

An Exploratory Study of Corporate Social Responsibility of Travel Agency Websites and Consumers' Low Carbon Travel Intention

Ma Chunjou

Graduate Student, Department of
Leisure and Recreation Management
Asia University
Taichung, Taiwan
macyjeanma@gmail.com

Sharon F.H. Pang

Assistant Professor, Department of Leisure and
Recreation Management
Asia University
Taichung, Taiwan
sharonpang@asia.edu.tw

Abstract—Environment depletion and climate change lead to the concept of carbon reduction which should be a critical issue that is concerned by the world. Environment and climate could influence the income in tourism industry. In addition, the impact on environment resulted from traveling could also affect the future revenue in tourism industry. Environmental pollution could be slowed down by improving travel methods with green energy. Meanwhile, improvements require actions from both consumers and industry practitioners. This study aims to identify consumers' low carbon travel intention and their demand by adopting the environmental behavior model (Hines et al, 1986-87) [1] and to examine travel agencies' efforts on setting up the low-carbon travel products or promoting low-carbon traveling on their websites. This study provided a model for the relationship between the intention to act and the responsible environmental behavior in low-carbon traveling by investigating factors, including knowledge of low-carbon traveling, action skill, locus of control, attitudes, personal responsibility, intention to act, responsible environmental behavior, travel constraints and climate change. This model utilized the structural equation model (SEM). The findings revealed that action skill, attitudes, personal responsibility are the main factors which affect the intention to act low-carbon traveling. The promotion of low-carbon traveling on travel agencies' websites is obviously not enough. Corporate social responsibility on travel agencies' websites has a potential effect with consumers' low-carbon travel intention which could be a reference for tourism agencies in the future.

Keywords—low-carbon tourism; travel agency websites

I. INTRODUCTION

The relationship among climate, environment and tourism is closely linked together. When one is affected, others are affected too. However, we can improve the way of tourism to minimize environment deterioration, such as convincing people to engage in carbon reduction. According to Taiwan Tourism Bureau [2], there are 37% people collecting the travel information from website. In addition, FIND [3] shows on-line shopping behavior has significantly increased. It indicates that

in 2009, there were used to have about 378 million people at least shopped on-line once per month and now it has increased up to 389 million. As people heavily rely on information online, many consumers start to search information about products on-line and even do products comparison, consumers are more willing to choose with better design web pages and services [4], Internet becomes a crucial role for people gathering their travel information.

According to Crompton [5], web-pages which provide detailed and practical information indeed catch the users' attention and hence perhaps increase organization's service. At the same time, the E-mail and forum make on-line users form their opinions and provide feedback to service providers. As the user received information and Pushed to the an enterprise or organization to promote the brand or concept [6]. When customer feels the server effect of energy depletion and climate change to the environment, they would come out with the ideas of low carbon travel, and even affect other customer to do so. That is why travel agencies web plays "pull" role to attract consumer's attention to low carbon travel during the time they surfing the internet. That is, the web not only provides the resources of traveling information for consumer but also push them to participate low carbon travel.

Kotler [7] states that information gathering for the consumer decision making is one of the important stage in consumer decision making model. It is logically assume that after enough climate change related information received, consumers may feel threaten, and hopefully the sense of responsibility of low carbon travel can be gradually increase.

To conclude, the information provide from travel agent's website is very important as it not only increasing consumers' awareness of the relationship between climate change and tourism but also guiding them a way to achieve low carbon travel. However, investigation is needed to understand whether travel agencies' websites provide this kind of information. Therefore, two perspective is (consumer, travel agent) included

to discuss the feasibilities of low carbon travel. First, the feasibility of promoting low carbon travel is viewed from consumers' perspective. This study uses Hines [1] "The Proposed Model of Responsible Environmental Behavior" to understand this perspective. By analyzing the state of the tourists travel knowledge, skills, and carbon reduction action knowledge, locus of control, and personal responsibility, it is helpful to realize whether the combination of these factors could promote one to engage low carbon travel. Second, industry suppliers' perspective is also concerned for this study. To understand whether industry have provided related products and information to promote low carbon travel, travel agency websites are examined.

