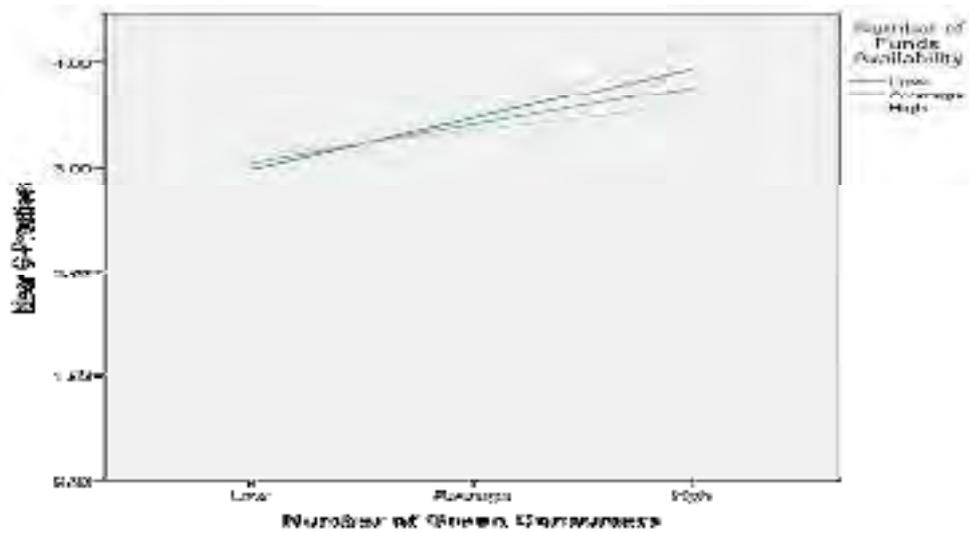


Figure 4.3  
*The Graph of Moderation Effect of Funds Availability Levels on the Relationship Between Green Consumers and G-Practices Adoption*

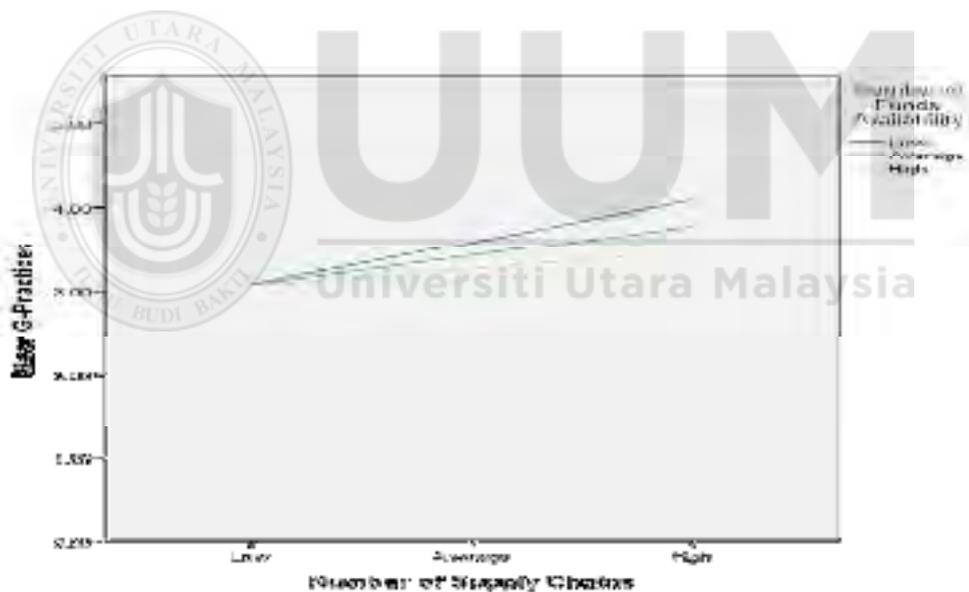


Figure 4.4  
*The Graph of Moderation Effect of Funds Availability Levels on the Relationship Between Supply Chains and G-Practices Adoption*

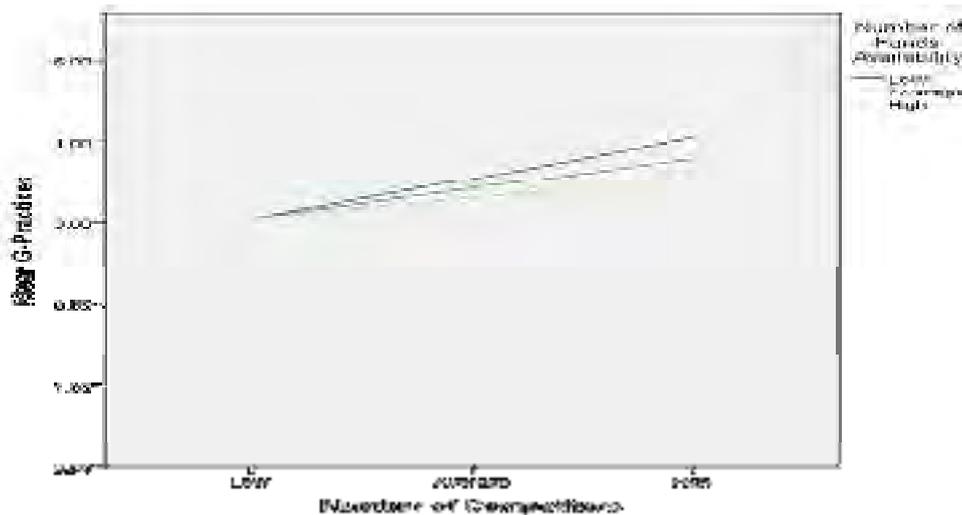


Figure 4.5  
*The Graph of Moderation Effect of Funds Availability Levels on the Relationship Between Competitors and G-Practices Adoption*

Examination of the interaction plot revealed an antagonistic effect that internal push factors (cost-benefit environmental awareness) decreased G-Practices adoption if constraint funds increased, as well as external pull factors (regulations, green consumers, supply chains and competitors) decreased G-Practices adoption if constraint funds increased. For instance, the interaction plot shows that respondents with low awareness have high constraint funds to adopt G-Practices. Further, respondents with average awareness have average constraint funds to adopt G-Practices, whereas, respondents with high awareness have lower constraint funds to adopt G-Practices.

The above findings clearly show that only funds availability moderates the relationship between internal push factors (cost-benefit environmental awareness) and G-Practices adoption which supported H4b, as well as between external pull

factors (regulations, green consumers, supply chains and competitors) and G-Practices adoption which supported hypotheses H5a, H5b, H5c and H5e.

On the other hand, the results illustrate that funds availability does not moderate the relationship between attitudes, general environmental awareness, benefits business can gain, concerns for employees, and local communities with G-Practices adoption, which did not support hypotheses H4a, H4c, H4d and H5d. Taken together, these results clearly show that funds availability is not always considered as a moderator on institutional pressures/G-Practices adoption relationship. With this, hypotheses H4 and H5 are only partially supported.

#### 4.11 Findings

Overall, the model indicates that a firm response to pressures resulting from environmental issues varies across the different level of institutional pressure. The summary of outcomes to answer the research questions is displayed in Table 4.27.

Table 4.27  
*Summary of Hypotheses Testing Results*

<b>Hypotheses</b>	<b>Result</b>
H1a: There is a positive relationship between owner-manager attitudes and G-Practices adoption.	Supported (severity)
H1b: There is a positive relationship between environmental awareness and G-Practices adoption.	Supported (cost benefit)
H1c: There is a positive relationship between benefits businesses can gain from environmental management and G-Practices adoption.	Rejected
H1d: There is a positive relationship between concern for employees and G-Practices adoption.	Rejected

Table 4.27 (Continued)

H2a: There is a positive relationship between regulations and G-Practices adoption.	Rejected
H2b: There is a positive relationship between green consumers pressure and G-Practices adoption.	Rejected
H2c: There is a positive relationship between supply chains pressure and G-Practices adoption.	Supported
H2d: There is a positive relationship between local communities and G-Practices adoption.	Rejected
H2e: There is a positive relationship between competitors and G-Practices adoption.	Rejected
H3: There is a negative relationship between funds availability and G-Practices adoption.	Rejected
H4a: Funds availability moderates the relationship between owner-manager attitudes and G-Practices adoption.	Rejected
H4b: Funds availability moderates the relationship between environmental awareness and G-Practices adoption.	Supported (cost benefit)
H4c: Funds availability moderates the relationship between benefits businesses can gain and G-Practices adoption.	Rejected
H4d: Funds availability moderates the relationship between concern for employees and G-Practices adoption.	Rejected
H5a: Funds availability moderates the relationship between regulations and G-Practices adoption.	Supported
H5b: Funds availability moderates the relationship between green consumers pressure and G-Practices adoption.	Supported
H5c: Funds availability moderates the relationship between supply chains pressure and G-Practices adoption.	Supported
H5d: Funds availability moderates the relationship between local communities and G-Practices adoption.	Rejected
H5e: Funds availability moderates the relationship between competitors and G-Practices adoption.	Supported

#### 4.13 Summary

This chapter presented data analysis methods and study results. The outcomes were logically and systematically summarized and interpreted in relation to their relevance to the research questions and hypotheses. In addition, the impact/degree of various demographic data on G-Practices adoption had been explored. Data findings were described the relationships between the study variables and presented as tabulations.

The results from regression analysis identified the factors that were perceived to be associated with G-Practices adoption. Drawing upon institutional theory, a model was developed to understand the factors that influence G-Practices adoption; it postulates that organizational action is influenced by normative, coercive and mimetic institutional pressures existing in an institutionalized environment that drive toward adopting and embracing G-Practices. To remain afloat, acquiring the necessary funds is frequently tied to adopting G-Practices. The empirical analysis confirmed several hypotheses that were derived from institutional theory. The researcher found support for two out of the four internal push factors (owner-manager attitudes and environmental awareness) and one out of the five external pull factors (supply chains) that influence G-Practices adoption. Funds availability negatively moderates the effect of internal push factors (environmental awareness) on G-Practices adoption as well as external pull factors (regulations, green consumers, supply chains and competitors) on G-Practices adoption. In the next chapter, the implications of the findings of internal push factors, external pull factors, funds availability and G-Practices adoption will be discussed. The limitations of the current study will also be presented.

## CHAPTER 5

### DISCUSSION AND CONCLUSION

#### 5.1 Introduction

The purpose of this chapter is to summarize the study that was conducted. Included in this summary are a review of the purpose of the study, a restatement of the research questions, the research methodology used, and a summary of the study results and discussion. The limitations of the current study will be outlined. This chapter will conclude with recommendations for further research in the area.

The purpose of this study was to explore the factors that influence G-Practices adoption by SMHs and the moderating role of funds availability in these relationships. The research questions for this study were: (1) What is the effect of internal push factors on G-Practices adoption? (2) What is the effect of external pull factors on G-Practices adoption? (3) What is the effect of funds availability on G-Practices adoption? (4) What is moderating of funds availability can influence the relationship between internal push factors, external pull factors and G-Practices adoption?

#### 5.2 Summary of Study

Based on institutional theory, DiMaggio and Powell (1983) analysis of the institutional processes by means of which the institutional context forces organizations to be isomorphic—producing similar services or products. They struggle for ways to combat uncertainty, obtain legitimacy, and ultimately ensure

survival. The researcher proposes that institutional pressures, through normative, coercive, and mimetic, have the capacity to influence an organization's responsiveness to G-Practices adoption. Normative isomorphism results from the standards and cognitive frameworks that are created and controlled by professions and other moral standards-making bodies. Coercive isomorphism results from formal or informal pressures exerted on the organization from the government, other organizations, or the cultural expectations of the environment. Mimetic isomorphism arises because of uncertainty in the environment that forces organizations to mimic what are perceived to be "best practices". This can manifest itself through copying standard business models or scanning the environment to benchmark competitive practices and employed technologies (Pavia, 1991). By means of these three processes, DiMaggio and Powell (1983) argue that rational actors of institutionalized fields make their organizations more similar.

The relationships between institutional pressures and G-Practices adoption have been widely studied. Nevertheless, there is still an on-going debate about the adoption of G-Practices. Many aspects of environmental management have been discussed in the literature such as factors, including drivers and enablers for adopting various G-Practices that more attention is paid to the barriers of SMEs. The researcher thus considers the factors and moderators of G-Practices adoption. These factors and moderators are categorized into two major components, namely, drivers and barriers.

## **Drivers**

The drivers of environmental engagement or performance in small (to medium) business in tourism are relatively under-researched (e.g. Mensah, 2014; Morrison et al., 2010; Thomas et al., 2011), and more needs to be done to help SMHs owner-managers adopt green initiatives. In order to improve poor environmental performance, it is crucial to understand SMHs owner/managers' attitudes toward the environment.

Kirk (1995) believes that change in an organization consists of five major motives, i.e. legislation and codes; fiscal policies; public opinion; consumer pressure; financial advantages resulting from saving resources. Foster et al. (2000) mention that the hospitality and tourism industry is being pressured to establish a more eco-friendly approach by the following forces: consumer demand, increasing environmental regulation, managerial concern with ethics, customer satisfaction, maintenance issues related to the physical plant, and the need for aesthetics based on ethics and economics. In Malaysian studies, Kasim (2007) conducted research on environmentalism in the hotel sector in Penang. She found a few drivers of environmental management practices such as regulation, community pressure, sectoral pressure, and economic factors. Moorthy et al. (2012) assert that there are the five key drivers for SMEs to go green: economic benefits, financial incentives, stakeholders demand, legislation, resource, motivation, and knowledge. Moreover, Samdin et al. (2012) have identified some general factors which influence Sustainable Tourism Practices (STP) in Malaysia, namely, incentives, knowledge, training, regulation, reduced cost, top management, and formalization.

Economic benefits resulting from cutting down operating costs and utilizing resources more efficiently were mentioned most frequently to be the major driving force for environmental management (Bohdanowicz, 2005, 2006; Enz & Sigauw, 1999; Kirk, 1998; Mensah, 2006; Penny, 2007; Tzschentke et al., 2004).

Institutional theory predicts that other actors (such as the government and the public) in society play a major role in the determination of organizational intentions to adopt or not adopt environmental management practices (Delmas & Toffel, 2003). Khanna and Speir (2007) propose that the interested parties exert normative and coercive pressure for change on the enterprise, including pressures from governments, consumers, interest group pressures, competitors, and managerial attitudes to the adoption of EMPs.

According to stakeholder theory, a successful company must have a management that builds and leverages a strong stakeholder relationship. A company, therefore, will not survive without the backing of key stakeholders (Elijido-Ten, 2007). Mensah's (2014) study was carried out in Ghana. He indicated that internal primary stakeholders are employees, shareholders and financial institutions; and external primary stakeholders are customers and suppliers. Another study, that of (Cespedes-Lorente et al., 2003; Kasim, 2007; Rivera, 2004) indicates that the adoption of environmental initiatives is exerted by stakeholders, including customers, NGOs and government amongst others who play critical roles that companies are dependent upon.

## **Barriers**

Hillary (1999) is one of the first to examine barriers to adopt environmental management for SMEs. In Chan's (2008) work, he first considers implications of former studies done in other industries, not in the hotel industry such as Quazi (1999), Post and Altman (1994). Erdogan and Baris (2007) added that the lack of interest and a lack of legal framework is a significant topic in environmental protection measures. A study led by Chan (2008) discovered that there are the six following factors that limit hotels in establishing EMS in Hong Kong: lack of knowledge and skills, lack of professional advice, uncertainty of outcome, certifiers/verifiers, lack of resources, and implementation and maintenance costs. Another study, that of (Hobson & Essex, 2001), summarizes the findings from the literature on this topic and confirms the existence and significance of barriers, i.e. lack of understanding and awareness, fear of extra costs, skepticism of impracticality of the concept of sustainability. According to Essex and Hobson's (2001) study in the accommodation businesses in the UK, they also add some other factors to the group of barriers including lack of interest and time for environmental issues.

In the same vein, it has been observed that many small companies exhibit low levels of eco-literacy (Chan, 2011; Nyahunzvi & Zimbabwe, 2014; Tilley, 2000), lack of information (Thuot et al., 2010), and lack of awareness to implement sustainable practices (Friedman & Miles, 2002; Halila, 2007; Hillary, 2004; Horobin & Long, 1996; Morrison & Teixeira, 2004; Tilley, 2000) and there are no exceptions for SMEs in tourism (Kasim, 2009; Masurel, 2007; Tzschentke et al., 2004; Vernon et al., 2003), and environmental responsibility is considered as something peripheral to their core business (Ammerbery & Hjelm, 2003; Chan, 2011; Hillary, 1995; Nyahunzvi & Zimbabwe, 2014; Redmond et al., 2008; Simpson et al., 2004; Tilley,

2000). Smith (1997) recognizes the need to raise awareness of environmental issues in SMEs. In addition, research (Condon, 2004; Lee, 2009; McKeiver & Gadenne, 2005; Seidel et al., 2009) have indicated that SMEs view financing difficulties as a major barrier to investment. Thuot et al. (2010) found that concern about costs appears to be the barrier in the hotel industry. This study therefore examined the moderating role of funds availability.

In this study, quantitative method was employed to attain the research objectives. Multiple regression was used to analyze the data collected from the survey and to determine what factor has the most impact on G-Practices adoption.

### **5.3 Summary of Findings/Results**

This study was conducted for the purpose of investigating the factors that influence the adoption of G-Practices by SMHs. The descriptive method of research was utilized and the survey technique was used to obtain data. The questionnaire served as the instrument of data collection, which was conducted during September-October 2015. In light of data analyzed by the researcher, summary of findings were stated. The results showed that a 66.5 percent representative sample of the hotel owner-managers were the respondents.

Of the 145 responses, 111 (76.6%) were from the manager. 58.6% were women and 41.4% were men. The respondents' age ranged from 20 to 69 years old. 47.6% of the respondents were between the ages of 30 and 39, and only 9.7% were younger than 29 years of age. The majority of respondents (72.4%) held bachelor's degrees, while 16.6% possessed master degrees. 44.8% of respondents had more than 6 years of working experience in their current position, while approximately 11.7% had less

than 1-year working experience. Number of employees were less than 50 (62.8%) and 50-200 (37.2%), while the mean number of rooms was 71. In terms of the location, the largest number of respondents were located in Krabi city (37.9%), followed by Phuket city (30.3%), Kathu (22.8%), Koh Lanta (7.6%) and Thalang (1.4%) respectively. The results revealed that 22.2% of the hotels are not certified by any green organization, 0.9% of the hotels are certified by the International Organization for Standardization (ISO) and 1.7% of the hotels have green leaf certification.

The results reveal that various green initiatives have already taken place in the hotel industry. “Sorting waste in guest rooms” is the most commonly mentioned initiatives, followed by “purchase of environmentally friendly cleaning products (e.g. biodegradable, reusable, recyclable, etc.)” and “water efficient fixtures”. These can be implemented through a relatively low level of capital. Hotels can sell used plastic bottles, glass bottles, drink cans, newspapers or magazines and cardboard as well. With regard to environmental awareness that would motivate hotel owner-managers to embrace green initiative in their hotels, “business environmental initiatives are of benefit to the hotel” is the most common reason. Moreover, “there are currently commercial benefits to my company in having an environmental policy” as well as “improving environmental performance usually improves production efficiency”. Having a written policy in the second rank is seemed to be important in the eye of the respondents.

