

Exploring Gen Y's Intention Towards Staying at Green Hotel in Penang with the Role of Attitude as a Mediator

Noor Idda Binti Idris

Kolej Komuniti Bagan Serai, Malaysia

Email: nooriddautm@gmail.com

*Zurina Binti Mohaidin **

Universiti Sains Malaysia

Email: mzurina@usm.my

**Corresponding author*

Abstract

Purpose: The main purpose of this study conducted was to examine the intention of Gen Y to stay at green hotel in Penang.

Design/methodology/approach: The researcher has adopted the Theory of Planned Behavior (TPB) used to answer the research questions from this study. The study has examined the intention of Gen Y to stay at green hotel in Penang by assessing the effects of five variables, namely attitude (ATT), subjective norms (SN), perceived behavioral control (PBC), environmental concern (EC), and environmental knowledge (EK). The population of this study consisted of Gen Y from the states of Kedah and Penang. A total of 129 responses were completed and returned to the researcher. Data were collected through online questionnaires and invitations via email. SPSS and PLS- SEM software was used to analyze the data obtained.

Findings: The findings of this study found that there was a positive relationship between ATT, SN, and PBC on Gen Y's intention to stay at green hotel. In addition, the result of the study also show that ATT mediates the effect of EC on the intention of Gen Y to stay at green hotel. However, ATT towards green hotels and EK showed no significant relationship between these two variables.

Research limitations/implications: This study only focused on the intention of Gen Y to visit green hotels in Penang without considering the actual behavior of the respondents to stay in green hotels. Therefore, the researcher suggested that for future studies the behavior of the respondents should be considered to obtain more accurate or precise results.

Practical implications: There are several implications for certain parties in ensuring public awareness, especially Gen Y about the green hotels so that it can be increased. The results of data analysis showed that there is a positive relationship between environmental concern and Gen Y's intention to visit green hotels. Therefore, the government should take this opportunity by implementing environmental-themed programs. For example, the Environmental Awareness Program (tree planting, nature conservation etc.), Environmental Exhibitions, and other environmental programs aim to have a sense of responsibility among the community to act and participate to save the environment.

Originality/value: The novelty of this study is that the researcher has made a slight modification different from previous studies where the researcher has used the existing theory that is TPB theory but re-conceptualized by adding two more variables namely EC and EK and choose attitude as a mediator variable in the framework that has been proposed.

Keywords: Green Hotel, Attitude (ATT), Subjective Norms (SN), Perceived Behavioral Control (PBC), Gen Y's Intention, Theory of Planned Behavior (TPB)

Introduction

The tourism and hospitality industry is one of the fastest growing industries not only in Malaysia but worldwide. (Karim et al., 2020). Accommodation at hotels and resorts is also part of the largest hospitality industry aimed to satisfy the needs of tourists who want to have a place to sleep during their trip (Olya et al., 2019). The hotel industry changes from time-to-time according to the passage of time and also the desires and needs of guests who want a different and unique atmosphere (Abdulaali et al., 2020). Today, environmental issues are getting more and more attention from people all over the world, including in Malaysia (Muniandy et al., 2019). Liao and Satchabut (2017) asserted that the use of green technology nowadays has become the focus in the field of future science aims to reduce the impact on nature. Generation Y group is among the most vulnerable groups to green issues and they have strong opinions on green practice issues (Jang et al., 2011). "They are the largest generation in the world, accounting for over 25% of the world's population" (GAIA Insights, 2016). This generation is also known as the "Millennium Generation" where they were born between the early 1980s and late 1990s (Parment, 2013). Jang et al. (2011) believe that Gen Y's attitude towards green practices will have an impact on the hotel industry since this generation has a large population, purchasing power and strong influence on other users. Therefore, the great influence of Generation Y on green practices is expected to support hotel marketers to organize strategies to attract this generation to visit green hotels.

Environmental issues in Malaysia are very important and given priority (Rahbar & Wahid, 2010). All industries, including the hospitality sector need to formulate an effective strategy in ensuring the sustainability of the environment. According to Tang et al., (2014) environmental sustainability is often an important agenda to be discussed in the hospitality sector. The implementation of environmentally sustainable practices in the hospitality sector in Malaysia has become an increasingly important issue and involves various stakeholders in discussing this issue. The Malaysian Government in the 12th Malaysia Plan (12MP) has clarified that "policies and strategies in the 12MP will be formulated based on three dimensions where the second dimension touches on the dimensions of environmental sustainability namely 'blue economy', 'green technology', 'renewable energy' as well as adaptation and mitigation of climate change" which coincides with the title of this study which is the green hotel. Hence, it is clear here that the government strongly encourages hotel organizations in Malaysia to practice green hotel concept in order to maintain environmental sustainability.

Demand for hotels has increased in recent years. According to Han and Kim (2010) green hotels can be the best alternative for the hospitality sector due to the growing demand. From here, green hotels can conserve the environment and provide a healthy market for the tourism sector. Recently, research related to green hotels has focused on awareness of sustainable construction (Verma & Chandra, 2018); sustainable building technology (Yiing et al., 2013); sustainable landscapes (Lee et al., 2010); energy efficiency for green hotels (Yusof et al., 2017; Yusof & Jamaludin, 2013); water efficiency for green hotels (Han & Trang, 2018); waste management for green hotels (Han & Trang, 2018); and strategies for owning a green hotel (Rahman & Reynolds, 2019). Studies in green-related hotels show efforts to present an integrated design of green hotels that can benefit hotel owners and in turn be able to preserve the environment.