II. LITERATURE REVIEW

A survey conducted by World Tourism Organization (UNWTO) [8] shows that within 84.2 thousand passengers travel abroad there are 40% travel by plane. Travel caused considerable energy consumption and waste of resources. Therefore, tourism became one of significant industry that contributes to the greenhouse effect. There are various travel method will cause considerable environmental impact. Simpson et al. [9] states that tourism in 2005, the average carbon dioxide emissions per person is about 5%, and may be as high as 5-14%. According to World Tourism Organization [10] survey in 2006, Global tourist population has reached 80.6 thousand people, while tourism spending is 682 billion. During the tour, it usually requires a lot of resources. With the tremendous reply on carbon emissions, each state pay more attention to the issues of energy saving and carbon reduction. Therefore, the green energy industry and energy saving policies promote the goal to create a low-carbon society with low carbon economy.

With the convenient computer network, the connection between countries commercial activities, education, health care and government resources causing considerable impact on the way of business and the lifestyle of consumers. With the coming of network media era, the companies have faced some new opportunities and challenges [6, 11]. Many companies start to provide their services through the Internet, such as e-banking or e-bookstore, etc. Internet technology provides business competitive advantage of enterprises and allows consumers use Internet to understand information related to their products and services. Moreover, consumers became more proactive to understand products and services on the market, thereby changing the traditional marketing model [12]. Website information effectively guides consumers to choose the needed information and commodities. The diverse and rich website information of a company will also affect the consumers' satisfaction [13]. Thus, under the rapid growth of the internet technology, it is important for companies focus on building the website, also well design online product and service information to gain advantages in the competition.

Due to frequent disasters happened nowadays, climate change has become one hot topic among us. However, the research about attitude and intention toward low carbon travel still is at its infancy. Hines et al's "The Proposed Model of Responsible Environmental Behavior" discusses consumers' willingness of improve the environment. This model discusses

the factors promote or reduce consumers' action. Hines et al [1] used meta-analysis collected 128 published journals, published books and dissertations on related environmental behavior study which developed environmental behavior patterns.. Hines et al. assumed that the variables affect environmental behavior change in the model can be divided into four main categories. Cognitive variables include knowledge of action strategies, action skills and knowledge of low-carbon traveling, personality factors including attitude, control concept, personal responsibility, action intention and situational factors. When an individual has more positive attitude toward these factors, he or she would have the higher intention of engage in environmental action. As for the consumer demand, according to Hines et al's environmental behavior model, when the tourists feel the increasingly threat of energy depletion and climate change to environment and begin to participate low-carbon traveling, has been forming their intention. By analyzing one's travel knowledge, skills, and carbon reduction action knowledge, locus of control and personal responsibility, we can understand that whether through the combination of these factors would become the "push" of low-carbon traveling. This study based on the results of domestic and international research's variables [15-21]. Used Hines et al. "The Proposed Model of Responsible Environmental Behavior" as reference, and adding two Situational factors were travel constraints and climate change (see Figure 1).

The relationship between the intention to act and the responsible environmental behavior in low-carbon traveling model are as followed:

H1 : knowledge of action strategies and action skills significantly influences low-carbon traveling

H2 : knowledge of low-carbon traveling significantly influences low-carbon traveling