Of the ten factors, it was found that only owner-manager attitudes, environmental awareness and supply chains, which are significant in predicting the adoption of

G-Practices and other variables are non-significant predictors of adoption. Funds availability also was found to negatively moderate the relationships between G-Practices adoption and five variables: environmental awareness, regulations, green consumers, supply chains, and competitors. Nevertheless, hotels feel very little external pressure to step up responsible behavior. This study concludes that the institutional framework is rather weak in developing countries like Thailand when compared to developed countries.

## **5.4 Discussion**

Based on the results of this study, the following discussion is provided.

### **5.4.1 Factors Affecting the Adoption of G-Practices**

These environmental factors can be categorized as internal push and external pull factors.

#### **5.4.1.1 Internal Push Factors**

The first question is related to the relationship between internal push factors (owner-manager attitudes, environmental awareness, benefits business can again and concern for employees) and G-Practices adoption. The analyses indicate that only some of the internal push factors are found to produce the effect on G-Practices adoption. For four hypothesized factors, the finding appears to support the hypothesis that there is a positive relationship between owner-manager attitudes (severity of environmental problems) and G-Practices adoption as well as between environmental awareness (cost-benefit environmental awareness) and G-Practices adoption. The following explains the finding of each influential factor and the relationship.

### **a. The Effect of Owner-Manager Attitudes on G-Practices Adoption**

**H1a: There is a positive relationship between owner-manager attitudes and G-Practices adoption.**

The literature states that the attitudes of hotel operators play a particularly important role in their engagement into green activities/practices. Ayuso (2006: 217) recommended that managers take the role of the environmental change initiators and implementers in the company. Nevertheless, the chance of implementation seems quite low if the owner-manager does not possess intrinsic value in G-Practices. For instance, VIU (2009) revealed that 43% of tourism operators who were not implementing G-Practices perceived that the “eco-crisis has been largely over exaggerated by society”. In this study, owner-managers in general expressed a positive attitude towards G-Practices.

Surprisingly, the above figure indicated a non-significant relationship between owner-manager attitudes and G-Practices adoption in this study. However, the author further examined the potential relationship by separating it into two dimensions – severity of environmental problems and inconvenience of being environmental friendly – as produced by factor analysis. It indicates that severity of environmental problems has a positive and significant effect on G-Practices adoption, while inconvenience of being environmental friendly has a negative and significant effect on G-Practices adoption. This finding is in line with past research by Park and Kim (2014a) which found that top managers’ personal environmental concern is a significant predictor of managerial attitudes towards G-Practices adoption. Enz and Siguaw (1999) and Tzschentke et al. (2008) indicated that attitude

is an important factor determining hotel companies' environmental behavior. In another study in Malaysia, green attitude is found to predict the intention to engage in G-Practices in terms of recycling (Tih & Zainol, 2012). While researchers have identified a significant relationship between environmental attitudes and prevalent practices (Weaver & Lawton, 2004), others have found different results.

Meanwhile, this finding is in contrast to the findings from previous studies (e.g. Zhengang, Weerasir, & Dissanayake, 2011) which demonstrated that there is no significant relationship between attitudes and environmental management practices. Managers/owners holding positive attitudes are no more prone to bring G-Practices into their organizations than managers/owners with negative attitudes. Similarly, previous studies found no relationship between green (environmentally concerned) attitudes and behavior (e.g. Gamba & Oskamp, 1994; Lansana, 1992; Oskamp, Harrington, Edwards, Sherwood, Okuda, & Swanson, 1991).

The reason for the significant impact of owner-manager attitudes on G-Practices adoption may be that attitudes and actions feed each other. The measured attitude was directly pertinent to the situation. Attitudes toward severity of environmental problems (but not general attitudes toward environmental issues) predict participation in G-Practices. Previous studies have confirmed that specific, relevant attitudes do predict behavior (Bassili, 1996; Wallace, Paulson, Lord, & Bond, 2005). Actions also affect moral attitudes: That which people have done people tend to justify as right. When the geo-political, economic and socio-cultural context of a country on the environment is perceived by owner-managers, they are more likely to develop a positive environmental attitude. Then, hotels whose top managers have

more positive environmental attitudes are more involved in G-Practices. The focus and support on environmental management depends on top management with personal goals. Top executive has the authority to determine the direction of the company to be conducted in any way. Top executive's attitude and passion are thus a core or underlying factor that drives the environmental policy and goals in SMHs.

#### **b. The Effect of Environmental Awareness on G-Practices Adoption**

**H1b: There is a positive relationship between environmental awareness and G-Practices adoption.**

Based on the collected data, this study has found that environmental awareness did not predict G-Practices adoption in the Thai hotel industry. Again, the author further examined the potential relationship by separating it into two dimensions – cost-benefit environmental awareness and general environmental awareness – as produced by factor analysis. It indicates that cost-benefit environmental awareness has a positive and significant effect on G-Practices adoption, while general environmental awareness has no significant impact on G-Practices adoption. This result supports the findings of Gadenne et al. (2009) which found a significant relationship between cost benefit environmental awareness and environmental conservative practices for SME owner/managers.

Besides, Bohdanowich (2006) pointed out that European hotelier's environmental awareness is not high enough to make significant changes. Some research results have shown that poor awareness of individual environmental impacts of SMEs and narrow-minded thinking may hamper the implementation of EMS (Gerrans & Hutchinson, 2000; Hillary, 1999).

There may be a significant relationship due to increased awareness of G-Practices by hotel owner-managers. Regarding the level of awareness related to environmental issues, those ranked highest included “business environmental initiatives are of benefit to the hotel”, “there are currently commercial benefits to my company in having an environmental policy” and “improving production efficiency through environmental performance”. This implies that owner-managers make aware of the cost-benefit of considering implementing G-Practices, but not general environmental awareness. Thus, owner-manager’s general awareness to environmental issues, poorly predict the adoption of G-Practices. The situation coincides with the study of Chan and Wong (2006), which found that internal factors play more influence than external factors to obtaining accreditation in EMPs.

### **c. The Effect of Benefits Business Can Gain on G-Practices Adoption**

**H1c: There is a positive relationship between benefits business can gain and G-Practices adoption.**

The results show that perceived benefits did not have a significant effect on company decisions to adopt G-Practices. In the previous literature, implementing environmental management practices was associated with increased extra costs that it was not conferred on the company a benefit or advantage (Palmer, Wallace, & Portney, 1995; Walley & Whitehead, 1994). In addition, Zengeni, Zengeni, and Muzambi (2013) observed that some G-Practices have not so far been adopted by some hoteliers even in developed countries and hence they have never enjoyed the benefits of going green.

On the other hand, Curkovic, Handfield, Melnyk, and Sroufe (1997) reason that a hotel's environmental management practices are integral to its success and performance. Further studies identify that corporate environmental performance is positively linked to the profitability that it pays to be green (Porter & Van der Linde, 1995; Starik & Marcus, 2000).

This implied that fewer companies believed that the benefits of G-Practices are visible compared to other factors. There may be no connection between what people think and feel and what they do (see Table 4.22). The second highest mean score was 4.08. Although hotel owner-managers realize G-Practices would bring economic benefits and improve the image and competitiveness of their hotel, this does not always translate into actions. On another point, even though a manager of small hotel behaves in a sensitive way for the environment, it cannot easily develop and implement an effective environmental management program because limited resources do not allow small companies to achieve a sustainable competitive advantage (Carmona-Moreno et al., 2004). In developing countries, unlike developed countries where regulatory forces are a major driver for the adoption of environmental management measures and have a large effect on external environmental orientation. In the Malaysian study, more operational efficiency and impression management in orientation are considered as pressure factors amongst hotels (Al-Shourah, 2007).

#### **d. The Effects of Concern for Employees on G-Practices Adoption**

**H1d: There is a positive relationship between employees and G-Practices adoption.**

Analyzing on the objective reveals that concern for employees is a non-significant predictor of G-Practices adoption. The finding is consistent with Al-Shourah (2007) that has found that employee recognition does not exhibit any influence on practices of environmental management.

In contrast with previous research, the findings of Sun Hwa Kim (2009) indicated that hotel employees, as a key stakeholder, have a significant and positive effect on G-Practices. In the same vein, the finding is aligned with those of Cordano, Marshall, and Silverman (2010) in the context of the environmental management programs in the U.S. wine industry and somewhat similar to the findings of Marshall, Akoorie, Hamann, and Sinha (2010) on the adoption of environmental practices in the United States and New Zealand. According to Weng et al. (2015), employee conduct was associated with a positive and significant effect on green innovation practices. Further, Rondinelli and Vastag (2000) claimed that employees became more aware of environmental matters as well as Kirk (1998) argued that overall environmental management is likely to lead to employee satisfaction.

The reason for this insignificant impact lies in the fact that employees have a low personal concern for environmental issues in the Thai hotel industry. Most of Thai people are behind much of the world in general eco-awareness. Thus, hotels should raise employee awareness by providing environmental awareness education programs and training, and build knowledge management systems to employees. The hotels has to make sure that their employees should be properly qualified and have the awareness, knowledge and skills to deploy environmental best practices. This will also enhance their concern and get involved regarding effectively implementing G-Practices.

#### **5.4.1.2 External Pull Factors**

The second question is related to the relationship between external pull factors (regulations, green consumers, supply chains, local communities, and competitors) and G-Practices adoption. The analyses reveal that only one of the external pull factors is found to produce an effect on G-Practices adoption. For five hypothesized factors, the finding is apparent to support the hypothesis that supply chains are positively related to G-Practices adoption. The following explains the finding of each influential factor and the relationship.

##### **a. The Effect of Regulations on G-Practices Adoption**

**H2a: There is a positive relationship between regulations and G-Practices adoption.**

Regulations are frequently cited as a key motivator in improving environmental performance, but it did not emerge as a major factor when directly compared with other actors in this current study.

The results show that regulatory pressure exhibited an insignificant influence on G-Practices adoption. The role of regulations in influencing companies' green adoption behavior seems to be insignificant. The result is aligned with the findings of KamalulAriffin et al. (2013) that regulation/government was not significantly related to environmental management practices.

Today, tourism is regarded as an industry relatively free from regulation (Ramm, 2001). Therefore, the adoption of voluntary management systems is important to

improve environmental performance (Tepelus & Córdoba, 2005). Indeed, voluntary environmental programs sponsored by third parties have emerged as important instruments that have proven to be effective in improving environmental performance. They have been found to be a more cost-effective approach to environment management (Daley, 2007; Woods, Thornsbury, Curry, & Weldon, 2006).

Additionally, prior studies do not endorse the idea of a positive influence of command and control regulation on environmental management in Europe (López-Gamero, Molina-Azorín, & Claver-Cortés, 2010; Smith & Crotty, 2008).

On the contrary, this result is quite different from previous research. Earlier findings (e.g. Darnall et al., 2008; Delmas & Toffel, 2004; Le et al., 2006; Tari' et al., 2009) revealed that regulations have a significant impact on environmental management practices implementation. Similarly, regulatory pressures were found to influence EMP (Al-Shourah, 2007) and have a statistically significant impact on the adoption of EMPs (Khanna & Speir, 2007). These studies reveal that the significance of regulatory pressures persuades companies to adopt EMPs or the ISO 14001 standard (Anton, Deltas, & Khanna, 2004; Arimura, Hibiki, & Katayama, 2008; Potoski & Prakash, 2005). Another recent study by Weng et al. (2015) asserted the government was associated with positive and significant effects on green innovation practices.

The present non-significant result may be owing to the fact that regulatory pressures are not likely to influence the adoption of G-Practices. Government agencies in Thailand were not perceived as having a significant influence on the adoption of G-Practices in SMHs. It implies that there have been no active drives by government

agencies and their role of weak regulatory enforcement on environmental compliance. This suggests that environmental incentives and support (e.g. technical support) from the government should be provided to promote companies to adopt more G-Practices.

### **b. The Effect of Green Consumers on G-Practices Adoption**

**H2b: There is a positive relationship between green consumers and G-Practices adoption.**

In many studies, customers were seen to be the most influential actor when designing the improvement of environmental performance. Surprisingly, the results reveal that green consumers fail to significantly affect the adoption of G-Practices, which indicates that there is no pressure from consumers to influence owner-managers' decision to adopt G-Practices. This finding seems consistent with the results of Weng et al. (2015) which demonstrated that customer pressure does not have significant impacts on green innovation practices. In the hotel industry, although owner-managers may decide to support environmental management, their real commitment is still dependent on the issue of the demands of consumers and resources (such as information, time and human, natural and capital resources) are limited (Kasim, 2009).

McKercher et al. (2010: 299) revealed that a large number of consumers become more concerned about environmental impacts and want to act responsibly, yet consumers' willingness or concern often does not translate into positive green

choices. Similarly, while consumers themselves hold the great power to change the industry, consumer demand for sustainable products is very low (Graci & Dodds, 2008; Williams & Ponsford, 2008). Studies also indicate that environmental degradation and climate change do not influence consumer buying decisions in travel and tourism (Anable, Lane, & Kelay, 2006; Berman, 2007; Leiserowitz, 2006).

In contrast, this finding does not support the findings of earlier studies by Al-Shourah (2007) and Mensah (2014). Companies have been aggressively lobbied by government regulatory bodies and consumer pressure groups to adopt G-Practices (Bateman & Zeithaml, 1983: 192). Corporate transparency and engagement in G-Practices are clearly a desire of customers (Reynolds, 2013). Coincidentally, Sucheran (2013) asserts that hotel managers' perceptions of the most influential stakeholders of G-Practices adoption are customers.

According to TripBarometer, a 2012-2013 TripAdvisor survey, 58 percent of respondents expressed that they will either not pay more or expect to pay less. About two-thirds (62 percent) of travelers expect hotels to put in place some type of environmental program, while the largest majority (84 percent) feel that these practices do not have a negative impact on the comfort. The survey reveals that only 17 percent of travelers will pay a higher price for environmentally friendly services.

Therefore, one possible reason for making green consumers an insignificant predictor of G-Practices adoption could be because of low customer demand. It seems to be that the customer demand is not there. There are not enough demand for their services while the general public is unlikely to have much usage of green products or

services. According to Pryce (2001), lack of motivation from customer demand is identified as the major barrier to environmental management in Europe and US hotels. The lack of consumer demand causes hotel owner-managers to give a low priority to green efforts. The other way round, hotel owner-managers start by trying to educate their customers.

### **c. The Effect of Supply Chains on G-Practices Adoption**

**H2c: There is a positive relationship between supply chains and G-Practices adoption.**

Based on the collected data, the findings reveal that supply chains demonstrate a significant predictor of G-Practices adoption. This is aligned with the findings of Studer et al. (2008) in Hong Kong SMEs which showed that the most efficient influencer for social and environmental change was supply chain pressure. As other study, Yu and Bell (2007) also revealed that in general Chinese SMEs under supply chain pressure presented a better environmental or social performance than others. Green growth have attracted industrial manufacturing players and deployed throughout the value chain and across the entrepreneurial ecosystem. There is strong competition, with more suppliers vying for market share and remaining in business. Supply chain pressure has become a more competitive driver in the green products supply, and the relationships between manufacturers and their component suppliers have become increasingly important.

Inconsistent with past research, Merritt (1998) reported that there have been little or no significant effects on SME behavior from supply chain pressure and environmental management strategies. In another study in Taiwan, Weng et al. (2015) found pressure from suppliers did not have significant impacts on green innovation practices.

There may be a significant relationship between supply chains and G-Practices adoption because hotel top managers realize the importance of environmental issue in the supply chain. The strong top management support of G-Practices adoption appears to be an internal driver that is able to improve cooperation amongst the various units. The purchasing managers then can adopt green purchasing relatively easily and quickly because it involves primarily internal operations. Their green purchasing focused on purchasing environmentally friendly cleaning products (e.g. biodegradable, reusable, recyclable, etc.) and purchasing in bulk to reduce packaging. More suppliers also provide sustainable supplies to fulfill customers' needs. Further, pressure from supply chain may help some SME owner-managers proactively embrace in G-Practices. Attention has been focused on environmental problems and information deficiencies caused by a lack of resources can be overcome.

In comparison with other factors in the institutional theory, it is found that supply chains were more visible to companies. This may be due to the fact that the suppliers have been playing an important role. New suppliers are seeking to embark on new activities that could help them signal that they are socially responsible to their customers. Therefore, green issues in the hotel industry have gained more attention

from many companies and the supply chain is under their direct control. Supply chains, thus, had a positive effect on the company's G-Practices adoption and added to growing the body of knowledge in the hotel industry in SMEs.

#### **d. The Effect of Local Communities on G-Practices Adoption**

##### **H2d: There is a positive relationship between local communities and G-Practices adoption.**

Local community and trade organizations were viewed as the least influential actors in environmental management. The results reveal that local communities fail to significantly affect the adoption of G- Practices. This finding would support past studies such as those done by McKeiver and Gadenne (2005) which showed that the level of environmental management is not significantly influenced by local communities.

However, this finding is inconsistent with the investigation of Florida and Davison (2001) into why some companies had adopted environmental management practices and instituted pollution prevention programs. They revealed that the adoption of these programs and the dynamic engagement of companies with local community stakeholders had a positive relationship. Also, Mensah (2014) found out that local communities can influence the environmental performance of hotel companies.

It is possible that the non-significant result has to do with the fact that local communities have an inactive presence in the Southern Thailand. They may not be trying to draw attention to the most serious environmental problems. Thai authorities are also taking small steps to protect and preserve the nature and wildlife in the

south. This result revealed that there is no strong impact from local community pressure to act a socially responsible manner. Since there is no pressure from local communities, the priority environment issues of owner-managers should come from their responsible and ethical manner.

#### **e. The Effect of Competitors on G-Practices Adoption**

**H2e: There is a positive relationship between competitors and G-Practices adoption.**

Competitors are found to be an insignificant predictor of G-Practices adoption. In line with previous research (e.g. Tang et al., 2013) showing that there is a lack of competitive pressure on Malaysian hotels to implement EMPs. Competitive pressures play any role in leading environmental management, but competition is not yet widely seen as a pressure to adopt STPs among Vietnam's tourism companies (Le, Hollenhorst, & Triplett, 2005).

In contrast with previous research, the findings of Delmas and Toffel (2003) indicated that facilities' environmental practices are directly influenced by competitors. Similarly, the finding is aligned with those obtained by previous studies suggesting companies are inclined to increasingly adopt innovations from competitive pressure (Sigala, 2006) and competitive legitimacy were found to influence EMP (Al-Shourah, 2007). Competitive pressures are significant in motivating firms to adopt EMPs (Khanna & Speir, 2007). In another study in Taiwan, competitive pressure was associated with positive and significant effects on green innovation practices (Weng et al., 2015).

The reason for the insignificant impact of competitors on the adoption of G-Practices may be that the effects of other influences may weaken the effect of mimetic pressure on G-Practices adoption. In the literature, when G-Practices are emerging, organizations have been found to be more influenced by mimetic pressure at the initial stage.

#### **5.4.2 Funds Availability**

The third question is related to the relationship between funds availability and G-Practices adoption.

##### **a. The Effect of Funds Availability on G-Practices Adoption**

**H3: There is a positive relationship between funds availability and G-Practices adoption.**

The outcomes demonstrate that funds availability has a negative influence on the adoption of G-Practices, but not significant. It indicates that fund availability does not have a direct influence on the adoption of G-Practices. However, the findings partially confirm the hypotheses that funds availability possibly moderates the relationship between institutional pressures and G-Practices adoption.