According to YBHG Dato 'Ar. Yew Tung Seang, in 2021 budget speech 'A Clean, Green, Safe, Well and Prosperous Environment' is still on the agenda of the Penang Island City Council (MBPP) to the people of Penang. "The Penang State Government" is very aware of the importance of outlining careful planning based on the Sustainable Development Goals (SDGs). However, until now only three hotels are listed as green hotels in Penang ("Ministry of Tourism, Arts and Culture Malaysia", 2021) and the number of domestic visitors by state visited in 2019

recorded Penang is ranked seventh out of 16 states in Malaysia which is 15.4 million number of domestic visitors (Department of Statistics, 2019).

Hence, this study is important in order to identify the factors that influence Gen Y's intention to stay at green hotel in Penang. This study adopts the TPB theory by Ajzen (1991) which consists of ATT, SN, and PBC variables. In addition, this study also uses the variables of environmental concern and environmental knowledge to obtain more precise research results. By conducting this study, it is hoped can provide a theoretical contribution to the literature where the factors that contribute to Gen Y's intention to stay in green hotels can be known. Furthermore, it is hoped that this study can help certain parties such as the government and the hotel industry in Malaysia in ensuring public awareness, especially Gen Y about green hotels so that it can be improved.

Literature Review

Theory of Planned Behavior

The main objective of this study was to find out the factors that influence Gen Y's intention to stay in a green hotel. Therefore, the appropriate theory used to conduct this study is TPB theory. TPB theory was introduced by Ajzen (1991) who stated that a person's intentions are influenced by ATT, SN, and PBC. In this study, researchers have examined whether the variables ATT, SN, and PBC are factors that influence the positive intention of Gen Y to stay in a green hotel. From a previous study by Han et al., (2010), He found that the variables ATT, SN, and PBC had influenced the positive intention of Gen Y to stay in a green hotel. In addition, this study also used EC and EK as variables to examine Gen Y's intention to stay in a green hotel. There are several past studies that have demonstrated a positive relationship between EC in determining individual behavior (Chen & Tung, 2014; Lee et al., 2010). Moreover, a study by Polonsky et al. (2012) concluded that there is a positive relationship between EK on consumer attitudes and intentions.

Attitude

From the TPB theory by Ajzen (1991), one of the predictors of intention found in this theory is attitude. People's attitudes towards certain behaviors are confusing and difficult to predict. This is because a person's attitude mostly depends on their feelings and thoughts. According to Ajzen (1991), attitude can be interpreted as an assessment of a person's behavior whether the behavior is good or bad. According to Heberlein (2012), in general, attitudes can be defined as specific habits of individual feelings, thoughts and tendencies to act on certain aspects of the environment. Similarly, Kok and Siero (1985) state that the attitude is the response of an individual to feel, think or behave positively or negatively to an object or subject. A study conducted by Verma and Chandra (2018), states that the attitude factor is the most significant factor in the Theory of Planned Behavior (TPB) model in predicting the desire of young consumers to visit green hotels.

Subjective Norm

SN is an individual's belief in the opinions and views of others which in turn influences the individual's interest whether or not to do such an action. (Ham & Frajman, 2015). Subjective norms are related to a persons' awareness of the social influences from those around them that will influence the individual's intentions towards certain action (Han & Kim, 2010). According to Huda (2012), "subjective norm is an individual's perception or view about the expectations of others where it will influence certain behaviors that a person will or willnot perform". Previous studies have found that subjective norms play an important role in an individual's decision to stay in a green hotel (Han et al., 2010; Lien et al., 2012).

Perceived Behavioral Control

PBC is the main difference between the TPB theory and the Theory of Reasoned Action (TRA). PBC is one of the variables found in TPB but not found in TRA. PBC can also be translated as an individual's perception of a particular behavior whether they want to perform or not due to prevailing controls such as time, cost, and resources (Ajzen, 1991). An individual's behavior depends on how strongly the individual tries to engage in the behavior and how much control he or she has (Han & Kim, 2010). A study from (Norazah & Norbayah, 2015) found that behavior control is the most influential factor that influences the intention of tourists to stay in green hotels.

Environmental Concern

Hu et al., (2010) define EC as "the degree to which an individual is aware and knows about a problem occurring in the environment and supports efforts as a solution to a problem or shows a willingness to solve environmental problems". EC according to Milfontand Gouveia (2006) is an individual's reaction or emotion such as uncertainty, dislike, and compassion towards environmental issues. Thus, individuals who demonstrate concern for the environment was considered as a valuable driver of environmental behaviors for example sensitive to the environment in terms of energy saving, water saving, waste recycling, engaging in green purchases and so on (Hu et al., 2010). Several previous studies have shown that consumers with high levels of environmental concern will have a better attitude towards environmentally friendly products and services or visit green hotels (Aman et al., 2012; Kim & Han, 2010).

Environmental Knowledge

According to Fryxell and Lo (2003) "EK is a fact and concept related to individual knowledge of ecosystems and the environment". Mostafa (2007) also explains that environmental knowledge involves individuals' understanding and knowledge of the environmental issues that occur around them. Several past studies shown an individual tends to change their attitude toward something that contributes to the eco-friendly concept if the individual has a high environmental knowledge and encourages the individual's behavior in eco -friendly purchases (Flamm, 2009; Polonsky et al., 2012).

Hypothesis Development

Based on the theoretical framework shown in Figure 1, seven (7) hypotheses have been developed.

The Effect of Attitude on Gen Y's Intention to Stay at Green Hotel

A study conducted by Verma and Chandra (2018), stated that ATT factor is the most significant factor in the TPB theory in predicting the interest of young consumers to stay at green hotel. The findings of the study coincide with previous studies by (Han & Kim, 2010, Han et al., 2010; Lee et al., 2010). They explained that young people have a strong attitude towards green practices implemented by the hotel. Therefore, the stated hypotheses have been formulated: -

H1: Attitude has a significant relationship with the Gen Y's intention to stay at green hotel.