H3 : locus of control significantly influences low-carbon traveling

H4 : attitudes significantly influences low-carbon traveling

H5 : personal responsibility significantly influences a low-carbon traveling

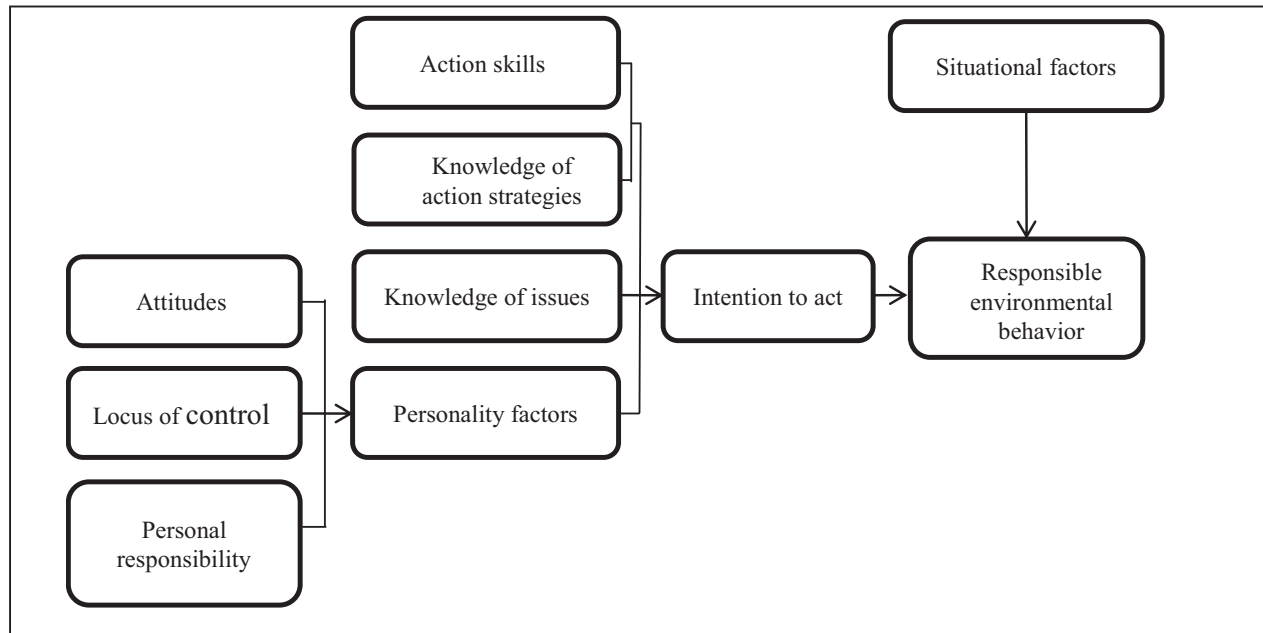


Fig. 1. Consumer demand research framework.

H6 : low-carbon traveling significantly influences responsible environmental behavior

H7: travel constraints significantly influences responsible environmental behavior

H8: climate change significantly influences responsible environmental behavior

III. RESEARCH METHOD

To collect information about consumers, pretest was conducted by 30 questionnaires. In the end, 400 questionnaires are survey in the Taipei Main Station and communities of Taipei, on December 10, 2012 to December 16, a total of 400 survey questionnaire returned. The responses of the survey questionnaires were analyzed in SPSS statistical software. In order to further test the relationship among the exogenous variables and endogenous variables, SEM was employed in this study. To understand the current industry suppliers' website information, classification of a travel agency website through the Alexa website statistics of the top five travel agencies in December 2012 (Lion Travel, Cola Tour, EZ Travel, SET Tout, and Star Travel agents) to find out the implementation of low-carbon travel situation.