It is confirmed by the literature review that belief in financial constraints has been a barrier for current tourism. The cost of implementing measures such as new appliances, hardware for water measurement or the high costs such as solar cell is found to be a big hindrance for implementing green and sustainable elements. VIU's (2009) study reported that 50 percent of respondents involved in rural tourism

operations in British Columbia mentioned that lack of money was the number one financial reason for not implementing environmental programs. This is supported by Kasim (2007: 689) who states that money drives an environmental agenda. The barriers hindering companies to implement sustainable practices are limited money and human resource efforts (Ayuso, 2006: 212). Also, Sucheran's (2013) study claims that small hotels point that barriers to environmental management are costs and inadequate resources. Likewise, lack of time and resources or lack of skills or knowledge can be proved to be a barrier that hampers corporate greening in the hotel industry (Mair & Jago, 2010: 85).

Nevertheless, it is argued against the challenge of money that even though SMEs, due to their small size, are often expected to have inadequate resources as well as capabilities, it does not make the SMEs farther from adopting green initiatives particularly when top management demonstrates that they support and build commitment for change. G-Practices are quite costly and have a slow payback period. Hotels should start their green process with something simple. There are other non-cost associated methods of green initiatives such as recycling bins or requesting guests to turn off the unwanted lights. It is realized that while the money factor is a very important factor to consider in hotel business decisions related to the implementation of G-Practices, most of green activities may not require a lot of money. Unlike voluntary environmental programs (EMSs), there is associated with high costs and complexity. The implementation of G-Practices can only rely on having intention and time. Money is the only factor that has led to business success in implementing G-Practices more quickly. It is important to note that implementing such practices may not be changed overnight and accomplished in the short-term. It

is a long-term goal that may require an extensive investment of time, effort and experience in achieving the goal that a company has set out.

#### **5.4.3 The Moderating Effect of Fund Availability on The Relationship Between Internal Push Factors and The Adoption Of G-Practices**

The forth question is related to the moderating effects of funds availability on the relationship between internal push factors (owner-manager attitudes, environmental awareness, benefits business can again and concern for employees) and G-Practices adoption.

**H4: Funds availability moderates the relationship between internal push factors and G-Practices adoption.**

The test on the moderating effect of funds availability is performed. Based on the result of a hypothesis test, it is shown that moderating effects of funds availability on the impacts of attitudes, benefits business can again and concern for employees on G-Practices adoption are not significant. Funds availability only negatively moderates the relationship between awareness (cost-benefit environmental awareness) and G-Practices adoption. Hence, the role of funds availability as a moderator on the relationship between internal push factors and adoption of G-Practices was only partially supported. This implies that funds availability does not act as an important driver for producing an antagonistic effect on attitudes, benefits business can again and concern for employees in G-Practices implementation. The finding that the internal driver is significantly related to different levels of the company's financial ability shows that companies can easily attribute high engagement to G-Practices under low financial constraint situations. The hotels will embrace and adopt G-Practices, particularly if the adoption will yield benefits for

their bottom line. Taken together, these results indicate that funds availability is not always considered a possible moderator on internal pressures and G-Practices adoption relationship. The results provide support for H4b; thus, hypothesis H4 is only partially supported.

#### **5.4.4 The Moderating Effect of Fund Availability on The Relationship Between Internal Push Factors and The Adoption Of G-Practices**

The fourth question is also related to the moderating effects of funds availability on the relationship between external pull factors (regulations, green consumers, supply chains, local communities and competitors) and G-Practices adoption.

##### **H5: Funds availability moderates the relationship between external pull factors and G-Practices adoption.**

The second test of moderating effect is to test on the moderating effects of funds availability on the relationship between external pull factors and the adoption of G-Practices. The results of the hypothesis test indicate that fund availability has significant and negative moderating effect on regulations, green consumers, supply chains, and competitors regarding G-Practices adoption. Fund availability does not moderate the relationship between local communities and G-Practices adoption. Thus, the role of funds availability as a moderator on the relationship between external pull factors and adoption of G-Practices was only partially supported. This implies that funds availability does not act as an important driver for producing an antagonistic effect on local communities in G-Practices implementation. The finding that the external driver is significantly related to different levels of the company's financial ability shows that companies can easily attribute low engagement to G-Practices under high financial constraint situations. This is consistent with a study

from Gil, Jimenez, & Lorentec (2001), organizational characteristics play an important role in deploying G-Practices in organizations. Taken together, these results reveal that funds availability is a possible moderator on external pressures and G-Practices adoption relationship. The results provide support for H5a, H5b, H5c and H5e; thus, hypothesis H5 is strongly supported.

## **5.5 Research Contribution**

The current study's results have several theoretical and practical implications.

### **5.5.1 Theoretical Contributions**

The study's key findings have contributed theoretically to the growing body of knowledge regarding G-Practices adoption in the tourism industry. The author used the well-established institutional theory (DiMaggio & Powell, 1983) comprising three main types of isomorphism – nominative, coercive and mimetic – and applied it to the tourism industry, particularly the hotel segment. In this study, institutional theory provides a perspective on how to understand organizations responding to institutional pressures. In order to improve the chance of survival, organizations have an overpowering desire to conform to the institutional environment (DiMaggio & Powell, 1983; Meyer & Rowan, 1977). The applicability of theories varies between developed and developing countries and from field to field around the world. The institutional theory, which has never been attempted before, was applied in SMEs/SMHs in the hotel sector and then is a preliminary study. While a wealth of SME surveys and case studies has been conducted in the manufacturing industries of developed countries, the issue has so far attracted relatively little research interest in

developing countries like Thailand, especially in tourism. According to Morrison et al. (2010) and Thomas et al. (2011), there is a lack of understanding about the factors that motivate organizations to implement environmental management for small companies in tourism. A model of the environmental behavior of companies is needed that can help to expose the mechanisms that can foster sustainable tourism in SMEs.

Therefore, the current study extends previous research on the factors that influence managerial decisions regarding G-Practices adoption in SMHs and provide a valuable contribution to existing theory. This research provides insights into the concepts of internal push and external pull factors on the adoption of G-Practices. The motivation to G-Practices adoption stems from the inner person (push factors) and/or external influences or pull factors that pull owner-managers towards a certain decision. Most of the earlier G-Practices studies did not consider internal push factors such as owner-manager attitudes. G-Practices adoption often draws on external pull factors in more developed countries. In this study, the author integrated both internal push and external pull factors in order to better understand which pressure has the most impact in shaping environmental decision making.

Overall, this study makes two significant contributions to the literature. First, the results provide support to DiMaggio and Powell (1983) that institutional pressures lead organizations to homogeneity (isomorphism) in nature. However, the researcher cannot overemphasize the organizational homogeneity because organizations may develop the organizational heterogeneity instead. Using institutional theory, empirical findings have revealed that both internal push and external pull factors can

influence the adoption of G-Practices and can be determined as important factors of G-Practices adoption. The researcher showed that both normative and coercive pressures brought forth the adoption of G-Practices. This follows from the fact that the coefficient of normative pressures is higher than that of coercive pressures. Specifically, companies subject to normative pressures can lead to higher conformity than would pressure from coercive pressures. The explanation could be that normative pressures to homogeneity come from the similar attitudes and awareness brought into the companies through G-Practices adoption. Among three institutional pressures, coercive pressures were viewed as least impactful and mimetic pressure was not found to be significant. According to the organization's reaction, SMHs may be less sensitive to external pull factors and thus are less likely to face pressures to adopt G-Practices. This result affirms the weak influential role of government bodies in the adoption of G-Practices in Thailand. To knowledge, this is one of the first scholarly studies to use all three isomorphic pressures for describing and explaining the adoption of G-Practices at the small and medium level in the hotel industry.

Second, the researcher refines institutional theory to better explain why organizations respond differently to common institutional pressures. The researcher found that the effect of institutional pressure on G-Practices adoption is dependent on organizational resources. The research takes into account the moderating effect of funds availability on these relationships. The findings suggest that fund availability plays an important role in converting institutional pressures into the adoption of G-Practices. The results also show that funds availability minimizes the likelihood of adopting G-Practices among SMHs. This is in line with prior environmental research (e.g. Vernon et al., 2003) who discovered that cost is a

major consideration for hospitality operators' perception and then this appears to be a significant barrier. Therefore, lack of resources is an important barrier to environmental improvement in the hotel industry in Thailand. As a result, this influences firms' ability to disregard or resist institutional pressures. The researcher argues that despite facing common institutional pressures, such organizations adopt a heterogeneous set of G-Practices because organizational characteristics lead owner-managers to diversely interpret these pressures.

To summarize, it seems to hold a belief that this research contributes to the existing literature by giving new and different insights into possible relationships between institutional pressures, funds availability and G-Practices adoption in SMHs. Vargas-Sánchez and Riquel-Ligero (2011) states that golf courses tend to conform coercive pressures, followed by mimetic pressures in the development of G-Practices. In another study, Rivera (2004) mentions that hotels tend to participate in voluntary environmental programs because of facing higher governmental monitoring. Conversely, the current findings indicate that SMHs do more conform under normative than coercive pressures which enhance them to adopt G-Practices. Thus, this research provides a theoretical contribution to institutional theory by advancing the understanding of the process by which factors associated with the decision of a company can lead to G-Practices adoption. Nevertheless, incorporating moderating effects has inverse relationship.

### **5.5.2 Practical Contributions**

The multidimensional drivers to adopt G-Practices investigated in this research have developed a better understanding of the influence of internal push and external pull

factors on G-Practices adoption. The findings in this research paper lead to a set of recommendations for the hotel owner-managers and industry. To address the issue of how companies prioritize to respond to the environmental demands of various institutional drivers, this research investigates the influence of internal push and external pull factors.

The environmental behavior of companies may satisfy customers, shareholders, employees and other stakeholders in order to secure their-long term loyalty, commitment and support (Freeman, 1984). The findings provide owner-managers with empirical evidence that both internal push and external pull factors are sensitive to environmental issues through the hotel's green activities, but the role of internal push factors rather than external pull factors was the main motivation in shaping companies green decisions in SMHs. Hotel owner-managers tend to give less attention to external pull factors whenever they design their company's strategy through the adoption of G-Practices. The degree of internal and external pressure depends largely on top managers' perception of strategic priorities. The personal responsibilities of managers and their perceptions will play a role in undertaking voluntary environmental programs (Buysse & Verbeke, 2003; Garcés-Ayerbe, Rivera-Torres, & Murillo-Luna, 2012; Sharma, 2000). It would seem that green issues in the hotel sector have gained more attention from many companies in Southern, Thailand. Green initiatives are placed on the marketing plans and strategies of only some leading SMHs (medium-sized hotels), which could have a written environmental policy. There is a need for inclusion of environmental priority at both strategic and operational levels to reach the company goal by connecting with all areas of a facility.

While the results suggest that consumer awareness and interest is currently quite low, SMHs should consider increasing environmental education to drive awareness to guests. The hoteliers argue that there is relatively little motive for hotels to market green credentials, since the green consumer demand is low (Johnson & Ebrahimpour, 2009). Customers increasingly demand that companies do right by society. Customer demand for green products and services is one of the most visible changes in environmental commitment for hotels. In this regard, an increase in demand for green products and services needs to be created among final consumers through increased environmental education and awareness. The hotels can play a big role in promoting awareness and educating more consumers on the conservation of resources. It is important to educate hotel guests on environmental issues and environmentally responsible behavior. While lack of communication of information to guests hinders environmental improvement, the green efforts being undertaken by hotels should be visibly communicated to induce the customer decision-making process. Hotel owner-managers should therefore plan educational projects and invite guests to participate in green activities. For instance, owner-managers should consider placing flyers and notices in each guest room to inform guests about the property's program and ask guests to participate in (i.e. towel recycling program or shut off the lights and air conditioning units when not needed). They should also come up with creative ways to reward hotel guests for being green such as discounts, loyalty programs.

Because there is currently low brand loyalty and price is the primary factor in consumer decision making, green initiatives of a company might lead to product differentiation as well as increased brand loyalty.

Clearly, consumer motivations must be associated with the actual purchase by marketers. Marketers should focus their marketing on creating an emotional connection between guests and eco-friendly brands. Consumers are primarily influenced by emotions (personal feelings and experiences). This is supported by Kollmuss and Agyeman's (2002) observations that the emotional connection with the environment can shape individuals' perceptions towards it. At the same time, awareness campaigns that alert the general public to the severity of the problem and general education messages that inform people how they can help. This will induce eco-friendly consumption norms for hotel guests and will help translate into consumer patterns. Providing knowledge on travel intermediaries is also important to foster sustainable behavior because tour operators and travel agents are able to serve as exemplars of the poor interest in green issues. Moreover, environmental issues can be communicated in guidebooks, on websites, in brochures and other printed material to provide potential guests and the general public with better information by which to make greener choices. Accreditation schemes and awards should also be disseminated as customers remain unaware.

Hotel facilities generally have positive response to environmental issues. Top managers who have more positive environmental attitudes are more involved in environmental management practices. Although owner-managers support G-Practices and sustainability, their effort and commitment is influenced by existing

barriers, resource availability and consumer demand. However, it has not prevented them from adopting green initiatives. Inner attitudes and awareness of owner-managers are the main influence in determining the adoption of G-Practices, including their decisions to take part in voluntary environmental programs.

By focusing on green initiatives, industry-based education and training campaigns and consumer education campaigns, are more likely to have high impact rather than attempting to move green certification forward to become more mainstream. Furthermore, hotel owner-managers in Phuket and Krabi begin to recognize the significance of green initiatives and have initiated a wide range of green activities. However, due to the number of barriers facing hotels in the implementation of some type of voluntary environmental program, a substantial number of hotels will not fully adopt and embrace all aspects of a comprehensive environmental program. Less than 1% of hotels have achieved certification.

There is a low awareness and success of certification programs to date. Hotels should adopt nationally or internationally recognized certification schemes or standards. G-Practices are those related to EMSs. There is a need for further development of the concept of EMSs (e.g. ISO 14001) and green leaf certification in hotels, especially of SMEs that is affordable, monitored, and reported. Implementing an effective EMS or green leaf certification depends on top management commitment and support of resource availability. The hotels participate in current green initiatives only by using low energy light bulbs, recycling as well as linen and towel reuse. Far from it. However, it is still concerned with creating processes and procedures. Green lodging programs may include purchasing policy, an environmental committee responsible for developing an environmental green plan for energy, water, and solid waste use,

employee training programs on green activities, monitoring and auditing, evaluating and reporting. Another suggestion is that SMHs need to set up monitoring systems and standards of each area of the hotel. For instance, a hotel can set the target to lowering its energy use by 20% over a one-year period or replacing the current lighting with LED lighting. For successful implementation of EMS or green leaf certification, hotel owner-managers need to have the necessary environmental knowledge and skills, while a strong management support of environmental programs can also have a positive influence on environmental performance. Many hotel companies want to change behaviors and create green actions, but don't have the requisite knowledge and information. There is therefore a clear need for the training of owner-managers and industry players.

Government and other environmental organizations should boost their efforts in providing hotels with practical information and knowledge. They should also promote awareness campaigns and training programs amongst management and employees.

Owner-managers should be equipped with good experience and training that enable them to better identify the market opportunities from the environmental demands of both internal and external factors. Owner-managers should also regularly participate in environmental training seminars, workshops and courses conducted by government agencies and the green leaf foundation to gain more understanding of the needs and expectations of all stakeholders and satisfy their demands. They have advantages in the form of new business opportunities and the long-term survival of

the business. In addition, employee awareness is very low. Environmental training is one way to help employees improve environmental awareness and knowledge.

Developing new and cost-effective technologies to address environmental threats are relevant and necessary, but it comes with a financial crises. The researcher suggests that hotels begin with low cost simple initiatives and projects. Projects that require a higher financial investment should be carried out thereafter once the benefits of G-Practices have become clearer. However, the low levels of adoption reflect a common belief that there are no economic benefits to be gained and business driven from the adoption of G-Practices. Therefore, the message that G-Practices can save money for daily hotel operation must be communicated and highlighted.

Because of the rapid growth of energy demand in Thailand, along with the need for new and clean energy sources with low costs, other alternate energy sources such as solar energy will definitely be an important part of the future energy mix and electricity use will be reduced. Currently, the potential of solar energy use remains underutilized. While the solar cells are still rather expensive, regulatory support and incentive schemes will play a vital role in a stable deployment of solar energy. The investment of installing solar cells will be okay with the 7-8 year breakeven. However, the hotel owner is able to ask for government subsidy.

As stressed by Anbumozhi and Kanda (2005), only bigger businesses have signed up to voluntary environmental initiatives in Asia and SMEs still lag behind in this approach. Generally, focus does not work with SMEs as much as with big companies. Environmental and professional organizations should target SMHs. Their

environmental knowledge and implementation is quite low compared to big chain hotels. Larger hotels should be invited to convey or to share their knowledge and experience of best practice in working with SMHs.

Ultimately, funds availability is an important moderating factor that must be understood and taken into consideration when dealing with these issues. Fund availability was found to negatively and significantly moderate the relationship between internal push, external pull factors and G-Practices adoption. It implies pressures for the adoption of G-Practices are reduced for higher constraint funds. A lack of financial resources can be perceived as a barrier to successful adoption. Therefore, the support from the government and other stakeholders to make it easy for SMEs/SMHs to access bank loans should be necessary.

### **5.5.3 Policy Recommendations**

Government and industry leaders' intervention in the hotel and tourism sector is too little in advocating environmental performance. There is presently no specific environmental legislation for the hotel and tourism sector. Based on analyses and results, there are several implications for public policy. First, it suggests that relying solely on market forces to lead hotels to go green may be inadequate. These forces may either not be inductive or simply lead some companies to make symbolic efforts to go green. Therefore, there is a substantial need for government, recognized organizations and Thai hotel association to take positive steps to promote G-Practices. Encouragement should be given at central and local levels of government. It is crucial to improve related rules and regulations, and push for stricter

enforcement of regulations in the future to motivate green behavior change. Further, stricter regulations in the future should induce innovation in green technologies. Second, government should play a supporting role by boosting the hotel and tourism sector to undertake green initiatives and in achieving various green certification standards. Attitude and knowledge of hotel owner-managers is important in implementing environmental programs in independently owned and managed hotels (Bohdanowicz, 2005). Independent hotels generally need more support than big hotel chains (Hotel Energy Solutions, 2011). Government involvement is needed, because market forces have not yet produced the need for these standards, and the hotel industry does not have the expertise to develop them. The Thai government may attempt to provide them with sufficient technical, financial, and educational resources. Technical and managerial training and financial aid can be powerful incentives to encourage hotel companies to be more active and become certified. Sustainability experts should be included in new tourism developments to ensure social and environmental criteria are considered in proposals and funding. This is particularly true for SMEs and indigenous businesses and community-based enterprises that may lack such support. Third, government should provide a comprehensive set of incentives or awards specifically to good performers or early adopters. Forth, government could raise more SMH owner-managers' awareness of green issues by providing education and training. Emphasis should be put on being proactive in taking green initiatives to gain competitive advantages. Fifth, the role of Thai Local Government Organization and related agencies should increase effective communication and campaigns on good practices. Sixth, the data suggests that policy makers and the green leaf foundation should target key actors in a value chain to cover a broader range of companies, suppliers and competitors. This will help in

improving the environment, social and financial sustainability of the products and services and Thailand's southern growing region. Finally, the promotion of best practices should take place and there is an expectation that governments will take a more proactive role. Governments need to act as facilitators for setting up arenas to share best practices among sectors (hotels, tour operators, airlines and cruise lines) so then they are able to learn from each other. It can therefore be concluded that there is a requirement to legislate and provide incentives concurrently to hotel businesses in the effective implementation of G-Practices. Additionally, courses and university degrees in environmental management should be provided.