The Effect of Subjective Norms on Gen Y's Intention to Stay at Green Hotel

Previous studies have found that SN is a major factor of tourists' intention to choose green hotels (Han et al., 2010; Lien et al., 2012) and subsequently affect their behavior to stay again at green hotel (Chen & Peng, 2012; Han & Kim, 2010). The study has clarified that according to the SN if an individual has a high belief that staying at green hotel is the best, then it can increase individual's motivation to visit a green hotel. In short, "the more SN that individuals build, the stronger their intention to act". Therefore, this hypothesis has been constructed-

H2: Subjective norm has a significant relationship with the Gen Y's intention to stay at green

hotel.

The Effect of Perceived Behavioral Control on Gen Y's Intention to Stay at Green Hotel

Several past studies have proven "a person's intention is positively influenced by their self-confidence to do such behavior" (Nimri et al, 2017; Sinnappan & Rahman, 2011; Rahman & Reynolds, 2010). Findings from these studies showed that when an individual has less control to perform certain behaviors due to lack of necessary resources (e.g., cost or time) his/ her behavioral intentions will show a low level. In line with this study, PBC was found to have significantly influenced the behavior of tourists to stay at green hotels (Chen & Peng, 2012; Lien et al., 2012). Hence, the following hypotheses has been formulated: -

H3: Perceived behavioral control has a significant relationship with the Gen Y's intention to stay at green hotel.

The Effect of Subjective Norms on Gen Y's Attitude towards Green Hotel

Han et al. (2010) in his study have explained that the positive attitude of visitors to visit green hotels is influenced by subjective norms. Similarly, a study by Tsay (2010) proved that there is significant relationship between SN and tourist ATT which in turn will influence the behavior of such tourists. Thus, the following hypothesis is created: -

H4: Subjective norm has a significant relationship with the Gen Y's attitude towards green hotel.

The Effect of Perceived Behavioral Control on Gen Y's Attitude towards Green Hotel

Previous studies by Tsai (2010), has confirmed that there is strong positive relationship between PBC and Gen Y's attitude towards green hotels. Based on a study by Chen and Tung (2014), attitudes have a mediating effect on PBC and intention to visit a green hotel. This is also explained by study of Han and Kim (2010). Therefore, the following hypothesis can be formulated: -

H5: Perceived behavioral control has a significant relationship with the Gen Y's attitude towards Green Hotel.

The Effect of Environmental Knowledge on Gen Y's Attitude Towards Green Hotel

Van Birgelen et al. (2011) in his study have explained that there is significant relationship between EK and human attitudes towards green practices. Moreover, Luand Shon (2012) also in their study have confirmed that "students who have a higher level of EK will have an optimistic and positive attitude towards the nature compared to students who have less knowledge about the environment". Therefore, this study aims to examine the following hypotheses:

H6: Environmental knowledge has a significant relationship with the Gen Y's attitude towards green hotel.

Mediating Effect of the Attitude on Environmental Concern and Gen Y's Intention

Several previous studies have shown that consumers with high levels of EC will have a better attitude towards environmentally friendly products and services or visit green hotel (Aman et al., 2012; Kim & Han, 2010). There are also previous studies proved that, EC influences consumer attitudes towards environmentally friendly products and services, which in turn leads to consumer intentions to purchase such products (Aman, Harun, & Hussein, 2012; Hartmann & Apaolaza, 2012; Yadav & Pathak, 2016). Thus, the following hypothesis can be formulated: -

H7: There is the influence of attitude that mediates the relationship between environmental concern and Gen Y's intention to stay at green hotel in Penang.

Methods

The study will examine the intention of Gen Y to stay at green hotel in Penang by assessing the effects of five variables, namely ATT, SN, PBC, EC, and EK. The research is quantitative research that involves the collection of data in numerical form which is accomplished through a survey sample questionnaire. The population for this study consisted of Gen Y from the states of Kedah and Penang. Gen Y are those born between 1981 to 1994 (Parment, 2013). Only individuals born between those years were selected as respondents in this study. In total, 300 online questionnaires were distributed to selected respondents who are individuals from Gen Y group. Based on that, a total of 129 responses were completed making a valid response rate of 43%. The sampling technique that has been used for this study is convenience sampling technique. From this sampling technique, anyone in the population that is Gen Y from the states of Kedah and Penang was selected without any process of random selection as long as they agree to be the respondents of the study. Samples from the state of Kedah were also selected to be the respondents of this study because Kedah is the border of Penang.

A Google form was created as a survey tool for online data collection. There are also some respondents who were invited via email to participate in this survey. All items were rated based on 5-point Likert scale ranging from 1 being 'strongly disagree' to 5 being 'strongly agree'. First section is a filtering question where respondents answer whether they belong to the age group of Gen Y or not. If they belong to the age range of Gen Y which is between 1881 to 1994, then they are allowed to answer the survey questionnaire. However, if they do not belong to the Gen Y age group, they do not need to answer this questionnaire. Next is Section B. This section consists of questions about the background of the respondents such as gender, marriage status, highest education, employment status, monthly salary, nationality, and questions whether they have ever stayed in a green hotel or not. Section C to Section H are Likert scale questions from strongly disagree to strongly agree. The questions asked consisted of several variables such as ATT, PBC, SN, EC, EK, and Gen Y's intention to stay at green hotel.

Findings

This part describes about the analysis of data along with the results of the study. First, the data obtained will be analyzed using SPSS version 22 for data screening and cleaning, assessing normality, and then descriptive analysis. The data will be changed in the form of percentage and frequency to make it easier for the reader to understand the study results. The second step, the researcher will analyze the data using PLS software for measurement model analysis and structural model analysis.