IV. DATA ANALYSIS

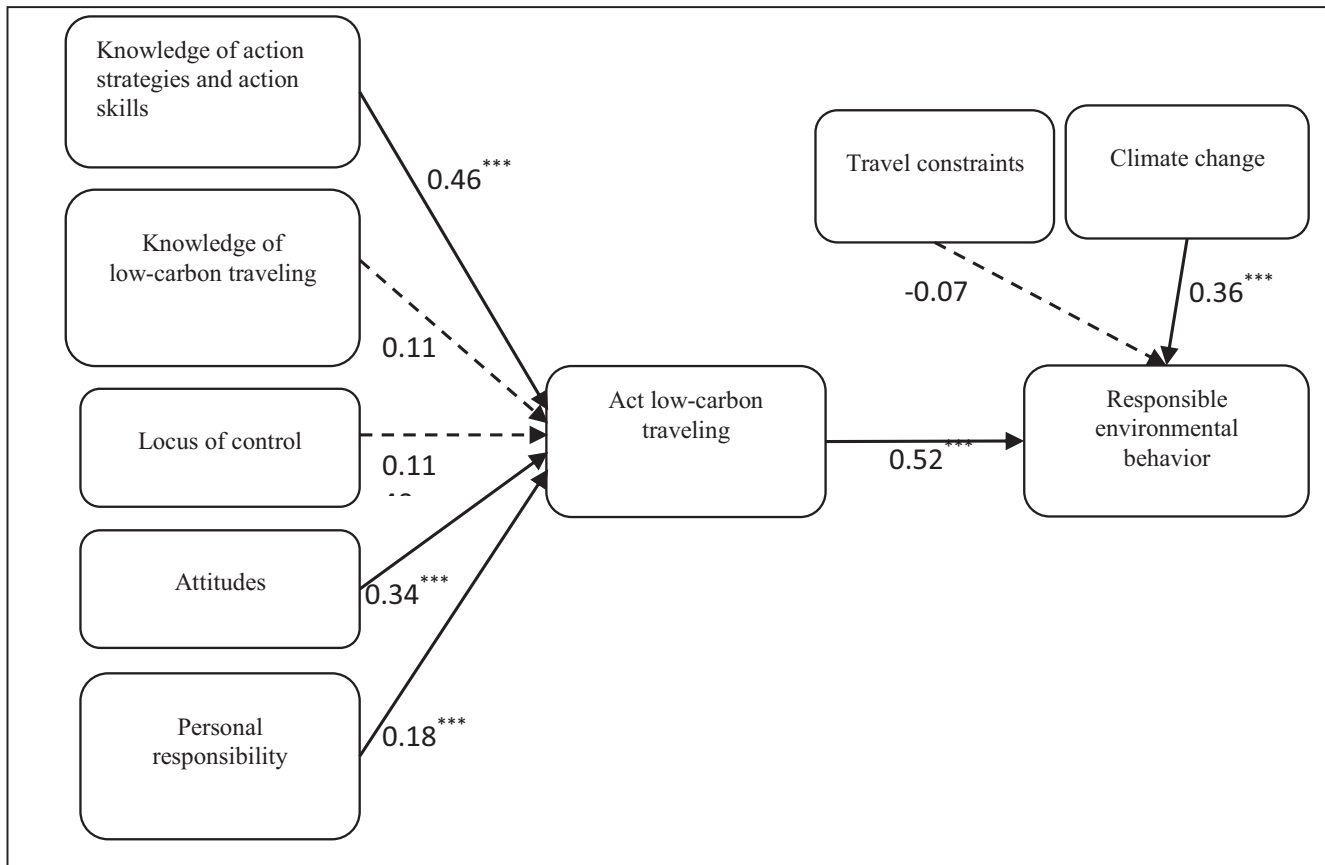
To verify the effect of each path in the research model and test hypotheses in SEM model, the AMOS 18.0 version was used. The overall model fit aspects according to Chiou, H.

[22], $CMIN / df \leq 3$, $GFI > 0.8$, $RMSEA < 0.08$, $CFI > 0.9$, model results $CMIN / df = 2.709$, $GFI = 0.774$, $RMSEA = 0.065$, $CFI = 0.847$ (see Figure 2).

V. RESULTS

A. Current status of travel agency websites

Through examining travel agency websites, it was found that under flexible examine, few travel products were in line with carbon reduction requirements. However, none of these products use the term "low carbon travel". Instead, low carbon travel was indirectly promoted by the destination or type of transportation. The examination process had to be carried out by searching for detailed descriptions of themed tours in order to analyze whether the site meets the desired criterion. From the perspective of the general public, clear indication of low carbon travel products can be helpful for those who are willing to take low carbon tours when conducting online information searching. While examining the means of transportation on travel agency websites, it was found that most travel products are much commercialized and do not concern about environment. No information about low carbon travel were shown on all of the websites. Even if there are potential customers who may be interested for low carbon travel, they do not know where to look for information. Therefore, in order to promote low carbon travel, a special theme section dedicated to low carbon travel is going to be helpful for potential customers' online information searching process.



^ * p<0.05, **p<0.01, ***p<0.001

Fig. 2. Result of SEM model

Among those travel websites examined, 60% offered accommodation options that satisfied the criterion for low carbon travel, under the condition of promoting tours involving accommodations with environmental certification. However, these accommodations with environmental certification mostly refer to famous hot spring hotels; given the fact that the travel products are designed to cater to consumer tastes, it is possible that environmental certification may not have been taken into consideration by the travel website in establishing its partnership with the accommodation providers. However, for the general public, if a special theme section dedicated to low carbon travel is not set up and there are no clear indications placed, it is impossible to identify whether or not the travel product satisfied the criterion for low carbon means of transportation, and hence preventing consumers from being able to easily make a choice concerning the correct low carbon travel products.