#### **5.6 Limitations and Future Research**

Despite the theoretical and practical contributions of this study, it was not without its limitations that might indicate opportunities for future research. Below, the author summarizes these limitations.

First, the survey was conducted during the off-peak season between September and October 2015 to ensure that hotel owner-managers had time to participate and were able to answer very long questionnaires (70+ questions). A number of hotel businesses were absent at the time of the data collection and, this could have affected the current results of the study. The research thus should be repeated at different times of the year to ensure the results are reliable across time. At the same time, if a large number of samples were obtained, the results may have been different. Further, future researchers should attempt to work on improvement scales. This can be achieved by adding and modifying items, based on expert feedback on the subject.

However, this study provided insights into the current situation and pointed to new issues that should be investigated in future research in tourism.

Second, this study applied to the use of self-administered questionnaires. There is still lack of in-depth information. Therefore, future research should consider combining questionnaire with personal interview that may provide a deep understanding of interviewees and yield valuable insights on G-Practices.

Third, the lack of the development of a universal definition of what constitutes an SME/SMH hinders comparisons of businesses. Definitions of SMEs used in earlier studies were different. The most common criterion used to distinguish between large and small businesses is the number of employees (Hatten, 2011). These may include whether or not the business is engaged in a particular industry (this is common in many countries that differentiate manufacturers from services).

Fourth, owner-managers who participated in this study might be apt to overstate or fabricate responses. For example, to answer questions, it's relatively easy for people to say 'yes', and it would be socially unacceptable to say that they didn't. Especially in Thai culture nobody is going to say 'no'. But does it convert to action when it comes to making decisions? This should be a matter of concern.

Last, this study investigated the indirect influence of funds availability on the relationship between institutional pressures and G-Practices adoption. Other moderating variables could intervene in the associations among institutional pressures and G-Practices adoption. It is possible, for example, that owner-managers'

personal characteristics (Bansal & Roth, 2000; Cordano & Frieze, 2000), past experiences or skills (Delmas & Toffel, 2012) would affect such a causal link. These could contribute to an increased understanding of the relationships.

## **5.7 Conclusion**

This chapter highlighted the important contributions of this research. This study has confirmed the significant influences of institutional pressure, both internal push and external pull factors on the adoption of G-Practices in hotels. Likewise, it was discovered that funds availability negatively moderates institutional pressures on the adoption of G-Practices. The results reported are aligned with previous results that financial constraints act as a barrier to G-Practices adoption in SMEs. Indeed, a company that is under institutional pressure to improve its sustainability can be expected to be more likely to invest in green initiatives, all the same, it depends on the circumstance.

Overall, the findings show that external pull factors such as regulators in Thailand are not proactive enough and their influence on the level of adoption of G-Practices in hotels are weaker than expected. Also, consumers favor price over environmental concern. The researcher further found that the pressure from supply chains is more obliged than other sources of external pressures. The findings provide an important addition to the growing body of knowledge about the potential for G-Practices adoption influenced by supply chain pressure. This study indicates that supply chains have a positive influence on the adoption of G-Practices. This might be because information sharing in supply chains has become more efficient for long-term cooperation and coordination. Many companies beat their competitors by using

their supply chains. Even if the decisions of SMHs to adopt G-Practices are stimulated by external pull factors, the author likewise finds that companies' decisions about their environmental operations can be constructed by internal push factors such as owner-manager attitudes and environmental awareness. Such self-perceptions drive them to respond to the need for G-Practices. Attitudes as well as awareness at a managerial level towards environmental issues are highly influential in SMHs adoption decision of G-Practices. For example, environmental views are inspired by owner-managers' perceptions, attitudes, values, information and knowledge. From this the author may conclude that external pull factors have a less impact on the adoption of G-Practices amongst SMHs compared to internal push factors. The researcher showed that normative pressures were more influential than coercive or mimetic pressures in adopting G-Practices in SMHs. Furthermore, one factor growing heterogeneity is funds availability. This research thus has yielded new theoretical knowledge outcome to the body of knowledge.

Moreover, very few SMHs engaged in voluntary environmental activities compared to larger hotels. Some SMHs may not choose to pursue certifications. Instead, green certification is a tool that hoteliers may use to distinguish themselves from other hotels. The current study provides preliminary clues about the challenges for the deployment of certification programs. The green leaf foundation or related agencies need to understand owner-managers' assumptions and experiences, and motivate them by giving proper support and guidance. Furthermore, policy-makers should care about an explanation that practically G-Practices must make sound business sense. Therefore, risk results from a reduction in product and service quality in the adoption

of G-Practices, hotels will lose customers to competitors, which could negatively impact profits and growth.

Most hotel companies perceived the benefits of G-Practices adoption include driving market reputation and brand value, saving the environment and sustainability, and reducing operation costs. Embedding sustainability into their hotels offers them greater opportunity in the drive for competitiveness and long-term survival.

G-Practices are a great way to help reduce legitimacy gaps between the organization's actions and society's expectations. The principle of institutional theory is to obtain a return on investment in a company. This guides the investment decisions for practitioners. In modern fundamental changes, companies must look beyond financial gain. They are seeking legitimacy directly from the firm's stakeholders rather than optimizing financial returns for shareholders alone. The existing concerns should be achieved by balancing the interests of all stakeholders, including the shareholders, whose interests are normally to have profit maximized. Businesses must be managed as to sustain the potential yield of their social and environmental benefits in addition to financial gain. It will promote long-term health for communities and a business environment that ensures a sustainable future all.

The significant and substantial contribution of the research is to understand the processes affecting towards G-Practices adoption. Even though many of these hypotheses tested in this study were not supported, analysis of the data identified potential areas of further research from the results, namely the addition of variables

pertained to G-Practices within an articulated dynamic model, and the inclusion of moderating variables or mediating variables affecting the adoption of G-Practices.

To summarize, the author believes that this study has given beneficial implications for practitioners, policy-makers and academic researchers based on an insightful review of the existing work on G-Practices adoption.



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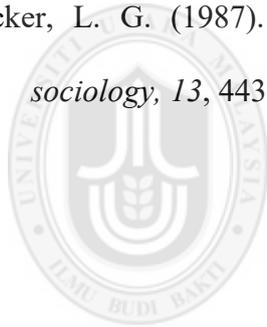
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**APPENDICES**



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## Appendix A

### *Istilah untuk Terjemahan Abstrak*

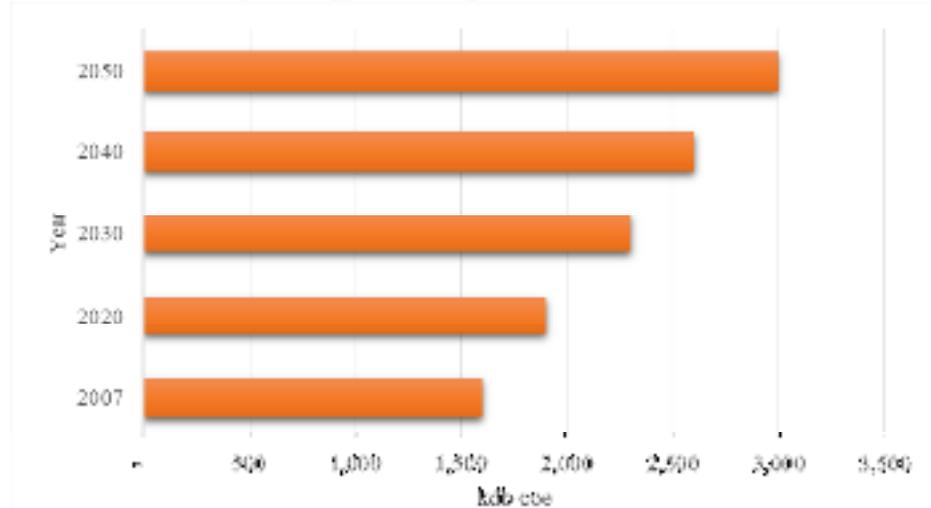
<b>Istilah Bahasa Inggeris</b>	<b>Istilah Bahasa Melayu</b>
green and sustainable practice	amalan hijau lagi mampan
certification scheme	skim pengakuan
small and medium-sized enterprise	perusahaan kecil dan sederhana
owner-manager	pengurus yang juga pemilik (pengurus-pemilik)
institutional theory	teori institusi
adoption	penerimagunaan
small and medium-sized hotel	hotel bersaiz kecil dan sederhana
internal push factors	faktor daya tolak dalaman
external push factors	faktor daya tarik luaran
supply chains	rantaian bekalan
fund availability	ketersediaan dana
moderates	menyederhana
independent variables	pemboleh ubah tak bersandar
dependent variables	pemboleh ubah bersandar



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## Appendix B

### *Thailand's Primary Energy Consumption*



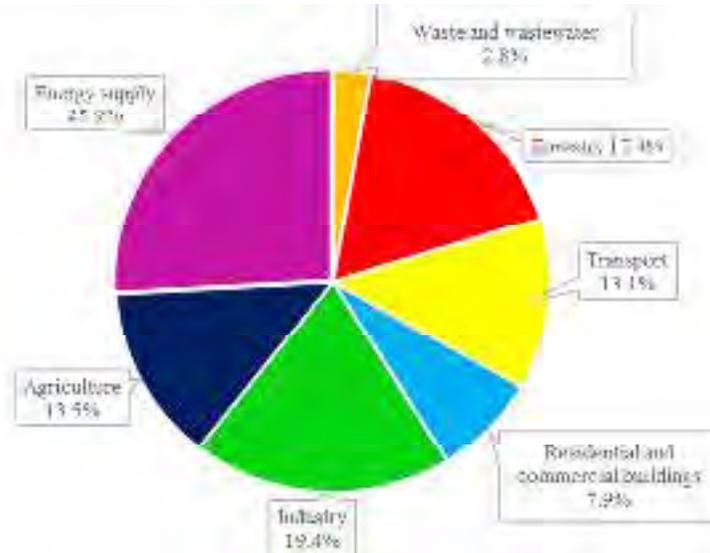
Source: Energy for Environment Foundation, 2009

### **Global Warming and Carbon Dioxide Emission and Energy Consumption Trend**

As shown above, all countries will be forced to jointly solve the problem of global warming. The needs of commercial energy in Thailand will increase at least 90 percent in 2050 from the present. Even to maintain GHG emissions on current levels, it might be very difficult for Thailand. IPCC proposed to maintain the level of greenhouse gas (GHG) in the atmosphere at 450 ppm CO<sub>2</sub> that means global GHG emissions in 2050 will be reduced from the level in 1990. Annex-1 Party must be reduced approximately 25-40 percent by 2020 and 80-95 percent by 2050. Non-Annex-1 Party (e.g. Thailand) must be reduced by 15-30 percent by 2020.

Scientific evidence suggests that global warming is much more severe than expected. Maintaining GHG level at 450 ppm CO<sub>2</sub> is too high. It may be necessary to reduce the level to 350-400 ppm. If GHG level is maintained at 350 ppm CO<sub>2</sub>, Global GHG emissions will begin to decline by 2015. In 2050, it will be reduced by 85 percent from

1990. Meanwhile, the burden of solving the global warming crisis should be shared fairly.



Source: Energy for Environment Foundation, 2009

CO2 EMISSIONS FROM FOSSIL FUELS IN 2005 & PRIMARY ENERGY CONSUMPTION (PEC) IN 2007			
Country	CO2 Emissions		PEC
	Total (M.Tons)	Per capita (Tons/person)	Per Capita (Tons/person)
Australia	407	20.24	6.05
China	5,327	4.07	1.42
France	415	6.59	4.05
Germany	844	10.24	3.77
India	1,166	1.07	0.37
Japan	1,230	9.65	4.06
Malaysia	156	6.49	2.39
Netherlands	270	16.44	5.59
Russia	1,696	11.88	4.85
South Korea	450	10.27	5.34
<b>Thailand</b>	<b>234</b>	<b>3.65</b>	<b>1.33</b>
United Kingdom	577	9.55	3.57
United States	5,957	20.14	7.98
<b>World</b>	<b>28,193</b>	<b>4.37</b>	<b>1.72</b>

Source: US Department Of Energy and British Petroleum, 2007

## Appendix C

### *The Environmental Impacts of a Hotel*

Service/Activity	Description	Main Environmental Impacts
<b>Administration</b>	Hotel management Reception of guests	Energy, water and materials (mainly paper) Generation of waste and hazardous waste (toner cartridges)
<b>Kitchen</b>	Food conservation Food preparation Dish washing	Consumption of energy and water Packaging waste Oil waste Organic waste Generation of odors
<b>Laundry</b>	Washing and ironing of guest clothes Washing and ironing of hotel linens	Consumption of energy and water Use of hazardous cleaning products Generation of waste water
<b>Restaurant/Bar</b>	Breakfast, lunch, dinner Beverages and snacks	Energy, water and raw materials consumption Packaging waste Organic waste
<b>Room Use</b>	Use by guests Products for guests' use Housekeeping	Energy, water and raw materials consumption Use of hazardous products Generation of waste packaging Generation of waste water
<b>Technical Services</b>	Equipment for producing hot water and heating Air conditioning Lighting Swimming pools Green areas Mice and insect extermination Repairs and maintenance	Energy and water consumption Consumption and generation of a wide range of hazardous products Air and soil emissions Generation of waste water Pesticides use

Source: Graci (2009)

**Appendix D**  
*Research Instrument*

**SCHOOL OF BUSINESS MANAGEMENT  
UNIVERSITI UTARA MALAYSIA**



**THE ADOPTION OF GREEN PRACTICES BY SMALL AND MEDIUM  
SIZED HOTELS IN SOUTHERN THAILAND**

For further information, please contact Sruangporn Satchapappichit,  
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**THANK YOU FOR COMPLETING THIS QUESTIONNAIRE**



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## เรียน ท่านเจ้าของ/ผู้จัดการ

ดิฉันเป็นนักศึกษาที่ Universiti Utara Malaysia กำลังทำปริญญาเอก  
 ภา น วิ จั ย ตั ภา น ก า ร ต ล าด  
 แบบสอบถามนี้เป็นส่วนหนึ่งของการศึกษาเรื่องการปรับเปลี่ยนเข้าสู่แนวทางป  
 ฏิบัติในการจัดการสีเขียวโดยสถานประกอบการโรงแรมขนาดกลางและเล็กใ  
 น ภา ค ใ ต้ ข อ ง ป ร ะ เ ท ศ ไ ท ย  
 กลุ่มเป้าหมายของการศึกษาครั้งนี้เป็นผู้จัดการ/เจ้าของธุรกิจโรงแรม  
 ความช่วยเหลือของท่านในการกรอกข้อมูลในแบบสอบถามนี้มีคุณค่าอย่างมา  
 ก และมีความสำคัญที่จะทำให้เสร็จสิ้นการศึกษาค้นคว้าครั้งนี้  
 โดยเฉพาะอย่างยิ่งการวิจัยนี้ไม่ได้มีวัตถุประสงค์ในเชิงพาณิชย์  
 คำตอบที่ได้รับจากท่านจะมีคุณค่ามากที่จะช่วยให้เข้าใจปัจจัยที่มีผลต่อระดับ  
 ข อ ง ก า ร ป ฏิ บั ติ ก า ร สี เ ขี ย ว  
 คำตอบของท่านจะได้รับการเก็บรักษาไว้เป็นความลับ  
 ผลการศึกษานี้สามารถนำเสนอตามคำขอ

## ขอแสดงความนับถือ

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.....  
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 .....

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Co-supervisor

Email: zolkafli@uum.edu.my

คำชี้แจง ไม่มีคำตอบไหนถูกหรือผิด เพียงให้คำตอบที่แท้จริงของท่าน  
โปรดมั่นใจได้ว่าคำตอบของท่านจะถูกเก็บรวบรวมโดยไม่ระบุชื่อ



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Dear Owner-managers,

I am a student at Universiti Utara Malaysia, currently doing Ph.D. thesis research in Marketing. This questionnaire is part of my study into the adoption of green practices by small and medium sized hotels in Southern Thailand. The target group of this study is owner-managers of the hotel businesses. Your help in filling in this questionnaire is highly appreciated and significant to complete this study. Particularly, this research does not have a commercial purpose. The answers received from you will be very valuable to help understand the factors that influence levels of green practices adoption. Your answers will be treated with the strictest confidence. The results of this study can be offered on request.

Yours truly,

.....

Sruangporn Satchapapichit

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.....

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**INSTRUCTIONS:** There are no ‘right’ or ‘wrong’ answers, only answers that are true for you. Please be assured that your responses will be collected anonymously.

**ตอนที่ 1. สิ่งทีปฏิบัติหรือมาตรการที่เป็นมิตรกับสิ่งแวดล้อมของโรงแรม**

**SECTION 1. GREEN PRACTICES IN YOUR HOTEL**

คำถามในส่วนนี้

จะพิจารณาถึงระดับสิ่งทีปฏิบัติหรือมาตรการที่เป็นมิตรกับสิ่งแวดล้อมภายในโรงแรมของท่าน โปรดทำเครื่องหมาย

รอบหมายเลขคำตอบทีตรงกับความเป็นจริงในโรงแรมของท่านมากที่สุด How much does your hotel engage in these green practices? (Please choose one of the following five alternatives and circle the number of your choice).