Common Method Variance (CMV)

From this study, the data collected also has been tested in terms of CMV in order to estimate the risk of being biased that occurred on one variable to other variable because the data came from the same source or method (Shehnaz Tehseen, T. Ramayah, Sulaiman Sajilan, 2017). Thus, to test the presence of the CMV for this study, "Harman Single Factor analysis" is adopted. Typically, this analysis will be performed after data collection is conducted. The value for this analysis is 37.7% which is less than the threshold level of 40.0% (Podsakoff et al., 2003; Shehnaz Tehseen, T. Ramayah, ulaiman Sajilan, 2017). Therefore, these results suggested that common method variance is not an issue in this study.

Respondents' Profile and Characteristics

The data collected consisted of 129 responses comprising the Gen Y group regarding their intention to stay at green hotel in Penang. From the results, the number of females is 79 people (61.2%), while male respondents are 50 people (38.8%). The next characteristic is marital status. The number of single respondents is only 31 people (24%), while the number of married respondents is 98 people (76%). For the highest education, Bachelor's degree showed the

highest percentage of 49.6%, followed by Master's degree 24.8%, Diploma/ Certificate 17.8%, High School 5.4%, and PhD/ Doctorate 2.3%. Next, employment status where public servant showed the highest percentage of 50.4%, then private employee 38%, self-employed 6.2%, and Housewife 5.4% only. For monthly income, a total of 55.8% of respondents have income in the range of MYR 2001 - MYR 5000, 20.0% is MYR 5001 - MYR 8000, 18.6% is less than MYR 2000, 3.1% is MYR 8001 - MYR 10,000, and the last 2.3% is above 10,000. A total of 98.4% are citizens. Only 1.6% are non -citizens. The researcher also included the question "Have you ever stayed at green hotel?" in this section, the results showed that a total of 62 people (48.1%) have ever stayed in a green hotel.

Measurement Model Assessment

In performing the analysis, the model measurement needs to be tested first before testing the hypothesis for the structural model. First, the researcher needs to test the internal consistency. Cronbach's Alpha values should be greater than 0.6 while composite reliability values between 0.7 or greater are acceptable (Fornell and Larcker 1981). From table 2 it is clear that the value of CronbachAlpha is between 0.751 to 0.925 which is above the recommended value of 0.7. Meanwhile, the composite reliability value is between 0.847 to 0.953 also showing a value above 0.7. Thus, it is clear here that the analysis for internal consistency in terms of Cronbach Alpha and composite reliability is confirmed.

After testing the reliability, the researcher will then test the validity in terms of factor loading and Average Variance Extracted (AVE). Loadings of 0.4, 0.5, 0.6, and 0.7 can be accepted if it leads to AVE that is larger than 0.5 (Bryne, 2016). The answer from table 1 has shown the value of Loadings between 0.497 to 0.947. Meanwhile, AVE shows a value between 0.613 to 0.87. Therefore, it can be concluded that convergent validity is ascertained.

Table 1: Goodness-of-fit measurement model (n=129)

Latent Variable	Items	Loading	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Attitude	ATT1	0.814	0.915	0.932	0.663
	ATT2	0.755			
	ATT3	0.743			
	ATT4	0.841			
	ATT5	0.798			
	ATT6	0.866			
	ATT7	0.874			
Environmental Concern	EC1	0.578	0.903	0.925	0.613
	EC2	0.497			
	EC3	0.794			
	EC4	0.873			
	EC5	0.877			
	EC6	0.845			
	EC7	0.836			
	EC8	0.863			
Environmental Knowledge	EK1	0.602	0.751	0.847	0.656
	EK2	0.896			
	EK3	0.896			
Perceived Behavioral Control	PBC1	0.882	0.813	0.89	0.729
	PBC2	0.875			
	PBC3	0.802			
Subjective Norms	SN1	0.946	0.925	0.953	0.87
	SN2	0.947			
	SN3	0.905			
Visit Intention	VI1	0.859	0.882	0.927	0.809
	VI2	0.919			
	VI3	0.919			

The next method is to evaluate the discriminant validity. From table 2, the HTMT value is less than 0.9. According to Henseler et al (2016), an acceptance level of HTMT values less than 0.9 is acceptable. Thus, it clearly proved that these constructs are different from each other.

Table 2: Heterotrait-Monotrait (HTMT) Ratio

	ATT	EC	EK	VI	PBC	SN
ATT						
EC	0.525					
EK	0.41	0.319				
VI	0.66	0.339	0.563			
PBC	0.71	0.531	0.47	0.736		
SN	0.363	0.096	0.593	0.507	0.344	

Structural Model Assessment

Next, the researcher will look at the value of the variance indicator factor (VIF) to identify whether there is collinearity or not. According to Diamontopoulos & Sigouw (2006) the VIF value should be less than 3.3 to ensure that no collinearity exists. Thus, from table 3 it is clear that collinearity does not exist because the VIF value is less than 3.3.

Table 3: Variance Indicator Factor (VIF)

	ATT	EC	EK	VI	PBC	SN
ATT				1.7		
EC	1.406					
EK	1.47					
VI						
PBC	1.5			1.649		
SN	1.402			1.149		

The second step is structural model relationships which represent the hypothesized relationships between the constructs. One-tailed is used because it has more power which is easier to reject H null than two-tailed (Kock, 2015). The results from table 4 show the significance of path coefficients. The results showed significant positive effect between ATT, SN, and PBC on Gen Y's intention to stay at green hotel. Thus, H1 ($\beta = 0.281$, $t = 3.173$), H2 ($\beta = 0.251$, $t = 3.825$), and H3 ($\beta = 0.378$, $t = 4.732$) were supported. There is also a significant positive effect between SN and PBC on Gen Y's attitude to stay at Green Hotel in Penang. Thus, H4 ($\beta = 0.213$, $t = 2.792$), and H5 ($\beta = 0.401$, $t = 3.954$) were supported. However, the relationship between EK and Gen Y's attitude to stay at green hotel is not significant, showing the value of H6 ($\beta = 0.048$, $t = 0.501$). Finally, there is the influence of ATT that mediates EC and Gen Y's intention to stay at green hotel in Penang showing the value of H7 ($\beta = 0.0081$, $t = 2.780$).