Through examining the websites, it was also found that, on average, only 37% of the websites satisfied the overall criterion for low carbon travel. Among the websites examined, low carbon travel is currently promoted through providing travel information on themed tours such as cycling, rail travel and eco-tourism. Although it seems that such tours appear as low carbon travel products, if a special theme section dedicated to low carbon travel is not set up and there are no clear indications placed, it is impossible to promote travel products involving the low carbon travel concept or provide consumers with relevant information to facilitate their choice-making. Therefore, even if a travel agency website has a high likelihood of meeting the carbon reduction criterion, information searching must be employed in order to determine whether or not the website actually satisfies this criterion. This extra process required may influence consumers' choice as no clear information is available for them to easily choose the low carbon travel products from the website. Therefore, it is shown that for the websites examined, besides insufficiencies in meeting the low carbon requirement, a low carbon travel theme is not provided as part of the travel information currently

presented, thus illustrating the deficiency of the websites in promoting low carbon travel.

B. Analysis of the structural model

This study analyzed a model for the relationship between the intention to act and the responsible environmental behavior in low-carbon traveling by investigating factors including knowledge of low-carbon traveling, action skill, locus of control, attitudes, personal responsibility, intention to act, responsible environmental behavior, travel constraints and climate change. This model is examined by the structural equation model (SEM). The findings revealed that action skill, attitudes, personal responsibility are the main factors which affect the intention to act low-carbon traveling.

From the perspective of consumers, in order to solve the low-carbon travel willingness and climate change issues, they will need to effectively influence consumer behavior of low-carbon travel. Therefore, the travel agency websites must be provided the knowledge of action strategies and action skills, as well as attitudes and personal responsibility of low-carbon traveling implementation, in order to effectively implement low-carbon tourism.

C. Summary

Among the travel agency websites examined, it was found that low carbon travel is mostly promoted through providing travel information on themed tours such as cycling, rail travel and eco-tourism. While it seems that such tours appear as low carbon travel products, the travel concept of carbon reduction was not incorporated as part of product promotion. The websites did not provide travel products under a low carbon theme, nor did they include a low carbon travel section. According to structural relationship model analysis, it was found that carbon reduction awareness, skills, attitude and personal responsibility have positive influences on low carbon travel; these can be regarded as influential factors for the general public in terms of the promotion of low carbon travel, while low carbon travel intention, climate change and attitude will positively affect low carbon travel responsibility intention.

By applying the push and pull theory to the study results, it can be seen that consumers' motivation for low carbon travel originates from influential factors, such as: low carbon travel awareness, skills, attitude, and personal responsibility. Therefore, consumers need to make an external demand for clarifying low carbon travel. This demand (push), together with climate change and attitude, can prompt consumers to collect information on low carbon travel through the internet. However, after examining the travel agency websites, no promotion of low carbon travel could be found; thus, it can be seen that the travel agencies have not been implementing actions related to corporate environmental responsibility.

Corporate social responsibility no longer refers to the traditional moral entrepreneur, as the term has expanded to also include practical social issues; its implementation is not a mandatory norm, and corporate environmental responsibility has not yet become a focus for general enterprises. Therefore, consumers actively taking an interest in the implementation of corporate environmental responsibility would help to guide

enterprises in improving their behavior. The implementation of corporate environmental responsibility can begin from consumers being guided through website information to put low carbon travel into action. Therefore, if consumers are unable to collect information on low carbon travel through the websites, this implies that travel agencies have not provided an effective mechanism (pull) to attract consumers through websites information. In conclusion, in regard to the current status of promoting low carbon travel, due to insufficient information provided by travel agency websites, consumers with willingness to engage low carbon travel cannot be effectively guided through website information to undertake low carbon travel which result in difficulties in promoting low carbon travel. This indicates that besides being a provider of travel information, travel agency websites could also be considered a key factor in encouraging consumers to undertake low carbon travel.