1	2	3	4	5
<i>ไม่เคยทำเลย</i> <i>Not at all</i>	<i>ไม่ค่อยได้ทำ</i> <i>lightly</i>	<i>ทำบางครั้ง</i> <i>Mod</i> <i>rately</i>	<i>ทำบ่อยครั้ง</i> <i>Very</i>	<i>ทำเสมอ</i> <i>Extrem</i> <i>ely</i>

1. มีมาตรการหรือติดตั้งระบบเพื่อควบคุมการส่องสว่างในพื้นที่สาธารณะให้ มีประสิทธิภาพ เช่น การติดตั้งเซ็นเซอร์เพื่อปิดไฟฟ้าเมื่อไม่มีผู้ใช้งาน Energy-efficient lighting in public areas. e.g.	1	2	3	4	5
2. มีการใช้อุปกรณ์ประหยัดน้ำ Water efficient fixtures.	1	2	3	4	5
3. มีการเชิญชวนแขกที่เข้าพักร่วมกันในการใช้ผ้าเช็ดตัวมากกว่า 1 ครั้ง Encouraging guests to reuse towels.	1	2	3	4	5
4. เลือกใช้สุขภัณฑ์ที่ช่วยประหยัดน้ำ Dual-flush toilets.	1	2	3	4	5
5. มีการคัดแยกของเสียในห้องพัก Sorting waste in guest rooms.	1	2	3	4	5

6. การเลือกใช้ผลิตภัณฑ์ทำความสะอาดที่เป็นมิตรกับสิ่งแวดล้อม (เช่น ย่อยสลายนำมาใช้ซ้ำ รีไซเคิล ฯลฯ) Purchase of environmentally friendly cleaning products (e.g. biodegradable, ...)	1	2	3	4	5
7. จัดซื้อวัตถุดิบประกอบอาหารที่เป็นสินค้าเกษตรอินทรีย์ Purchase of organically grown foods.	1	2	3	4	5
8. จัดซื้อสินค้าจำนวนมาก หรือกำหนดเงื่อนไขต่อคู่สัญญา เพื่อลดการใช้บรรจุภัณฑ์ เช่น การใช้บรรจุภัณฑ์หมุนเวียน การงดการใช้ถุงพลาสติกและโฟม Purchase in bulk to reduce packaging usage or specify conditions to suppliers to reduce packaging usage, e.g. reusable packaging, no plastic bags and foam.	1	2	3	4	5
9. การเชิญชวนแขกที่เข้าพักให้เข้าร่วมกิจกรรมส่งเสริมความเป็นมิตรกับสิ่งแวดล้อม Encouraging guests to be eco-friendly.	1	2	3	4	5

1	2	3	4	5
<i>ไม่เคยทำเลย</i> Not at all	<i>ไม่ค่อยได้ทำ</i> Slightly	<i>ทำบางครั้ง</i> Moderately	<i>ทำบ่อยครั้ง</i> Very	<i>ทำเสมอ</i> Extremely

10. มีการผสมผสานข้อความที่คำนึงถึงสิ่งแวดล้อมในผลิตภัณฑ์ Incorporating environmental messages in their products.	1	2	3	4	5
11. มีการบริจาคเฟอร์นิเจอร์ที่ใช้แล้ว Donation of used hotel furniture.	1	2	3	4	5
12. มีการให้บริการห้องพักปลอดบุหรี่และการจัดสถานที่สูบบุหรี่ Provision of designated non-smoking rooms.	1	2	3	4	5
13. เสนอเมนูสุขภาพที่มีใสสารเคมีให้ใสปริมาณน้อยที่สุด และควรเป็นเมนูที่มีอาหารครบห้าหมู่ Provision of a healthy menu with minimal chemical additives.	1	2	3	4	5
14. จัดให้มีการฝึกอบรมด้านสิ่งแวดล้อมสำหรับพนักงาน Provision of environmental training sessions for employees.	1	2	3	4	5
15. มีรถบริการโรงแรมให้แขกผู้มาพัก Encouraging car-pooling whenever if possible for hotel's guests.	1	2	3	4	5

16. มีการตรวจสอบ เช่นการใช้พลังงาน, น้ำConducting an audit e.g. energy, water.	1	2	3	4	5
17. มีการกำหนดนโยบายด้านการจัดการ สิ่งแวดล้อมHaving a written policy.	1	2	3	4	5

**ตอนที่ 2. ความคิดเห็นต่อสิ่งแวดล้อม**  
**SECTION 2. YOU AND THE ENVIRONMENT**

คำถามในส่วนนี้ จะถามถึงทัศนคติของท่านที่มีต่อสิ่งแวดล้อม และความคิดเห็นต่อปัจจัยที่ส่งผลต่อการปรับเปลี่ยนเข้าสู่สิ่งที่เป็นมิตรกับสิ่งแวดล้อม ให้ท่านสำรวจความคิดเห็นของตนเอง แล้วโปรดทำเครื่องหมาย O รอบหมายเลขคำตอบที่ตรงกับความคิดเห็นของท่านมากที่สุด How much do you agree or disagree with each of these statements regarding your attitudes, opinions and perceptions toward the environment? (Please choose one of the following five alternatives and circle the number of your choice).

1	2	3	4	5
<i>ไม่เห็นด้วย</i> <i>Strong Disagree</i>	<i>น้อย</i> <i>Disagree</i>	<i>ปานกลาง</i> <i>Neither Agree nor Disagree</i>	<i>มาก</i> <i>Agree</i>	<i>มากที่สุด</i> <i>Strongly Agree</i>

**ทัศนคติ Owner-Manager Attitudes**

18. บ้านที่สร้างขึ้นในพื้นที่ใหม่ควรได้รับการสร้างขึ้นรอบๆ ต้นไม้ซึ่งไม่ควรถูกตัดลง House built in a new area should be built around trees, which should not be cut down.	1	2	3	4	5
19. ประเทศของเรามีต้นไม้จำนวนมากซึ่งไม่มีความจำเป็นในการรีไซเคิลกระดาษ Our country has so many trees that there is no need to recycle paper.	1	2	3	4	5
20. มีน้ำมากในประเทศนี้เราไม่เห็นว่ามีใครคนมีความกังวลใจเกี่ยวกับก๊อกน้ำรั่ว With so much water in this country, we do not see why people are worried about leaky faucets.	1	2	3	4	5
21. เรามีไฟฟ้ามากซึ่งเราไม่ต้องกังวลเกี่ยวกับการอนุรักษ์ We have so much electricity that we do not have to worry about conservation.	1	2	3	4	5

22. การรีไซเคิลสร้างปัญหามากเกินไป Recycling is too much trouble.	1	2	3	4	5
23. เนื่องจากเราอยู่ในประเทศที่ใหญ่ มลพิษใดๆ ที่เรารสร้างจะแพร่กระจายได้ง่ายและ ดังนั้นเราไม่ต้องกังวล Since we live in such a big country, any pollution we create is easily spread out and therefore is	1	2	3	4	5
24. ไม่มีอะไรที่ประชาชนโดยเฉลี่ยสามารถ ทำได้เพื่อช่วยหยุดมลพิษทางสิ่งแวดล้อม There is nothing the average citizen can do to help stop environmental pollution.	1	2	3	4	5
25. เรามีการดำเนินงานด้านสิ่งแวดล้อม ที่เพียงพอเพื่อตอบสนองความต้องการ ทางกฎหมาย We take sufficient environmental action to meet legislation	1	2	3	4	5
26. บริษัทของเราไม่ก่อให้เกิดผลกระทบต่อ สิ่งแวดล้อม Our company does not have an environmental impact.	1	2	3	4	5
	1	2	3	4	5
<i>ไม่เห็นด้วย</i> <i>Strong</i> <i>Disagree</i>	<i>น้อย</i> <i>Disagree</i>	<i>ปานกลาง</i> <i>Neither</i> <i>Agree nor</i> <i>Disagree</i>	<i>มาก</i> <i>Agree</i>	<i>มากที่สุด</i> <i>Strongly</i> <i>Agree</i>	
27. การลดผลกระทบต่อสิ่งแวดล้อมของ เราทำให้สามารถสร้างประสิทธิภาพ ด้านต้นทุนอย่างมีนัยสำคัญ Reducing our environmental impact can have significant cost benefits	1	2	3	4	5
28. การปรับปรุงการดำเนินงานที่เป็นมิตร กับสิ่งแวดล้อมมักจะช่วยเพิ่มประสิทธิภาพ การผลิต Improving environmental performance usually improves production efficiency.	1	2	3	4	5
29. การดำเนินกิจกรรมที่เป็นมิตรต่อสิ่งแวดล้อม ในธุรกิจก่อให้เกิดประโยชน์ ต่อโรงแรม Business environmental initiatives are of benefit to the hotel.	1	2	3	4	5
30. เป็นที่ชัดเจนสิ่งที่แสดงให้เห็นถึง 'วิธีปฏิบัติที่เป็นเลิศ' ในการดำเนินงานที่เป็นมิตรกับสิ่งแวดล้อม It is clear what represents 'best practice' in	1	2	3	4	5
31. เป็นที่ชัดเจนว่ากฎหมายมีผลต่อเรา It is clear how legislation affects us.	1	2	3	4	5

32. นโยบายการจัดการสิ่งแวดล้อมก่อให้เกิดผลประโยชน์เชิงพาณิชย์ในเวลา นี้ There are currently commercial benefits to my company in having an environmental policy.	1	2	3	4	5
<b>ประโยชน์ที่ธุรกิจได้รับ Benefits Businesses Can Gain</b>					
33. ประหยัดต้นทุนเพิ่มขึ้น Increase cost saving.	1	2	3	4	5
34. ทำกำไรเพิ่มขึ้น Increase profitability.	1	2	3	4	5
35. เพิ่มประสิทธิภาพในการผลิต Increase efficiency.	1	2	3	4	5
36. ให้เราได้เปรียบในการแข่งขันเหนือคู่แข่งของเรา Give us a marketing advantage over our competitors.	1	2	3	4	5
37. เสริมสร้างภาพลักษณ์ของโรงแรม Enhance hotel's image.	1	2	3	4	5
	1	2	3	4	5
<i>ไม่เห็นด้วย</i> <i>Strong Disagree</i>	<i>น้อย</i> <i>Disagree</i>	<i>ปานกลาง</i> <i>Neither Agree nor Disagree</i>	<i>มาก</i> <i>Agree</i>	<i>มากที่สุด</i> <i>Strongly Agree</i>	
38. ปรับปรุงความพึงพอใจของลูกค้า Improve customer satisfaction.	1	2	3	4	5
39. ปรับปรุงความสัมพันธ์กับชุมชน Improve relationship with the community.	1	2	3	4	5
40. ปรับปรุงขวัญกำลังใจของพนักงาน Improve employee morale.	1	2	3	4	5
41. การปฏิบัติตามกฎหมาย Complying with legislation.	1	2	3	4	5
42. สร้างสภาพแวดล้อมการทำงานที่สะอาด Create cleaner working environment.	1	2	3	4	5
43. ลดการปล่อยก๊าซคาร์บอน Reduce carbon emissions.	1	2	3	4	5

**การใส่ใจพนักงาน Concern for Employees**

44. ความกังวลของพนักงานด้านสิ่งแวดล้อมส่งผลกระทบต่อการผลิตเสมอ Employee concerns always affect productivity.	1	2	3	4	5
45. เราปฏิบัติตามคำแนะนำจากพนักงานเกี่ยวกับเรื่องสิ่งแวดล้อมใดๆ We act upon any environmental matters suggested by employees.	1	2	3	4	5
46. การใส่ใจสิ่งแวดล้อมเพื่อพนักงานเป็นส่วนสำคัญของการทำงานของเรา Employee concerns are an important part of our work.	1	2	3	4	5
47. พนักงานมักจะมองหาธุรกิจที่เป็นมิตรต่อสิ่งแวดล้อม Employees tend to look for an environmental friendly business.	1	2	3	4	5

1	2	3	4	5
<i>ไม่เห็นด้วย</i> <i>Strong Disagree</i>	<i>น้อย</i> <i>Disagree</i>	<i>ปานกลาง</i> <i>Neither Agree nor Disagree</i>	<i>มาก</i> <i>Agree</i>	<i>มากที่สุด</i> <i>Strongly Agree</i>

**ระเบียบข้อบังคับ Regulatory**

48. ธุรกิจของเราให้ความร่วมมือกับตัวแทนรัฐในการรักษาสิ่งแวดล้อม Our business has established collaborative partnership with the govt agents to protect the environment.	1	2	3	4	5
49. ข้อกำหนดกฎหมายสิ่งแวดล้อมมีผลกระทบต่อธุรกิจของเรา โดยต้องมีการจัดการมลพิษสิ่งแวดล้อมที่ไม่เป็นอันตรายต่อสุขภาพมนุษย์และสิ่งแวดล้อม เช่น นำเสียดำหนดให้มีค่า BOD ปล่อย่อยออกไม่เกิน 20 mg/l สถานที่ต้องถูกชลक्षणณะ	1	2	3	4	5
50. เราปฏิบัติตามข้อกำหนดของกฎหมาย เช่นมาตรา 7-9 มีเซนสนนถูกส่งปิด Environmental legislation is not relevant to our business.	1	2	3	4	5

**ผู้บริโภคสีเขียว Green Consumers**

51. ปัญหาด้านสิ่งแวดล้อมนั้นมีผลต่อลูกค้าในการตัดสินใจเลือกซื้อสินค้าที่เป็นมิตรกับสิ่งแวดล้อม Environmental issues critically affect the buying decisions of our customers.	1	2	3	4	5
52. ลูกค้าของเรามักจะพูดถึงปัจจัยด้านสิ่งแวดล้อมเมื่อตัดสินใจเลือก Our customers often mention environmental factors when making choices.	1	2	3	4	5
53. ลูกค้าต้องการสินค้าที่เป็นมิตรกับสิ่งแวดล้อม Customers desire for environmental friendly products.	1	2	3	4	5
54. ลูกค้ายินดีจ่ายในราคาที่สูงกว่าสำหรับสินค้าที่เป็นมิตรกับสิ่งแวดล้อม Customers are willing to spend more money on green products.	1	2	3	4	5

#### ห่วงโซ่อุปทาน Supply Chains

55. เราได้รับข้อมูลจากผู้ขายวัตถุดิบของเราเกี่ยวกับสิ่งที่ปฏิบัติที่เป็นมิตรกับสิ่งแวดล้อมของพวกเขา We obtains information from our suppliers about their environmental management practices.	1	2	3	4	5
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1	2	3	4	5
<i>ไม่เห็นด้วย</i> <i>Strong Disagree</i>	<i>น้อย</i> <i>Disagree</i>	<i>ปานกลาง</i> <i>Neither Agree nor Disagree</i>	<i>มาก</i> <i>Agree</i>	<i>มากที่สุด</i> <i>Strongly Agree</i>

56. ความใส่ใจต่อสิ่งแวดล้อมของซัพพลายเชน มีผลกระทบต่อธุรกิจของเรา Supply chains' environmental concerns have impacted on our business.	1	2	3	4	5
57. ความต้องการซัพพลายเชนเพื่อสิ่งแวดล้อมเข้ามามีบทบาทสำคัญในการปรับปรุงการดำเนินการ Supply chain requirements can play an important role in improving environmental performance.	1	2	3	4	5
58. ซัพพลายเออร์ของเราพิจารณาประเด็นด้านสิ่งแวดล้อมเป็นสิ่งสำคัญมาก Environmental issues are considered to be very important for our supplier.	1	2	3	4	5

#### ชุมชนท้องถิ่น Local Communities

59. ความกดดันจากนักกิจกรรมชุมชนส่งผลกระทบต่อการทำงานของ บริษัทของเรา Pressure from community activists has affected our company's conduct.	1	2	3	4	5
60. ชุมชนท้องถิ่นสร้างแรงกดดันต่อบริษัทที่มีการดำเนินงานที่เป็นมิตรกับสิ่งแวดล้อมที่ไม่ดี Local communities put pressure on companies that have bad environmental practices.	1	2	3	4	5
61. สมาชิกชุมชนจัดทำโครงการสีเขียวเสมอ Green projects have always been led by community members.	1	2	3	4	5
62. ธุรกิจของเราส่วนใหญ่มีแนวโน้มที่มุ่งมั่นในการพัฒนาชุมชนในท้องถิ่น Our business is most likely to be committed to communities in the local.	1	2	3	4	5

**คู่แข่ง Competitors**

63. การลงทุนในสินค้าของเราทำให้เรามีความแตกต่างจากคู่แข่ง Investing in products differentiate our products.	1	2	3	4	5
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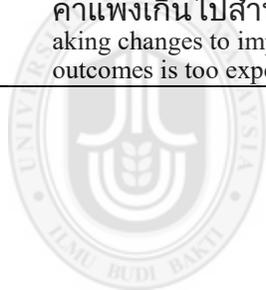
1	2	3	4	5
<i>ไม่เห็นด้วย</i> <i>Strong Disagree</i>	<i>น้อย</i> <i>Disagree</i>	<i>ปานกลาง</i> <i>Neither Agree nor Disagree</i>	<i>มาก</i> <i>Agree</i>	<i>มากที่สุด</i> <i>Strongly Agree</i>

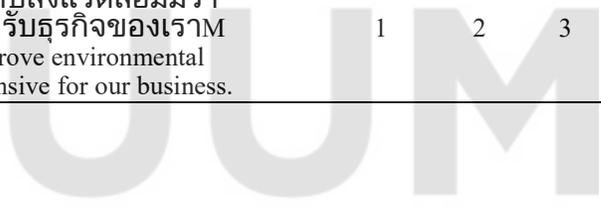
64. การปรับปรุงการดำเนินงานที่เป็นมิตรกับสิ่งแวดล้อมจะช่วยให้เราแข่งขันกับคู่แข่ง Improving environmental performance helps us keep up with competitors.	1	2	3	4	5
65. การปฏิบัติที่เป็นมิตรกับสิ่งแวดล้อมส่งผลให้เกิดนวัตกรรมของสินค้า Environmentally friendly actions result in product innovations.	1	2	3	4	5

**ความพร้อมของเงินทุน Funds Availability**

66. มีวิธีการวิเคราะห์ผลประโยชน์ต้นทุนที่ไม่ครอบคลุม Non-comprehensive cost-benefit analysis methods.	1	2	3	4	5
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67. มีการคำนวณกำไรระยะสั้นด้วยไม่มีความอดทนเพียงพอซึ่งระยะเวลาในการคืนทุนจะช้าในการลงทุนของอุปกรณ์	1	2	3	4	5
Short-term profit calculations resulting in low tolerance for longer payback periods of equipment investment.					
68. ขาดความยืดหยุ่นในการลงทุนเนื่องจากมีอัตรากำไรต่ำ A lack of capital investment flexibility due to low profit margin.	1	2	3	4	5
69. การขาดความเข้าใจในการพยากรณ์ค่าใช้จ่ายที่คาดว่าจะเกิดขึ้นในอนาคต (เช่นการกำจัดของเสีย)	1	2	3	4	5
A lack of understanding in predicting future liability costs (e.g. waste disposal).					
70. การประหยัดจากขนาดการผลิตได้ขจัดขวางบริษัทขนาดเล็กจากการลงทุนในความคิดที่จะลดของเสีย (เช่นเทคโนโลยี)	1	2	3	4	5
Economies of scale preventing smaller firms from investing in waste reduction opinions (e.g. technologies).					
71. การเปลี่ยนแปลงเพื่อปรับปรุงการดำเนินงานที่เป็นมิตรกับสิ่งแวดล้อมมีราคาแพงเกินไปสำหรับธุรกิจของเรา	1	2	3	4	5
making changes to improve environmental outcomes is too expensive for our business.					



  
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### ตอนที่3. ข้อมูลทั่วไปของผู้ตอบแบบสอบถาม

#### SECTION 3. SOME QUESTIONS ABOUT YOU AND YOUR BUSINESS

โปรดทำเครื่องหมาย ✓ ลงใน □ หรือเติมข้อความลงในช่องว่างตรงตามความเป็นจริง

Please answer by ticking ✓ □ the relevant box or writing an answer.

1. ผู้ให้ข้อมูล Informant

เจ้าของ Owner  ผู้จัดการ Manager

2. เพศ Gender

ชาย Male  หญิง Female

3. อายุ Age

20-29  30-39  40-49  50-59  60-69  ≥70

4. ระดับการศึกษาสูงสุด Level of Education

ประถมศึกษา Primary  มัธยมศึกษาตอนต้น  
Secondary  มัธยมศึกษาตอนปลาย High school  
 อนุปริญญา Diploma  ปริญญาตรี Bachelor degree  
 สูงกว่าปริญญาตรี Post graduate degree

5. ระยะเวลาการทำงานของท่านที่อยู่ในตำแหน่งนี้ How long have you been in your position?