Table 4: Hypotheses testing results

Hypothesis	Relationship	Std. Beta	Std. Error	t-value	Decision	f ²
H1	Attitude → Visit Intention	0.281	0.089	3.173	Significant	0.097
H2	Subjective Norm → Visit Intention	0.251	0.066	3.825	Significant	0.115
H3	Perceived Behavioral Control → Visit Intention	0.378	0.08	4.732	Significant	0.181
H4	Subjective Norm → Attitude	0.213	0.076	2.792	Significant	0.063
H5	Perceived Behavioral Control → Attitude	0.401	0.101	3.954	Significant	0.208
H6	Environmental Knowledge → Attitude	0.048	0.079	0.501	Insignificant	0.002
H7	Environmental Concern → Attitude → Visit Intention	0.081	0.029	2.780	Significant	0.125

The next step is to assess the level of R². From the result, the value of R² is 0.522 for the visit intention endogenous latentvariable. This means that the three latent variables (ATT, SN, and PBC) moderately explain 52.2% of the variance in Gen Y’s visit intention. Meanwhile, the R² value for attitude of Gen Y towards staying at green hotel is 0.485 indicating that 48.5% of the variance in attitude of Gen Y to stay at green hotel was explained by SN, EC, EK, and PBC. Therefore, the R² values of attitude of Gen Y (0.485) and visit intention (0.522) can be considered moderate based on the statements from Hair et al. (2017).

The next criterion is to look at the value of f² which is the effect size. Cohen (1988) suggested that “f² values higher than 0.02are considered small, higher than0.15 is medium, and higher than 0.35 is large”. From the result, the f² values for H1 (f² = 0.097), H2 (f² = 0.115), H4 (f² = 0.063), H5 (f² = 0.028), H6 (f² = 0.002), and H7 (f² = 0.125) are weak because they have values greater than 0.02. Meanwhile, H3 (f² = 0.181) was moderate because it showed a value greater than 0.15.

The last step is to assess the predictive relevance of Q². This step is important to know if the model is accurate and relevant or accurate but not relevant. If relevant, this model can accurately estimate the effect on DV by IV. As proposed by Geisser (1975), “a value of 0.02 ≤ Q² < 0.15 is weak predictive power, 0.15 ≤ Q² < 0.35 is moderate predictive power, and Q² ≥ 0.35 is considered strong predictive power”. The Q² values for this study were attitude (Q² = 0.305) and Gen Y’s visit intention (Q² = 0.389). Thus, the results show the strong predictive power for visit intention variable and moderate predictive power for attitude variable.

Discussion and Conclusion

Hypothesis 1 (H1) of this study has proved that there is a positive relationship between ATT towards green hotels and Gen Y’s intention to stay at green hotels in Penang. The tested hypotheses have shown values of $\beta = 0.281$ and $t = 3.173$. From these results it is clear that attitudes and intentions have a positive relationship. The results of this study coincide with previous studies by (Han & Kim, 2010, Han et al., 2010; Lee et al., 2010). They explained that young consumers have a significant relationship and strong attitude towards green practices implemented by the hotel. Therefore, it can be summarized here, in order to increase customers' intention to visit green hotels, hotel marketers can carefully plan and consider the criteria to improve customers' positive attitude towards green hotels.

Hypothesis 2 (H2) from this study has proved that there is a positive relationship between SN and Gen Y’s intention to stay at green hotels in Penang. The tested hypotheses have shown β

= 0.251 and $t = 3.825$. From these results it is clear that SN and intentions have a positive relationship. According to studies from (Han & Kim, 2010; Kim & Choi, 2005) high levels of social stress will affect an individual's intention to visit a green hotel. Muniandy et al., (2019) in his study has proven that there is a positive relationship between SN and intention of tourists to visit green hotels. In short, the more subjective norms that individuals build, the stronger their intention to act.

Hypothesis 3 (H3) proved that there is a positive relationship between PBC and Gen Y's intention to stay at green hotels in Penang. The tested hypotheses have shown values of $\beta = 0.378$ and $t = 4.732$. This study is in line with the findings of a study conducted by Chen and Peng (2012) and Lien et al. (2012). In the study the researcher has explained that PBC was found to have significantly influenced the behavior of tourists to stay at green hotels. In addition, previous study by (Norazah & Norbayah, 2015) found that behavior control is the most influential factor that influences the intention of tourists to stay at green hotels. Therefore, this study confirms that factors such as time, resources, and opportunities are among the criteria that will influence the intention of tourists to stay at green hotels.

Hypothesis 4 (H4) proved that there is a positive relationship between SN and ATT of Gen Y towards green hotels concept. The tested hypotheses have shown values of $\beta = 0.213$ and $t = 2.792$. This proves that Gen Y's attitude towards green hotels has a positive influence on SN. The results from this study are similar to the results from previous studies. Among them is a study conducted by Tsai (2010) confirmed that there is a significant relationship between SN and tourist attitudes which in turn will influence the behavior of such tourists. Similarly, to the study conducted by Han et al. (2010), the study explained that there is a positive relationship between ATT and SN related to green hotels. Thus, it can be concluded that Gen Y's decision to visit a green hotel has a strong influence from reference views such as family, friends and so on.