REFERENCES

- [1] Hines, J.M., Hungerford, H.R. & Tomera, A.N. (1986–87). Analysis and synthesis of research on responsible pro-environmental behavior: a meta-analysis. *The Journal of Environmental Education*, 18(2),1–8.
- [2] Tourism Bureau, M.O.T.C. Republic of China, "2010 Survey of Travel by R.O.C. citizens" [Online] Available: admin.taiwan.net.tw/upload/statistic/20120801/6a69f6c4-bbc5-4083-aae7-30c2691574cc.doc
- [3] FIND, 2010 Survey of current state and level of demand on household broadband in Taiwan. Institute for Information Industry, Taipei (2011)
- [4] L. C. Lee, C. Q. Song, and H. C. Kang, "Internet marketing strategies for home stays," *Bio and Leisure Industry Research*, vol. 6, no. 3, pp. 120–140, 2008.
- [5] Crompton, J. (1979). Motivations for pleasure vacation, *Annals of Tourism Recreation*, 6, 24–408.
- [6] Holtz, S. (1999). Public relations and technology: perspectives. *Journal of Public Relations Research*, 9, 3, 213–236.
- [7] Kotler, P. (1996) *Marketing Management: Analysis, Planning Implementation, and Control*, 9th Ed., Prentice Hall International, NJ.
- [8] World Tourism Organization (UNWTO) (2008) *Climate Change and Tourism: Responding to Global Challenges*. Wiedmann, T. and Minx, J. (2008) *A Definition of 'Carbon Footprint'*, printed in C. C. Pertsova (ed.), *Ecological Economics Research Trends*, Chapter 1: 1–11. NY: Nova Science Publishers.
- [9] Simpson, M.C., Gössling, S., Scott, D., Hall, C.M. and Gladin, E. (2008) *Climate Change Adaptation and Mitigation in the Tourism Sector: Frameworks, Tools and Practices*, UNEP, University of Oxford, UNWTO, WMO: Paris, France.
- [10] World Tourism Organization (WTO) (2006) *Tourism Market Trends, 2006 Edition – World Overview & Tourism Topics*. Madrid.
- [11] Gleason, M. (1997). Edelman sees niche in web public relations. *Advertising Age* (January 20), 68, 30.
- [12] Y .Y . Wu, "The Study of Travel Website's Audio-Visual Effect on Consumer's Purchasing Intention" [Unpublished M.S. thesis], Aletheia University, Taiwan, 2009.
- [13] Huizingh, Eelko K.R.E.(2000), *The Content and Design of Web Sites: An Empirical Study*, *Information & Management*, 37, 123–134.
- [14] Hungerford, H. R., & Tomera, A. (1985), *Science Methods for the Elementary School*, Champaign: Stipes Publishing Co., IL.
- [15] P .H .Lin, "Investigating factors affecting behavioral intention of low carbon tourism" [Unpublished M.S. thesis], National Cheng Kung University, Taiwan, 2009.
- [16] S .L . Chen, G .L . Yeh, "The influential factors of environmental behaviors toward the junior high school students in Pingtung area of Taiwan" *Chinese Journal of Environmental Education*, vol.1 , pp. 13–30, Dec, 2002.

- [17] Yang CH, Chen KH, Lee CJ (2007) Using Rasch Model to Explore the Perceived Constraints of Outbound Travel for Individual Travelers. *J. Leisure Tourism Industry Res.* 2(1): 1-26.
- [18] C .H . Lin, W .C . Wang, P .Y . Liu, N .Y . Wang, "Reexamining on a General Model of Tourists' Destination Choices: The Case of Heritage Tourists" *Journal of Outdoor Recreation Study*, vol. 22, no. 4, pp. 81–104.
- [19] W .C . Lin, "Teachers' Perception on Climate Change and Climate Education: The Case Study in Penghu Archipelago" [Unpublished M.S. thesis], National Taiwan Normal University, Taiwan, 2009.
- [20] Backman, S. J. & Crompton, J. L. (1991). Differentiation Between High, Spurious, Latent and Low Loyalty Participants in Two Leisure Activities. *Journal of Park and Recreation Administration*, 9(2), 1-17.
- [21] Hsu, S. J., & Roth, R. E. (1998).An assessment of environmental literacy and analysis of predictors of responsible environmental behavior held by secondary teachers in the Hualien area of Taiwan. *Environmental Education Research*, 4(3) , 229-249.
- [22] H . J. Chiou, (2005).Principles and practice of structural equation modeling with LISREL. Taipei, Taiwan: Yeh Yeh Book Gall