<1 ปี  2-5 ปี  6-10 ปี  
 11-15 ปี  >16 ปี

6. ราคาห้องพักต่อคืนต่อคน: How much do you charge per room per night?  
บาท

<500 บาท  500-999 บาท  1,000-1,500 บาท

7. ธุรกิจที่פקแห่งนี้ก่อตั้งขึ้นมากี่ปี How many operating ages of your business run this establishment? \_\_\_\_\_

8. ธุรกิจที่פקของท่านมีจำนวนพนักงานทั้งหมดกี่คนรวมเจ้าของและผู้จัดการ How many people are employed here, including the owner and/or the manager? \_\_\_\_\_

9. ธุรกิจที่פקของท่านมีจำนวนห้องพักทั้งหมดกี่ห้อง How many rooms do you have? \_\_\_\_\_

10. สถานที่ที่ท่านตั้งธุรกิจที่พัก Where is your location of business?

- กะทู้ Kathu       กลาง Thalang       เมืองภูเก็ต Phuket City
- เกาะลันตา Koh Lanta       เมืองกระบี่ Krabi City   
เหนือคลอง Nuea      Khlong
- อ่าวลึก Aou Luk

11. มาตรฐานที่กิจการเคยได้รับ Standard (ตอบได้มากกว่า 1 ข้อ) Receiving Standards (Answer more than 1 item)

- มาตรฐานโรงแรมไทยระดับ\_\_\_\_\_ดาว ของสมาคมโรงแรมไทย Thai Hotel Standard
- มาตรฐานรางวัลสถานประกอบการท่องเที่ยวดีเด่นของททท. Thailand Tourism Standard
- มาตรฐานโรงแรมใบไม้เขียวระดับ\_\_\_\_\_ใบ ของมูลนิธิใบไม้เขียว Green Leaf Environmental Standard
- มาตรฐานโรงแรมปลอดบุหรี่ ของมูลนิธิใบไม้เขียว Smoke-free Hotel Standard
- มาตรฐานอาหารอร่อย สะอาด ปลอดภัย Clean Food Good Taste
- มาตรฐานสปาไทยระดับ\_\_\_\_\_ของสมาคมสปาไทย Thai Spa
- มาตรฐาน ISO 14001 ISO 14001 Standard
- มาตรฐานอื่นๆ โปรดระบุ Other Standards
- 
- ไม่เคยได้รับมาตรฐานใดๆ Never receiving any standard

**ขอขอบคุณเป็นอย่างสูงที่ท่านได้ให้ความอนุเคราะห์ในการตอบแบบ  
สอบถาม**

**Thank you for completing this questionnaire.**

**Appendix E**  
*Demographic Profiles*

**Informant**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Owner	34	23.4	23.4	23.4
	Manager	111	76.6	76.6	100.0
	Total	145	100.0	100.0	

**Gender**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	60	41.4	41.4	41.4
	Female	85	58.6	58.6	100.0
	Total	145	100.0	100.0	

**Age**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-29	14	9.7	9.7	9.7
	30-39	69	47.6	47.6	57.2
	40-49	38	26.2	26.2	83.4
	50-59	16	11.0	11.0	94.5
	60-69	8	5.5	5.5	100.0
	Total	145	100.0	100.0	

### Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Secondary	1	.7	.7	.7
	High school	10	6.9	6.9	7.6
	Diploma	5	3.4	3.4	11.0
	Bachelor degree	105	72.4	72.4	83.4
	Post graduate degree	24	16.6	16.6	100.0
	Total	145	100.0	100.0	

### Year of Service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-1	17	11.7	11.7	11.7
	2-5	63	43.4	43.4	55.2
	6-10	38	26.2	26.2	81.4
	11-15	11	7.6	7.6	89.0
	>16	16	11.0	11.0	100.0
	Total	145	100.0	100.0	

### No of Employee

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<50	91	62.8	62.8	62.8
	50-200	54	37.2	37.2	100.0
	Total	145	100.0	100.0	

**Price/day**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<500	10	6.9	6.9	6.9
	500-999	56	38.6	38.6	45.5
	1000-1500	79	54.5	54.5	100.0
	Total	145	100.0	100.0	

**Location**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Kathu	33	22.8	22.8	22.8
	Thalang	2	1.4	1.4	24.1
	Phuket city	44	30.3	30.3	54.5
	Koh Lanta	11	7.6	7.6	62.1
	Krabi city	55	37.9	37.9	100.0
	Total	145	100.0	100.0	

**Descriptive Statistics**

	N	Mean	Std. Deviation
Erect	145	9.36	8.327
No.of Room	145	71.12	58.686
Valid N (listwise)	145		

**Appendix F**  
*Factor Analysis*

**G-Practices**

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.817
Bartlett's Test of Sphericity	Approx. Chi-Square
	1272.402
	df
	105
	Sig.
	.000

**Communalities**

	Initial	Extraction
Energy-efficient lighting in public areas, e.g. sensors	1.000	.542
Water efficient fixtures.	1.000	.557
Encouraging guests to reuse towels.	1.000	.670
Dual-flush toilets.	1.000	.689
Sorting waste in guest rooms.	1.000	.681
Purchase of environmentally friendly cleaning products (e.g. biodegradable, reusable, recyclable, etc.).	1.000	.639
Purchase of organically grown foods.	1.000	.870
Purchase in bulk to reduce packaging.	1.000	.587
Encouraging guests to be eco-friendly.	1.000	.724
Incorporating environmental messages in their products.	1.000	.669
Donation of used hotel furniture.	1.000	.711
Provision of a healthy menu with minimal chemical.	1.000	.865
Provision of environmental training sessions for employees.	1.000	.666
Conducting an audit, e.g. energy, water.	1.000	.720
Having a written policy.	1.000	.761

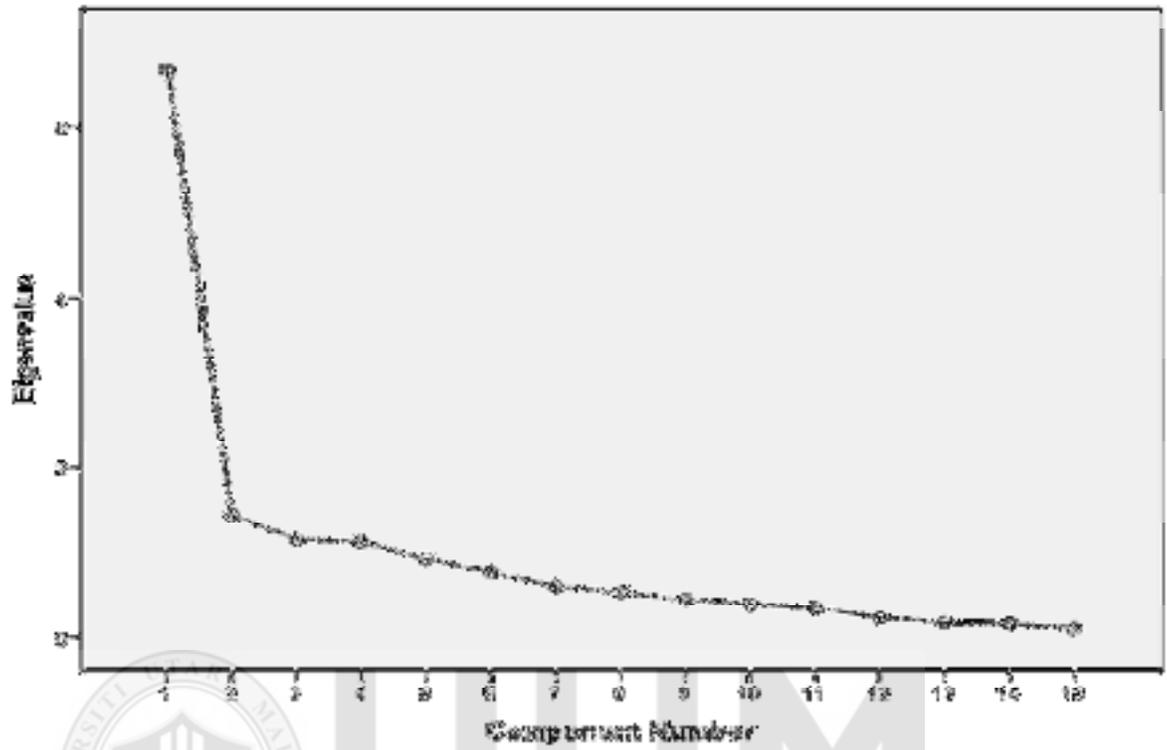
Extraction Method: Principal Component Analysis.

**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.660	44.400	44.400	6.660	44.400	44.400	3.155	21.032	21.032
2	1.427	9.515	53.915	1.427	9.515	53.915	2.808	18.723	39.754
3	1.148	7.654	61.569	1.148	7.654	61.569	2.300	15.333	55.088
4	1.115	7.433	69.002	1.115	7.433	69.002	2.087	13.915	69.002
5	.915	6.097	75.099						
6	.765	5.100	80.199						
7	.602	4.015	84.215						
8	.531	3.542	87.757						
9	.437	2.913	90.670						
10	.393	2.622	93.293						
11	.344	2.291	95.583						
12	.232	1.544	97.127						
13	.175	1.167	98.294						
14	.160	1.066	99.360						
15	.096	.640	100.000						

Extraction Method: Principal Component Analysis.

Scree Plot



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**Component Matrix<sup>a</sup>**

	Component			
	1	2	3	4
Incorporating environmental messages in their products.	.803	-.121		
Encouraging guests to be eco-friendly.	.796	-.112	.134	-.243
Conducting an audit, e.g. energy, water.	.740	-.151	-.167	-.348
Dual-flush toilets.	.724	-.219		.330
Provision of environmental training sessions for employees.	.723	-.173		.325
Having a written policy.	.699	-.205	-.147	-.456
Water efficient fixtures.	.692	-.164	-.219	
Purchase of organically grown foods.	.664	.570	-.222	.234
Purchase of environmentally friendly cleaning products (e.g. biodegradable, reusable, recyclable, etc.).	.659	-.188	-.272	.309
Sorting waste in guest rooms.	.649	.231	.366	.268
Purchase in bulk to reduce packaging.	.574	.308	.370	-.159
Donation of used hotel furniture.	.563	.212	.474	-.352
Encouraging guests to reuse towels.	.514	-.466	.350	.257
Energy-efficient lighting in public areas, e.g. sensors	.510		-.466	-.250
Provision of a healthy menu with minimal chemical additives.	.592	.677	-.225	

Extraction Method: Principal Component Analysis.

a. 4 components extracted.

**Rotated Component Matrix<sup>a</sup>**

	Component			
	1	2	3	4
Dual-flush toilets.	.735	.301		.229
Encouraging guests to reuse towels.	.733		.273	-.229
Provision of environmental training sessions for employees.	.731	.204	.223	.201
Purchase of environmentally friendly cleaning products (e.g. biodegradable, reusable, recyclable, etc.).	.644	.366		.291
Incorporating environmental messages in their products.	.518	.450	.417	.155
Having a written policy.	.202	.788	.315	
Conducting an audit, e.g. energy, water.	.267	.741	.294	.112
Energy-efficient lighting in public areas, e.g. sensors.	.106	.683		.249
Encouraging guests to be eco-friendly.	.388	.542	.521	
Water efficient fixtures.	.495	.504		.225
Donation of used hotel furniture.		.218	.806	
Purchase in bulk to reduce packaging.	.144	.136	.688	.273
Sorting waste in guest rooms.	.498		.540	.372
Provision of a healthy menu with minimal chemical additives.		.212	.259	.866
Purchase of organically grown foods.	.252	.185	.207	.854

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

## Owner-Manager Attitudes

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.691
Bartlett's Test of Sphericity    Approx. Chi-Square	353.376
df	21
Sig.	.000

### Communalities

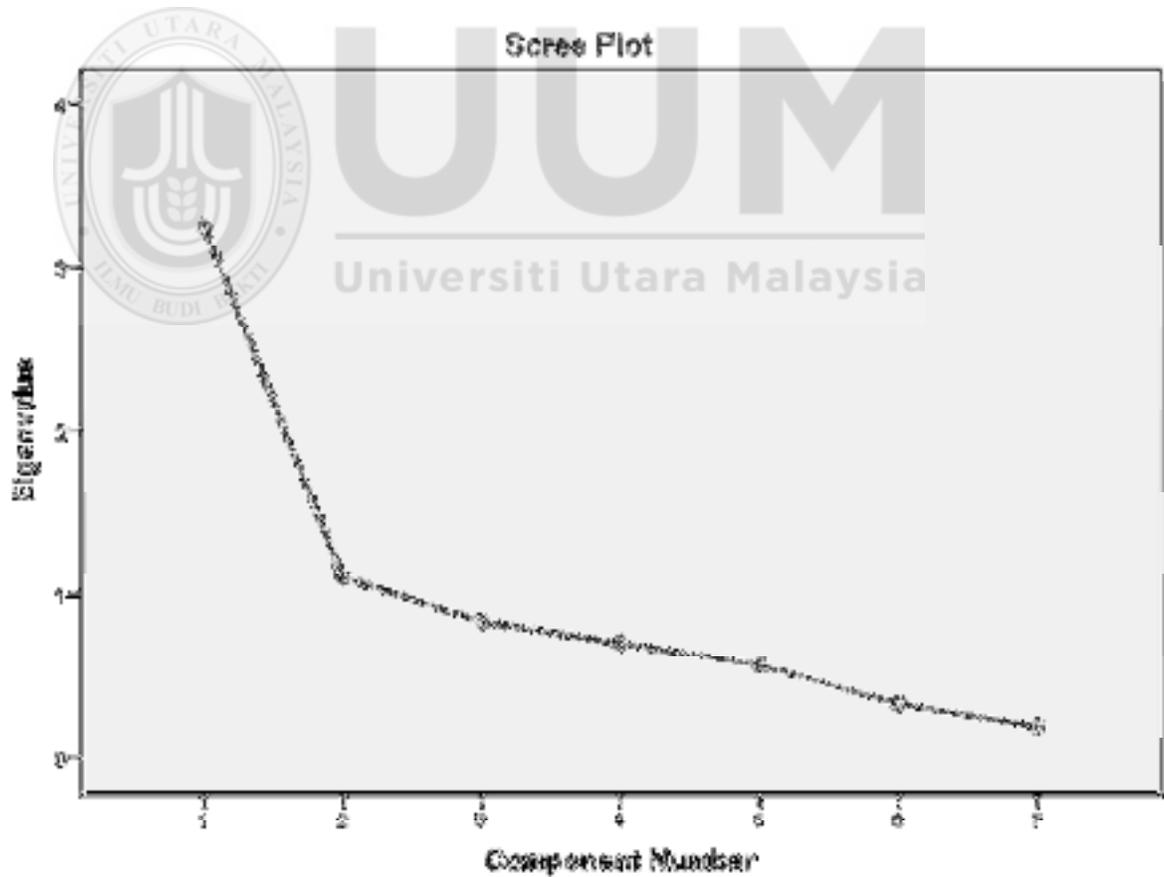
	Initial	Extraction
House built in a new area should be built around trees, which should not be cut down.	1.000	.783
Our country has so many trees that there is no need to recycle paper.	1.000	.634
With so much water in this country, we do not see why people are worried about leaky faucets.	1.000	.533
We have so much electricity that we do not have to worry about conservation.	1.000	.617
Recycling is too much trouble.	1.000	.583
Since we live in such a big country, any pollution we create is easily spread out and therefore is no concern to me.	1.000	.679
There is nothing the average citizen can do to help stop environmental pollution.	1.000	.520

Extraction Method: Principal Component Analysis.

**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.250	46.433	46.433	3.250	46.433	46.433	2.693	38.475	38.475
2	1.098	15.689	62.122	1.098	15.689	62.122	1.655	23.647	62.122
3	.837	11.961	74.083						
4	.710	10.147	84.230						
5	.566	8.081	92.311						
6	.338	4.822	97.134						
7	.201	2.866	100.000						

Extraction Method: Principal Component Analysis.



Component Matrix<sup>a</sup>

	Component	
	1	2
Since we live in such a big country, any pollution we create is easily spread out and therefore is no concern to me.	.820	
We have so much electricity that we do not have to worry about conservation.	.779	-.100
With so much water in this country, we do not see why people are worried about leaky faucets.	.710	-.169
There is nothing the average citizen can do to help stop environmental pollution.	.685	-.223
Recycling is too much trouble.	.646	.408
Our country has so many trees that there is no need to recycle paper.	.625	-.494
House built in a new area should be built around trees, which should not be cut down.	.435	.771

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

**Rotated Component Matrix<sup>a</sup>**

	Component	
	1	2
Our country has so many trees that there is no need to recycle paper.	.789	-.107
We have so much electricity that we do not have to worry about conservation.	.722	.310
There is nothing the average citizen can do to help stop environmental pollution.	.704	.156
With so much water in this country, we do not see why people are worried about leaky faucets.	.697	.215
Since we live in such a big country, any pollution we create is easily spread out and therefore is no concern to me.	.668	.482
House built in a new area should be built around trees, which should not be cut down.		.885
Recycling is too much trouble.	.348	.679

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

## Environmental Awareness

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.855
Bartlett's Test of Sphericity	Approx. Chi-Square	539.399
	df	28
	Sig.	.000

### Communalities

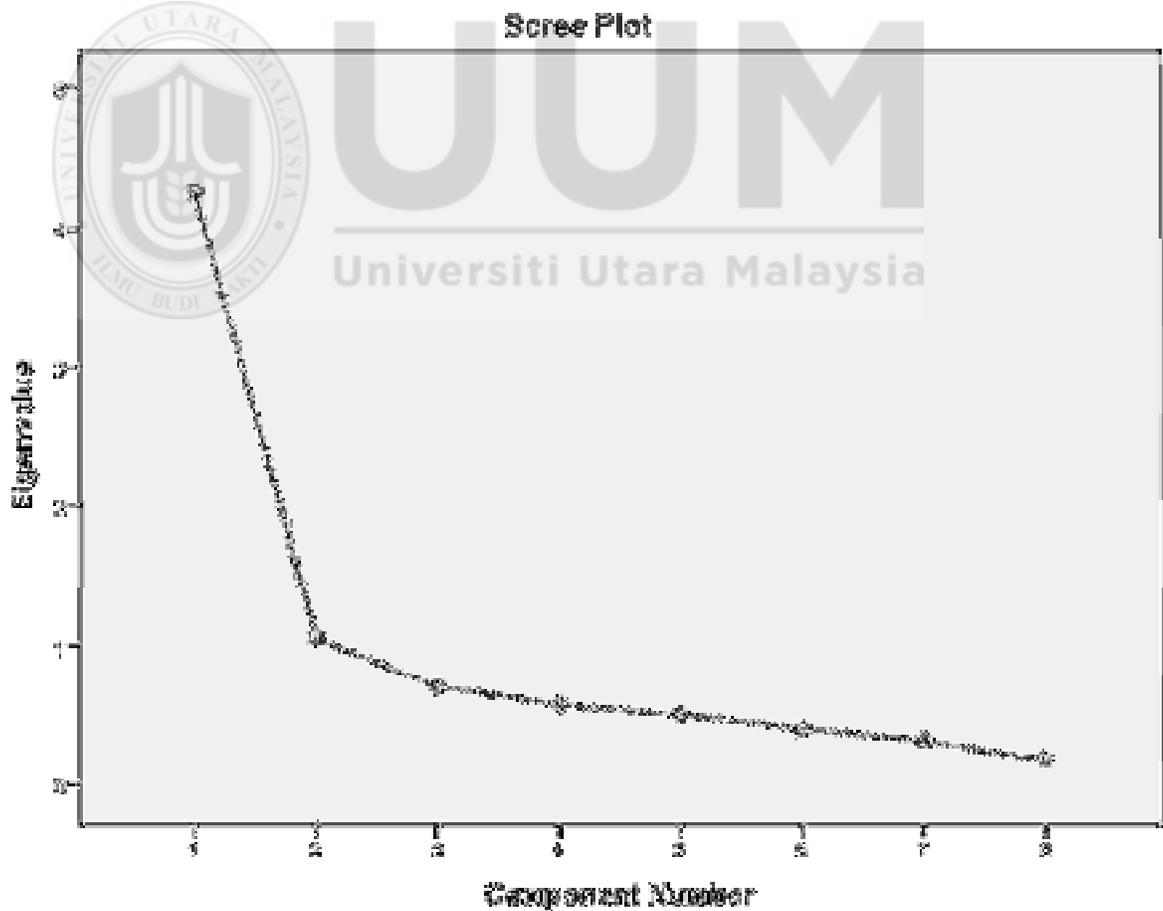
	Initial	Extraction
We take sufficient environmental action to meet legislation.	1.000	.704
Our company does not have an environmental impact.	1.000	.488
Reducing our environmental impact can have significant cost benefits.	1.000	.588
Improving environmental performance usually improves production efficiency.	1.000	.820
Business environmental initiatives are of benefit to the hotel.	1.000	.682
It is clear what represents 'best practice' in environmental performance.	1.000	.617
It is clear how legislation affects us.	1.000	.662
There are currently commercial benefits to my company in having an environmental policy.	1.000	.755

Extraction Method: Principal Component Analysis.