Hypothesis 5 (H5) proved that there is a positive relationship between PBC and ATT towards green hotels concept. The tested hypotheses have shown values of $\beta = 0.401$ and $t = 3.954$. This proved that Gen Y's attitude towards green hotels has a positive influence on PBC. The results from this study are similar to the results from previous studies. According to a study by Tsai (2010), has confirmed that there is a strong positive relationship between PBC and Gen Y's attitude towards green hotels. This is also explained from the research of Han and Kim (2010) who explained that when the respondent's behavior control is seen as positive, then the respondent's attitude is also positive. The results of this study coincide with the literature by Ajzen (1991) explaining that the control of individual behavior will be more prominent if the individual has extensive resources and opportunities.

Hypothesis 6 (H6) shows that Gen Y's attitudes toward green hotels are not influenced by their environmental knowledge of green concepts. The tested hypotheses have shown values of $\beta = 0.0048$ and $t = 0.501$. This proved that Gen Y's attitude towards green hotels has no influence on environmental knowledge. The results from this study contradict some of the results from previous studies. Van Birgelen et al. (2011) in his study have explained that there is a significant relationship between environmental knowledge and human attitudes towards green practices. Moreover, Lu and Shon (2012) also in their study have confirmed that students who have a higher level of environmental knowledge will have an optimistic and positive attitude towards the environment compared to students who have less knowledge about the environment. However, this study is supported by a study by Paço and Lavrador (2017) on environmental knowledge among university students, where the results of the study showed no correlation between environmental knowledge and attitude. In the study, the researcher explained that

although the environmental knowledge among students is high, but it does not lead to a positive attitude of the students regarding energy saving.

Hypothesis 7 (H7) proves that respondents' attitudes towards green hotels are influenced by environmental concern which in turn influence their intention to visit green hotels in Penang. The tested hypotheses have shown values of $\beta = 0.081$ and $t = 2.780$. This proves that Gen Y's attitude towards green hotels has a mediating influence on environmental concern and in turn affects their intention to stay at green hotels. Hence, this hypothesis has been supported that attitude mediates the effect of environmental concern. The findings of this study are in line with the literature by Bamgbade (2017), who explained that the sources and inputs of green products are due to environmental concern attribute. Therefore, Gen Y's intention to stay in a green hotel is due to their concern towards the environment. Moreover, in line with the results of this study is related to the environmental concern and attitude where previous studies by (Han & Kim, 2010, Aman et al., 2012), showed that individuals with environmental concern will have a positive attitude to support, buy, and use green products or services including staying in green hotels. Thus, it is clear here that Gen Y's attitude towards green hotels is due to their environmental concern which in turn influences their intention to visit and stay at green hotels. Therefore, the results of the study have shown that attitude towards green hotel is a mediating effect between environmental concern and Gen Y's intention because first, there is a significant relationship between environmental concern and attitude, second there is a significant relationship between attitude and Gen Y's intention, and last there is also a significant relationship between environmental concern, attitude, and Gen Y's intention. Therefore, a mediating effect exists since all the conditions are met.

Theoretical Implications

In summary, this study has made some theoretical contribution to the literature in which the factors contributing to Gen Y's intention to stay in green hotel can be known. Findings from this study found that if the factors of ATT, SN, and PBC are positive then the tendency of Gen Y to visit green hotels is high. Thus, it can be concluded that TPB theory was very suitable and useful framework in order to analyze a person's intention to stay at green hotel. In addition, the findings from this study also found that the attitude towards green hotels is a mediating influence on environmental concern where if respondents have awareness of the environment, then they also have a positive effect on attitudes towards green hotels and hence their tendency to stay or visit green hotels is high. However, the environmental knowledge variable did not have a positive relationship with attitudes toward green hotels. This is because, individuals who have high level of environmental knowledge do not necessarily have the intention to stay or visit the green hotel in Penang.

Practical and Social Implications

There are also several implications for certain parties in ensuring public awareness, especially Gen Y about the green hotels so that it can be increased. The results from the analysis showed that there is a positive relationship between environmental concern and Gen Y's intention to visit green hotels. Therefore, the government should take this opportunity by implementing environmental-themed programs. For example, the Environmental Awareness Program (tree planting, nature conservation etc.), Environmental Exhibitions, and other environmental programs aim to have a sense of responsibility among the community to act and participate to save the environment.

Next, to give awareness to the community, especially Gen Y who is the highest domestic tourist in Malaysia, hotel marketers can promote green hotels by using social media for example Instagram, Facebook, Twitter, Blog, and also websites to influence people to stay in green hotels. Hotels can use internet sources to attract people to visit green hotels as well as convey a

message about the importance of supporting green practices. Next, empirical studies have also shown that individual behavioral control influences their intention to stay at green hotels. The availability of green hotels in Penang affects the intention of visitors to stay at green hotels. However, it is quite difficult for tourists to access green hotels in Penang due to limited number that only three hotels have implemented green practices. Therefore, the government's communication and incentive programs are important in order to encourage hotel operators to practice the green concept in their hotels. It is important for these agencies to provide financial assistance and encouragement to hotel operators to implement green concept in their hotels.

Limitations and Suggestions for Future Research

This research aims to examine the factors that influence the intention of Gen Y to visit and stay at green hotels in Penang. Despite this study has contributed a very meaningful theoretical and practical contributions, there are also some limitations in this study that need to be presented in order to ensure more meaningful and relevant studies in future.

The first limitation encountered in this study is the small sample size of only 129 respondents involved in this study. Although G-power software shows a minimum value of sample size is 129 but sample representation can be improved by taking a population of elements randomly from a scattered location. This is because tourists in Penang are those who come from various states and countries.

Secondly, this study only focused on intention of Gen Y to visit green hotels at Penang without considering the actual behavior of the respondents to stay in green hotels. Therefore, the researcher suggested that for future studies the behavior of the respondents should be considered to obtain more accurate or precise results.

There are some suggestions for future research. The researcher suggested that for the future study, the actual behavior of the respondents should be investigated to get more precise study results. This is because, intention is not the determinant for a person to act like staying in a green hotel. In addition, for future studies, the researchers maybe also can consider other variables such as the impact of alternative communication interventions (education, media advertisement) on the intention of consumers to stay at green hotels. Next, the researcher suggested that in future studies the proposed theoretical framework can consider other generations besides Gen Y for example data from Gen Y and Gen X are collected to see comparison of findings between these two generations on intention to stay at green hotel. Therefore, more accurate findings can be obtained.

Acknowledgement

I wish to thank my corresponding author, Dr. Zurina Mohaidin for constructive supervision, thoughtful encouragement and intellectual commitment in guiding me through my MBA journey and writing this article. I am very grateful for her support and guidance.

References

- Abdulaali, H. S., Hanafiah, M., Usman, I. M., Nizam, N. U. M., & Abdulhasan, M. (2020). A review on green hotel rating tools, indoor environmental quality (IEQ) and human comfort. vol, 29, 128-157.
- Ajzen, I. (1991), "The theory of planned behaviour", *Organizational Behaviour and Human Decision Processes*, Vol. 50 No. 2, pp. 179-211.
- Aman, A. L., Harun, A., & Hussein, Z. (2012). The influence of environmental knowledge and concern on green purchase intention the role of attitude as a mediating variable. *British Journal of Arts and Social Sciences*, 7(2), 145-167.
- Bamgbade, J. A., Kamaruddeen, A. M., & Nawi, M. N. M. (2017). Towards environmental sustainability adoption in construction firms: An empirical analysis of market orientation and organizational innovativeness impacts. *Sustainable Cities and Society*, 32, 486-495.

- Chen, A., & Peng, N. (2012), "Green hotel knowledge and tourists' staying behavior", *Annals of Tourism Research*, Vol.39 (4), 2211–2216.
- Chen, M. F., & Tung, P. J. (2014). Developing an extended theory of planned behavior model to predict consumers' intention to visit green hotels. *International Journal of Hospitality Management*, 36,221-230.
- Cohen, J. (1988). Set correlation and contingency tables. *Applied psychological measurement*, 12(4), 425-434.
- Department of Statistics Malaysia. (2021). Domestic Tourism Survey 2019 By State. https://www.dosm.gov.my/v1/index.php?r=column/cthemByCat&cat=472&bul_id=UVZoQXZWUmhUaGxadW95RWdBL2QxZz09&menu_id=b0pIV1E3RW40VWRTUkZocEhyZ1pLUT09.
- Diamantopoulos, A., & Siguaw, J. A. (2006). Forma-tive versus reflective indicators in organizational measure development: A comparison and empi-rical illustration. *British Journal of Manage- ment*, 17(4), 263–282.
- Flamm, B. (2009). The impacts of environmental knowledge and attitudes on vehicle ownership and use. *Transportation research part D: transport and environment*, 14(4), 272-279.
- Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics.
- Fryxell, G. E., & Lo, C. W. (2003). The influence of environmental knowledge and values onmanagerial behaviours on behalf of the environment: An empirical examination of managers in China. *Journal of business ethics*, 46(1), 45-69.
- GAIA Insights (2016). Generation Y Demographics. <http://www.generationy.com/about-generation-y-in-the-workforce/demographics/>
- Geisser, S. (1975). The predictive sample reuse method with applications. *Journal of the American Statistical Association*, 70, 350, 320-328.
- Hair Jr, J. F., Sarstedt, M., Ringle, C. M., & Gudergan, S. P. (2017). *Advanced issues in partial least squares structural equation modeling*. saGe publications.
- Ham, M., Jeger, M., & Frajman Ivković, A. (2015). The role of subjective norms in forming the intention to purchase green food. *Economic research-Ekonomska istraživanja*, 28(1), 738-748.
- Han H., Hsu L., & Sheu C. (2010). Application of the Theory of Planned Behavior to Green Hotel Choice: Testing the Effect of Environmentally Friendly Activities. *Tourism Management*, 31(3), 325-334.
- Han, H., & Kim, Y. (2010). An investigation of green hotel customers' decision formation: Developing an extended model of the Theory of Planned Behavior. *International Journal of Hospitality Management*, 29(4), 659–668.
- Han, H., Lee, J. S., Trang, H. L. T., & Kim, W. (2018). Water conservation and waste reduction management for increasing guest loyalty and green hotel practices. *International Journal of Hospitality Management*, 75, 58-66.x.
- Henseler, J., Hubona, G., & Ray, P. A. (2016). Using PLS path modeling in new technology research: updated guidelines. *Industrial management & data systems*.
- Hartmann, P., & Apaolaza-Ibanez, V. (2012). Consumer attitude and purchase intention toward green energy brands: The roles of psychological benefits and environmental concern. *Journal of Business Research*, 65(9), 1254–1263.
- Heberlein, T. A. (2012). *Navigating environmental attitudes*. Oxford University Press.
- Hu, H. H., Parsa, H. G., & Self, J. (2010). The dynamics of green restaurant patronage. *Cornell Hospitality Quarterly*, 51(3), 344–362.