**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
	1	4.253	53.168	53.168	4.253	53.168	53.168	2.985	37.317
2	1.063	13.290	66.458	1.063	13.290	66.458	2.331	29.141	66.458
3	.705	8.817	75.275						
4	.571	7.134	82.409						
5	.500	6.255	88.664						
6	.405	5.060	93.725						
7	.319	3.993	97.717						
8	.183	2.283	100.000						

Extraction Method: Principal Component Analysis.



**Component Matrix<sup>a</sup>**

	Component	
	1	2
There are currently commercial benefits to my company in having an environmental policy.	.868	
Improving environmental performance usually improves production efficiency.	.846	-.325
It is clear what represents 'best practice' in environmental performance.	.785	
Business environmental initiatives are of benefit to the hotel.	.767	-.305
It is clear how legislation affects us.	.702	.412
Reducing our environmental impact can have significant cost benefits.	.616	-.457
Our company does not have an environmental impact.	.614	.333
We take sufficient environmental action to meet legislation.	.576	.611

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

**Rotated Component Matrix<sup>a</sup>**

	Component	
	1	2
Improving environmental performance usually improves production efficiency.	.861	.281
Business environmental initiatives are of benefit to the hotel.	.788	.247
Reducing our environmental impact can have significant cost benefits.	.766	
There are currently commercial benefits to my company in having an environmental policy.	.700	.514
It is clear what represents 'best practice' in environmental performance.	.624	.477
We take sufficient environmental action to meet legislation.		.837
It is clear how legislation affects us.	.285	.762
Our company does not have an environmental impact.	.267	.645

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

## Benefits Business Can Gain

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.899
Bartlett's Test of Sphericity	Approx. Chi-Square	1279.733
	df	55
	Sig.	.000

### Communalities

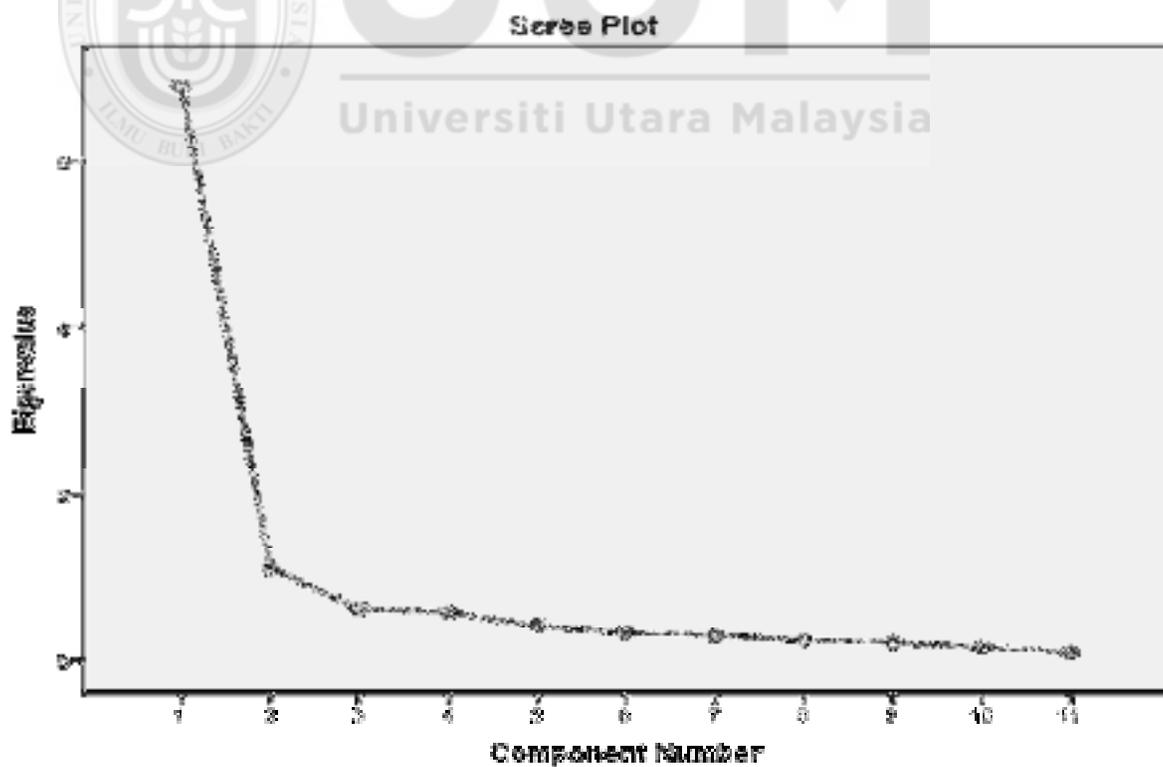
	Initial	Extraction
Increase cost saving.	1.000	.763
Increase profitability.	1.000	.819
Increase efficiency.	1.000	.770
Give us a marketing advantage over our competitors.	1.000	.752
Enhance hotel's image.	1.000	.653
Improve customer satisfaction.	1.000	.731
Improve relationship with the community.	1.000	.738
Improve employee morale.	1.000	.715
Complying with legislation.	1.000	.501
Create cleaner working environment.	1.000	.781
Reduce carbon emissions	1.000	.786

Extraction Method: Principal Component Analysis.

**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.894	62.675	62.675	6.894	62.675	62.675	4.274	38.857	38.857
2	1.115	10.134	72.809	1.115	10.134	72.809	3.735	33.952	72.809
3	.624	5.674	78.483						
4	.590	5.363	83.846						
5	.420	3.816	87.661						
6	.334	3.033	90.695						
7	.300	2.729	93.423						
8	.245	2.228	95.651						
9	.215	1.957	97.608						
10	.159	1.449	99.057						
11	.104	.943	100.000						

Extraction Method: Principal Component Analysis.

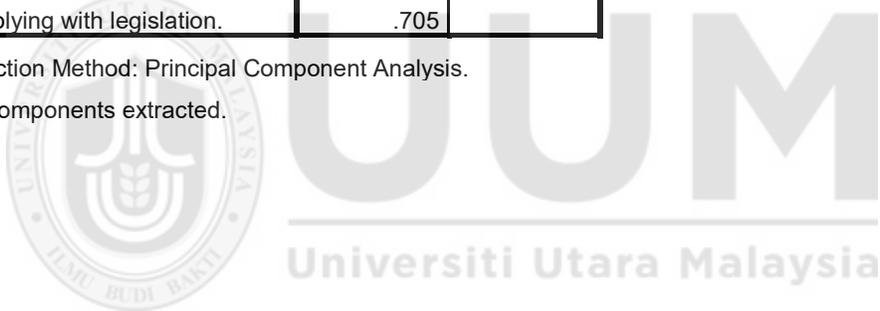


**Component Matrix<sup>a</sup>**

	Component	
	1	2
Improve customer satisfaction.	.855	
Increase cost saving.	.834	-.260
Give us a marketing advantage over our competitors.	.834	-.239
Improve employee morale.	.828	.172
Enhance hotel's image.	.798	-.126
Improve relationship with the community.	.797	.321
Increase profitability.	.793	-.435
Increase efficiency.	.774	-.414
Create cleaner working environment.	.749	.469
Reduce carbon emissions	.728	.507
Complying with legislation.	.705	

Extraction Method: Principal Component Analysis.

a. 2 components extracted.



**Rotated Component Matrix<sup>a</sup>**

	Component	
	1	2
Increase profitability.	.880	.212
Increase efficiency.	.851	.215
Increase cost saving.	.791	.370
Give us a marketing advantage over our competitors.	.777	.384
Enhance hotel's image.	.675	.444
Improve customer satisfaction.	.613	.596
Reduce carbon emissions	.197	.865
Create cleaner working environment.	.238	.851
Improve relationship with the community.	.372	.774
Improve employee morale.	.496	.684
Complying with legislation.	.483	.517

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

## Concern for Employees

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.689
Bartlett's Test of Sphericity	Approx. Chi-Square	216.197
	df	6
	Sig.	.000

### Communalities

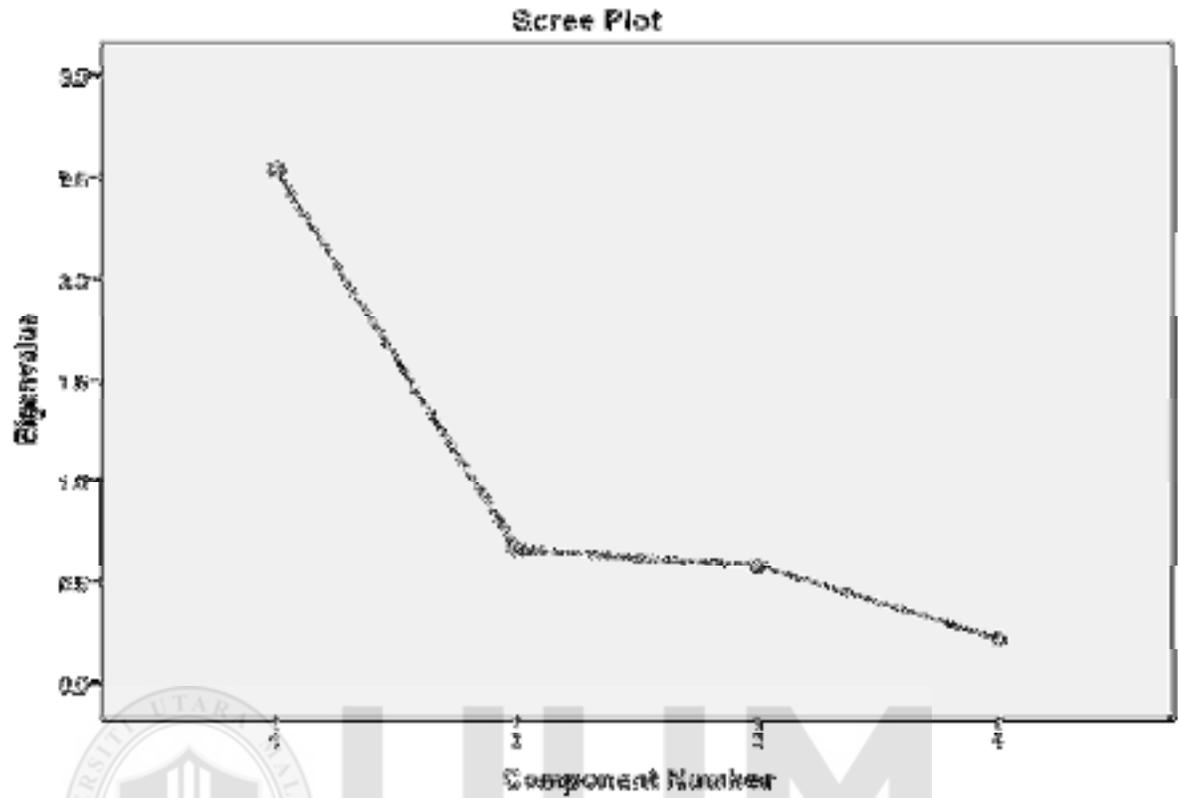
	Initial	Extraction
Employee concerns always affect productivity.	1.000	.762
We act upon any environmental matters suggested by employees.	1.000	.744
Employee concerns are an important part of our work.	1.000	.520
Employees tend to look for an environmental friendly business.	1.000	.507

Extraction Method: Principal Component Analysis.

### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.533	63.320	63.320	2.533	63.320	63.320
2	.667	16.665	79.984			
3	.577	14.428	94.412			
4	.224	5.588	100.000			

Extraction Method: Principal Component Analysis.



Component Matrix<sup>a</sup>

	Component
	1
Employee concerns always affect productivity.	.873
We act upon any environmental matters suggested by employees.	.863
Employee concerns are an important part of our work.	.721
Employees tend to look for an environmental friendly business.	.712

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

## Regulations

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.693
Bartlett's Test of Sphericity	Approx. Chi-Square	143.487
	df	3
	Sig.	.000

### Communalities

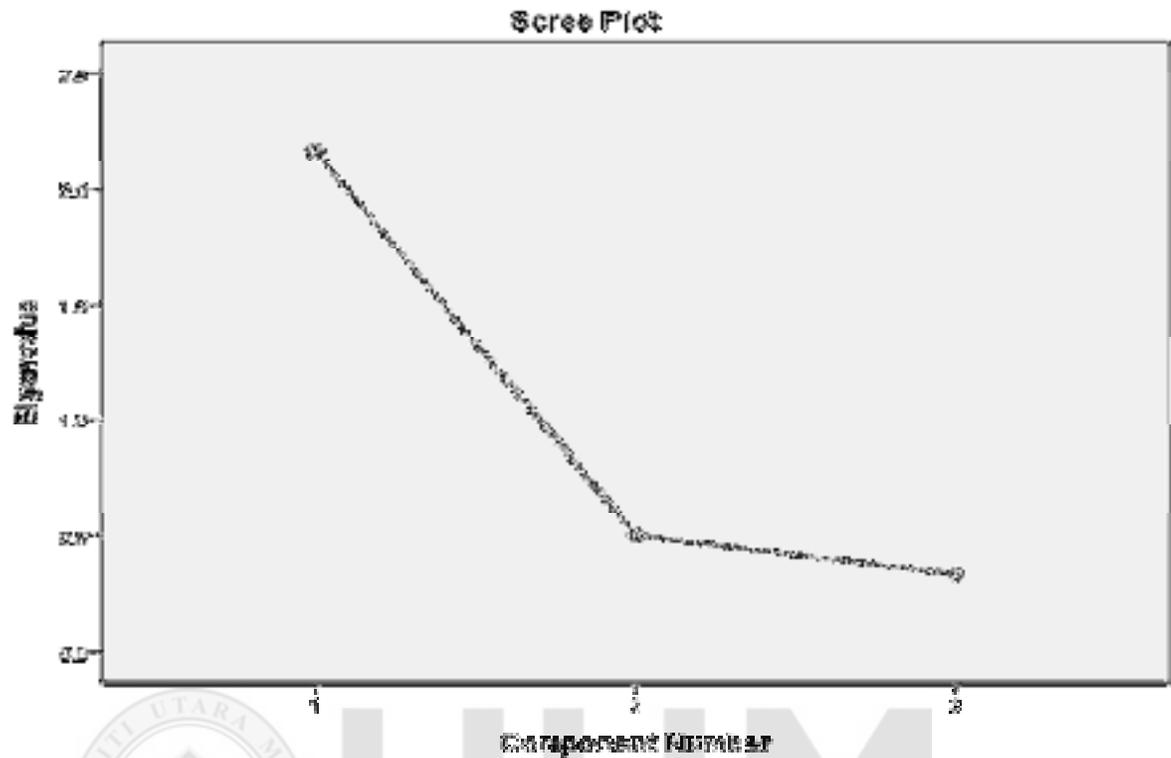
	Initial	Extraction
Our business has established collaborative partnership with the govt agents to protect the environment.	1.000	.785
Environmental legislative requirements impact on our business.	1.000	.701
Environmental legislation is not relevant to our business.	1.000	.677

Extraction Method: Principal Component Analysis.

### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.163	72.087	72.087	2.163	72.087	72.087
2	.501	16.700	88.786			
3	.336	11.214	100.000			

Extraction Method: Principal Component Analysis.



**Component Matrix<sup>a</sup>**

	Component
	1
Our business has established collaborative partnership with the govt agents to protect the environment.	.886
Environmental legislative requirements impact on our business.	.837
Environmental legislation is not relevant to our business.	.823

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

## Green Consumers

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.829
Bartlett's Test of Sphericity	Approx. Chi-Square	462.670
	df	6
	Sig.	.000

### Communalities

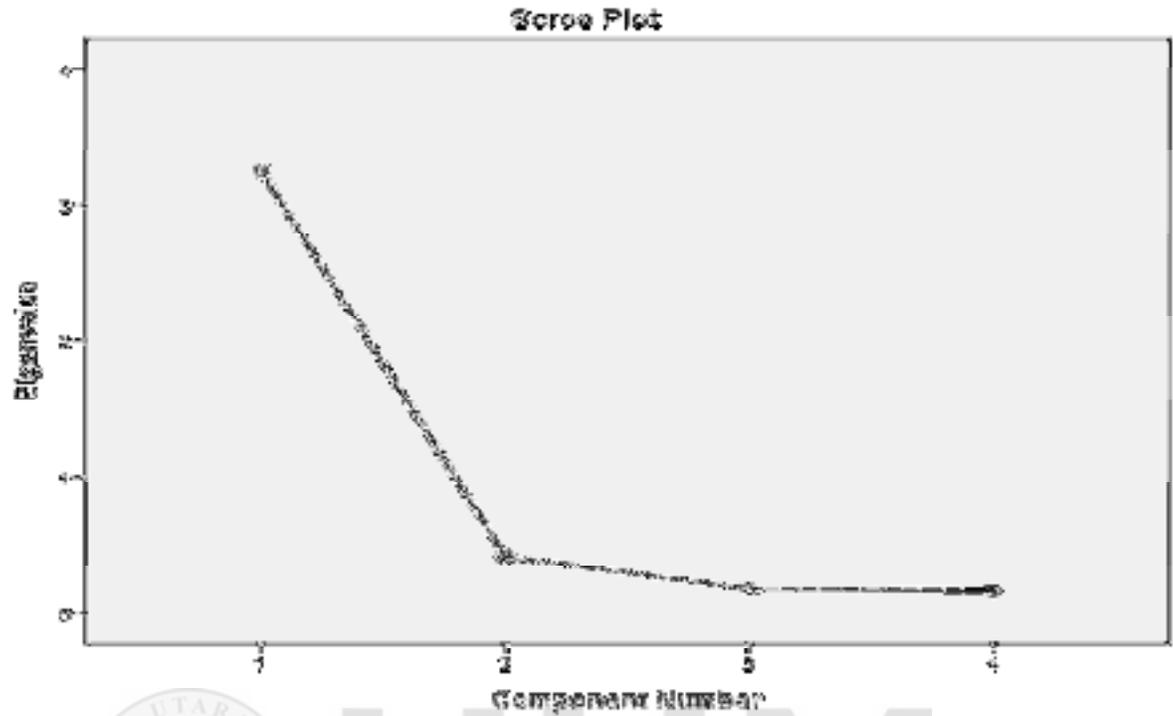
	Initial	Extraction
Environmental issues critically affect the buying decisions of our customers.	1.000	.693
Our customers often mention environmental factors when making choices.	1.000	.839
Customers desire for environmental friendly products.	1.000	.881
Customers are willing to spend more money on green products.	1.000	.833

Extraction Method: Principal Component Analysis.

### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.246	81.161	81.161	3.246	81.161	81.161
2	.417	10.415	91.576			
3	.176	4.404	95.980			
4	.161	4.020	100.000			

Extraction Method: Principal Component Analysis.



**Component Matrix<sup>a</sup>**

	Component
	1
Customers desire for environmental friendly products.	.939
Our customers often mention environmental factors when making choices.	.916
Customers are willing to spend more money on green products.	.913
Environmental issues critically affect the buying decisions of our customers.	.833

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

## Supply Chains

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.814
Bartlett's Test of Sphericity	Approx. Chi-Square	375.700
	df	6
	Sig.	.000

### Communalities

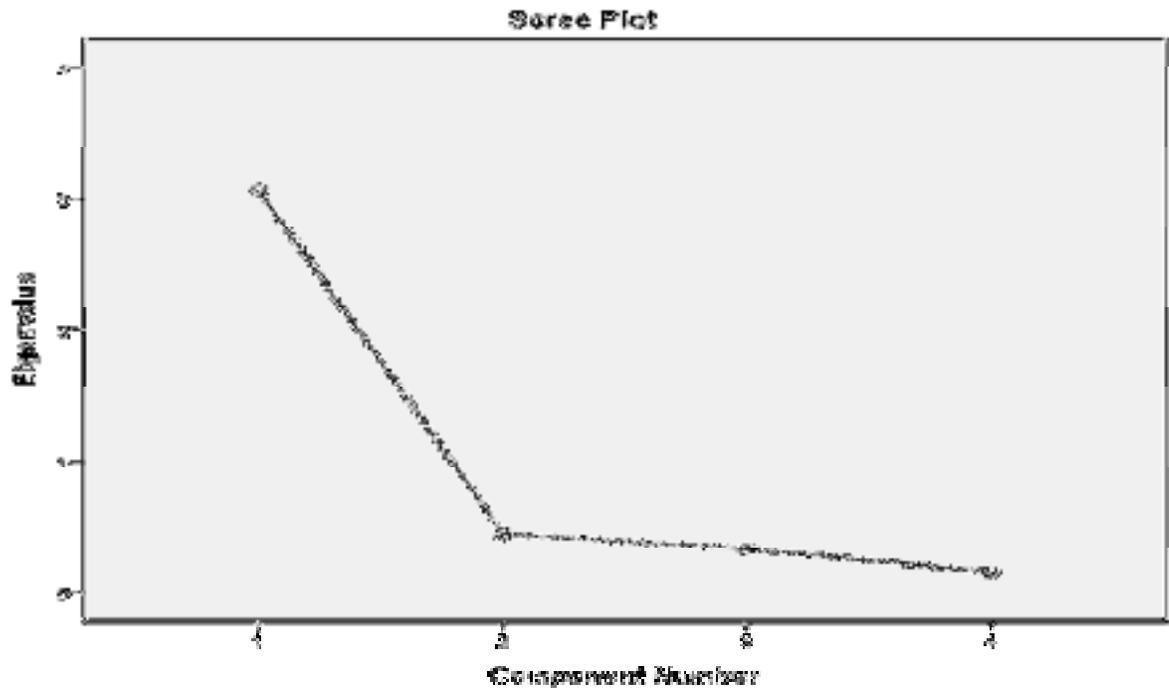
	Initial	Extraction
We obtains information from our suppliers about their environmental management practices.	1.000	.810
Supply chains' environmental concerns have impacted on our business.	1.000	.648
Supply chain requirements can play an important role in improving environmental performance.	1.000	.739
Environmental issues are considered to be very important for our supplier.	1.000	.864

Extraction Method: Principal Component Analysis.

### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.061	76.526	76.526	3.061	76.526	76.526
2	.452	11.312	87.838			
3	.333	8.331	96.169			
4	.153	3.831	100.000			

Extraction Method: Principal Component Analysis.



**Component Matrix<sup>a</sup>**

	Component
	1
Environmental issues are considered to be very important for our supplier.	.929
We obtains information from our suppliers about their environmental management practices.	.900
Supply chain requirements can play an important role in improving environmental performance.	.860
Supply chains' environmental concerns have impacted on our business.	.805

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

## Local Communities

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.717
Bartlett's Test of Sphericity	Approx. Chi-Square
	213.883
	df
	6
	Sig.
	.000

### Communalities

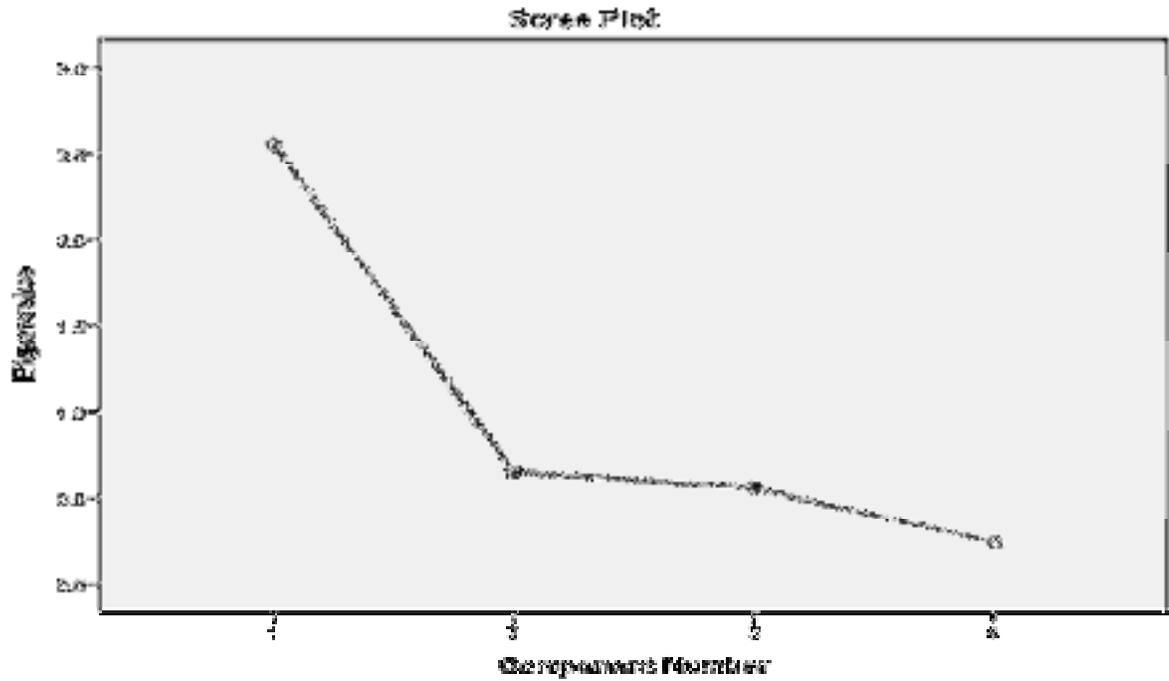
	Initial	Extraction
Pressure from community activists has affected our company's conduct.	1.000	.483
Local communities put pressure on companies that have bad environmental practices.	1.000	.609
Green projects have always been led by community members.	1.000	.795
Our business is most likely to be committed to communities in the local.	1.000	.666

Extraction Method: Principal Component Analysis.

### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.553	63.827	63.827	2.553	63.827	63.827
2	.649	16.221	80.048			
3	.559	13.976	94.025			
4	.239	5.975	100.000			

Extraction Method: Principal Component Analysis.



**Component Matrix<sup>a</sup>**

	Component
	1
Green projects have always been led by community members.	.892
Our business is most likely to be committed to communities in the local.	.816
Local communities put pressure on companies that have bad environmental practices.	.780
Pressure from community activists has affected our company's conduct.	.695

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

## Competitors

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.705
Bartlett's Test of Sphericity	Approx. Chi-Square
	196.543
	df
	3
	Sig.
	.000

### Communalities

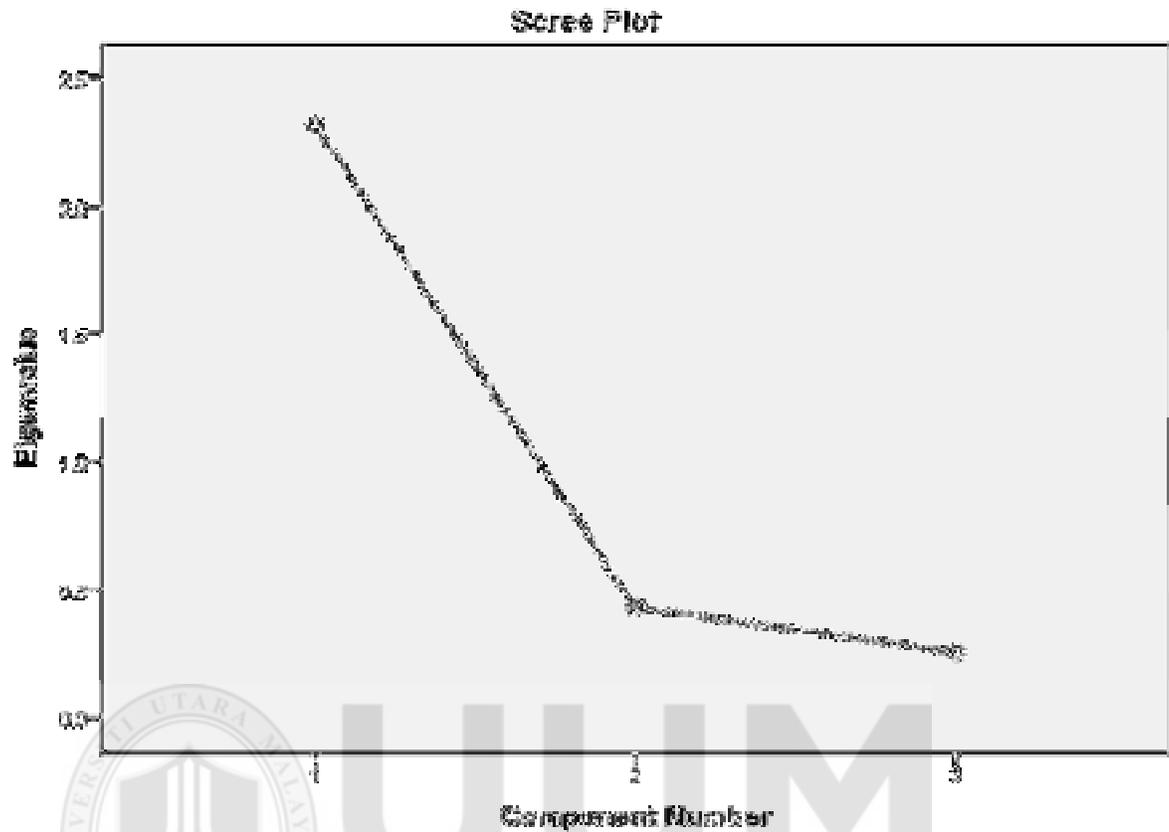
	Initial	Extraction
Investing in products differentiate our products.	1.000	.735
Improving environmental performance helps us keep up with competitors.	1.000	.837
Environmentally friendly actions result in product innovations.	1.000	.748

Extraction Method: Principal Component Analysis.

### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.320	77.349	77.349	2.320	77.349	77.349
2	.425	14.171	91.521			
3	.254	8.479	100.000			

Extraction Method: Principal Component Analysis.



Component Matrix<sup>a</sup>

	Component
	1
Improving environmental performance helps us keep up with competitors.	.915
Environmentally friendly actions result in product innovations.	.865
Investing in products differentiate our products.	.857

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

## Funds Availability

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.744
Bartlett's Test of Sphericity	Approx. Chi-Square	369.519
	df	15
	Sig.	.000

### Communalities

	Initial	Extraction
Non-comprehensive cost-benefit analysis methods.	1.000	.819
Short-term profit calculations resulting in low tolerance for longer payback periods of equipment investment.	1.000	.819
A lack of capital investment flexibility due to low profit margin.	1.000	.671
A lack of understanding in predicting future liability costs (e.g. waste disposal).	1.000	.642
Economies of scale preventing smaller firms from investing in waste reduction opinions (e.g. technologies).	1.000	.731
Making changes to improve environmental outcomes is too expensive for our business.	1.000	.814

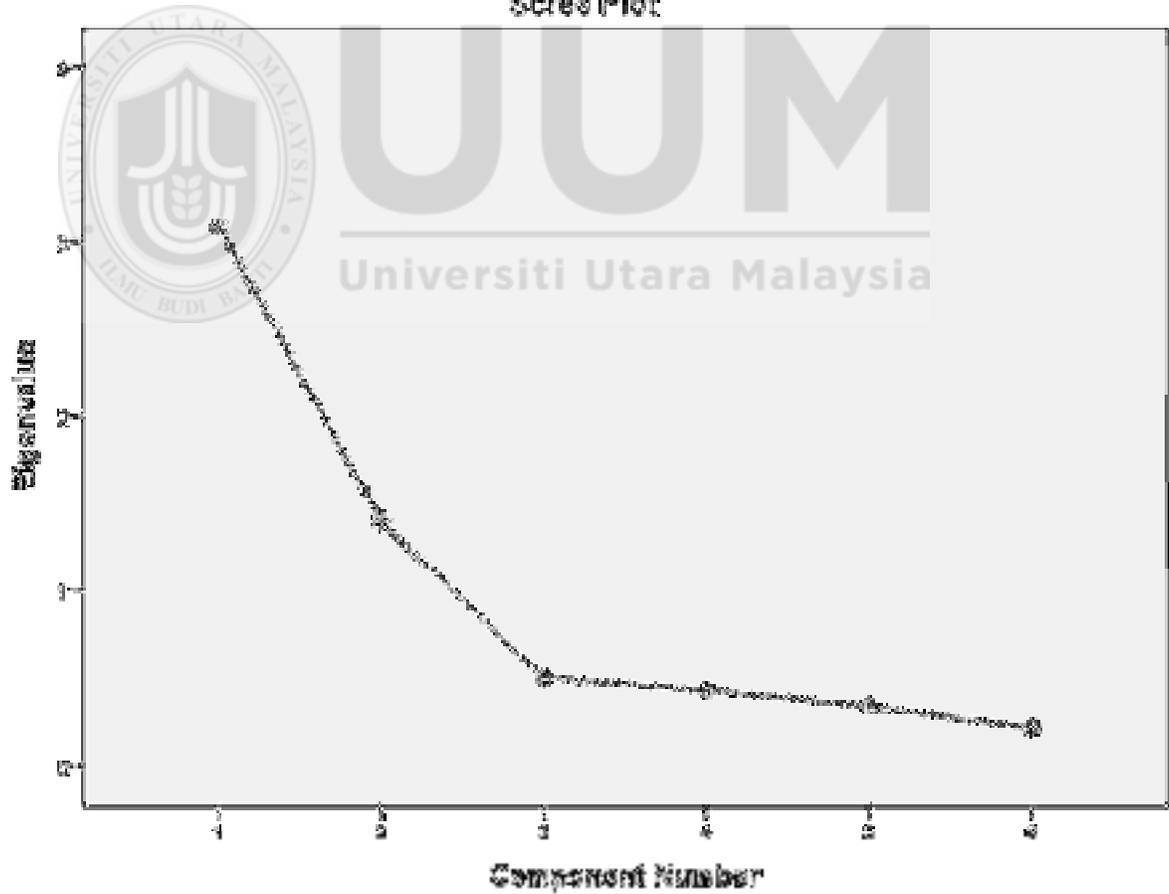
Extraction Method: Principal Component Analysis.

**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.095	51.586	51.586	3.095	51.586	51.586	2.473	41.212	41.212
2	1.402	23.364	74.950	1.402	23.364	74.950	2.024	33.738	74.950
3	.501	8.352	83.302						
4	.432	7.205	90.507						
5	.344	5.727	96.234						
6	.226	3.766	100.000						

Extraction Method: Principal Component Analysis.

**Scree Plot**



**Component Matrix<sup>a</sup>**

	Component	
	1	2
A lack of capital investment flexibility due to low profit margin.	.819	
A lack of understanding in predicting future liability costs (e.g. waste disposal).	.801	
Short-term profit calculations resulting in low tolerance for longer payback periods of equipment investment.	.780	-.458
Non-comprehensive cost-benefit analysis methods.	.679	-.598
Economies of scale preventing smaller firms from investing in waste reduction opinions (e.g. technologies).	.645	.562
Making changes to improve environmental outcomes is too expensive for our business.	.544	.720

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

**Rotated Component Matrix<sup>a</sup>**

	Component	
	1	2
Non-comprehensive cost-benefit analysis methods.	.903	
Short-term profit calculations resulting in low tolerance for longer payback periods of equipment investment.	.898	.109
A lack of capital investment flexibility due to low profit margin.	.662	.483
A lack of understanding in predicting future liability costs (e.g. waste disposal).	.619	.509
Making changes to improve environmental outcomes is too expensive for our business.		.902
Economies of scale preventing smaller firms from investing in waste reduction opinions (e.g. technologies).	.172	.838

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

**Appendix G**  
*Reliability*

**Scale: G-Practices**

**Reliability Statistics**

Cronbach's Alpha	N of Items
.904	15

**Scale: Owner-manager Attitudes**

**Reliability Statistics**

Cronbach's Alpha	N of Items
.782	7

**Scale: Environmental Awareness**

**Reliability Statistics**

Cronbach's Alpha	N of Items
.859	8

**Scale: Benefits Business Can Gain**

**Reliability Statistics**

Cronbach's Alpha	N of Items
.938	11

**Scale: Concern for Employees**

**Reliability Statistics**

Cronbach's Alpha	N of Items
.804	4

**Scale: Regulations**

**Reliability Statistics**

Cronbach's Alpha	N of Items
.789	3

**Scale: Green Consumers**

**Reliability Statistics**

Cronbach's Alpha	N of Items
.921	4

**Scale: Supply Chains**

**Reliability Statistics**

Cronbach's Alpha	N of Items
.896	4

**Scale: Local Communities**

**Reliability Statistics**

Cronbach's Alpha	N of Items
.808	4

**Scale: Competitors**

**Reliability Statistics**

Cronbach's Alpha	N of Items
.852	3

**Scale: Funds Availability**

**Reliability Statistics**

Cronbach's Alpha	N of Items
.806	6