- Huda, N., Rini, N., Mardoni, Y., & Putra, P. (2012). The analysis of attitudes, subjective norms, and behavioral control on muzakki's intention to pay zakah. *International Journal of Business and Social Science*, 3(22).
- Jang, Y. J., Kim, W. G., & Bonn, M. A. (2011). Generation Y consumers' selection attributes and behavioral intentions concerning green restaurants. *International Journal of Hospitality Management*, 30(4), 803-811.
- Karim, W., Haque, A., Anis, Z., & Ulfy, M. A. (2020). The movement control order (mco) for covid- 19 crisis and its impact on tourism and hospitality sector in malaysia. *International Tourism and Hospitality Journal*, 3(2), 1-7.
- Kim, Y., & Choi, S. M. (2005). Antecedents of green purchase behavior: An examination of collectivism, environmental concern, and PCE. *ACR North American Advances*.
- Kok, G., & Siero, S. (1985). Tin recycling: Awareness, comprehension, attitude, intention and behavior. *Journal of economic psychology*, 6(2), 157-173.
- Kock, N. (2015). One-tailed or two-tailed P values in PLS-SEM?. *International Journal of e-Collaboration (IJeC)*, 11(2), 1-7.
- Lee, J. S., Hsu, L. T., Han, H., & Kim, Y. (2010). Understanding how consumers view green hotels: how a hotel's green image can influence behavioural intentions. *Journal of sustainable tourism*, 18(7), 901-914.
- Liao, Y., & Satchabut, T. (2017). Factors affecting behavioral intentions and responsible environmental behaviors of Chinese tourists: A case study in Bangkok, Thailand. *UTCC International Journal of Business and Economics*, 9(2), 137-154.
- Lien, C., Huang, C. and Chang, H. (2012), "The influence of green consumption cognition of consumer on behavioural intention – a case study of the restaurant service industry", *African Journal of Business Management*, Vol. 6 No. 26, pp. 7888-7895.
- Lu, J. L., Shon, Z. Y. (2012): Exploring airline passengers' willingness to pay for carbon offsets. – *Transportation Research Part D* 17: 124-128.
- Ministry of Tourism, Arts and Culture Malaysia (2021). Rated Green Hotel. <http://www.motac.gov.my/en/check/green-hotel>.
- Mostafa, M. M. (2007). A hierarchical analysis of the green consciousness of the Egyptian consumer. *Psychology & Marketing*, 24(5), 445-473.
- Muniandy, K., Rahim, S. A., Ahmi, A., & Rahman, N. A. A. (2019). Factors that influence customers' intention to visit green hotels in Malaysia. *Int. J Sup. Chain. Mgt Vol*, 8(3), 994.
- Nimri, R., Patiar, A., & Kensbock, S. (2017). A green step forward: Eliciting consumers' purchasing decisions regarding green hotel accommodation in Australia. *Journal of Hospitality and Tourism Management*, 33, 43-50.
- Olya, H. G., Bagheri, P., & Tümer, M. (2019). Decoding behavioural responses of green hotel guests. *International Journal of Contemporary Hospitality Management*.
- Paço, A., & Lavrador, T. (2017). Environmental knowledge and attitudes and behaviours towards energy consumption. *Journal of environmental management*, 197, 384-392.
- Parment, A. (2013), "Generation Y vs. Baby Boomers: shopping behavior, buyer involvement and implications for retailing", *Journal of Retailing and Consumer Services*, Vol. 20 No. 2, pp. 189- 199.
- Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(879), 10-1037.
- Polonsky, M. J., Vocino, A., Grau, S. L., Garma, R., & Ferdous, A. S. (2012). The impact of general and carbon-related environmental knowledge on attitudes and behaviour of US consumers. *Journal of Marketing Management*, 28(3-4), 238-263.

- Rahbar, E., & Wahid, N. A. (2010). The Malaysian consumer and the environment: Purchase behavior. *Global Business and Management Research: An International Journal*, 2(4), 323-336.
- Rahman, I., & Reynolds, D. (2019). The influence of values and attitudes on green consumer behavior: A conceptual model of green hotel patronage. *International Journal of Hospitality & Tourism Administration*, 20(1), 47-74.
- Sinnappan, P., & Rahman, A. A. (2011). Antecedents of green purchasing behavior among Malaysian consumers. *International Business Management*, 5(3), 129–139.
- Norazah Mohd Suki & Norbayah Mohd Suki (2015). Consumers' environmental behaviour towards staying at a greenhotel. *Management of Environmental Quality: An International Journal*.
- Tang, Y. H., Amran, A., & Goh, Y. N. (2014). Environmental management practices of hotels in Malaysia: Stakeholder perspective. *International Journal of Tourism Research*, 16(6), 586- 595.
- Tehseen, S., Ramayah, T., & Sajilan, S. (2017). Testing and controlling for common method variance: A review of available methods. *Journal of Management Sciences*, 4(2), 142-168.
- Teng, Y. M. (2011). Applying the extended theory of planned behavior to predict the intention of visiting a green hotel. *African Journal of Business Management*, 5(17), 7579-7587.
- Tsai, C. Y. (2010). Applying the theory of planned behavior to explore the independent travelers behavior. *African Journal of Business Management*, 4(2), 221-234.
- Van Birgelen, M., Semeijn, J., & Behrens, P. (2011). Explaining pro-environment consumer behavior in air travel. *Journal of Air Transport Management*, 17(2), 125-128.
- Verma, V. K., & Chandra, B. (2018). Sustainability and customers' hotel choice behaviour: a choice- based conjoint analysis approach. *Environment, development and sustainability*, 20(3), 1347- 1363.
- Yadav, R., & Pathak, G. S. (2016). Young consumers' intention towards buying green products in a developing nation: Extending the theory of planned behavior. *Journal of Cleaner Production*, 135, 732–739.
- Yiing, C. F., Yaacob, N. M., & Hussein, H. (2013). Achieving sustainable development: Accessibility of green buildings in Malaysia. *Procedia-Social and Behavioral Sciences*, 101, 120-129.
- Yusof, Y., Awang, Z., Jusoff, K., & Ibrahim, Y. (2017). The influence of green practices by non-green hotels on customer satisfaction and loyalty in hotel and tourism industry. *International Journal of Green Economics*, 11(1), 1-14.
- Yusof, Z. B., & Jamaludin, M. (2013). Green approaches of Malaysian green hotels and resorts. *Procedia-Social and Behavioral Sciences*, 85, 421-431.