The nexus of climate change and hotel management in Malaysia: an exploratory study

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Abstract: Small island tourism is susceptible to the adverse impacts of climate change and is expected to challenge the business model of hotel operators. Thus, it is imperative for them to understand the interactions between climate change and hotel management to mitigate the unfavourable impacts. This study aims to investigate the perceptions among hotel managers in Kapas Island, Malaysia on the climate change impact to their hotel operation. It represents their readiness when experiencing adverse conditions brought by climate change. Qualitative research through case study is conducted to get an in-depth investigation of the understanding about climate change among managers. Results showed that there are mixed views among respondents on the impact of climate change to their hotel management. Most hotel management in Kapas Island perceived that climate change impact are irrelevant for their hotel operation. Thus, no serious actions in terms of business operation and adaptation strategy were taken by the owners to prepare for any unexpected climate event. This study contributes to the literature on climate change adaptation by providing information from the Malaysian perspective.

Keywords: perception; hotel management; climate change; Malaysia.

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1 Climate change and the tourism industry

Climate change or environmental change is an adjustment in weather patterns that occur over a broad timeframe (National Research Council, 2010). Changes in weather can be observed through clouds, temperature, humidity, precipitation, and wind in a specific place or areas. The tourism industry is known as a climate-sensitive sector, and continuous events related to climate change had significantly influenced the activities of the tourism players such as hotels, tour operators, travel agencies, and customers themselves. In the tourism industry, the negative impacts of climate change can be observed through the damage to facilities and infrastructure, increased medical costs for employees due to the health issues and the reduction of tourism attractiveness as some activities could not be carried out during the climate change-related event. Indeed, researchers have concluded that many indicators have shown that climate change would significantly affect the tourism sector in the future (Bujosa et al., 2015). Such findings demonstrate a clear signal that the interactions of climate change and the hotel industry should receive serious attention from related parties before the impact of this event become more severe.

Malaysia is considered among the most vulnerable to climate change impacts as they own limited resources to adapt on the climate impacts socially, technologically and financially (UNFCCC, 2007). The impact to Malaysia occur on the island temperature, weather, sea level, and biodiversity which lead to the erosion and seasonal changes (Cashman et al., 2012). Moreover, experts believed that the impacts may be worse to small islands due the structure and its exposure. Other impacts will be seen through accelerated beach erosion, degradation and coral reefs bleaching that influence the tourism income (UNFCCC, 2007). As tourism is a major contributor to Malaysia's national income, these situations have brought difficult challenges for the industry. In particular, island tourism is threatened by more serious issues due to the climate change impacts as they are operating with limited resources and space (Kakazu, 2016). Thus, proper tourism planning and effective resources usage are required to ensure business operators are in a better position to adapt to the impacts (Mohamad et al., 2016).

In conjunction with the risks and potential issues of the climate change impacts, researchers believe that an adaptation strategy should become the main priority to prepare an organisation for the upcoming challenges. As such, a declaration has been made

during the UN Framework Convention on Climate Change to urge countries to pay great attention to an adaptation strategy for climate change (Adger et al., 2005). Adaptation strategy is not only meant to assist organisations with management decisions to deal with the situations during climate change, but more importantly it could increase the capability of an organisation to react to minimise the negative impacts of an event if it happens again (Tompkins et al., 2010). This is important to achieve as the sustainable tourism industry is highly influenced by the weather condition. In the same vein, research showed that although many adaptation approaches have been developed, the success of implementations is only achievable by considering the need of related stakeholders, who influence business decisions such as tourism operators, suppliers, government and tourists (Adger et al., 2005). The pressure from all stakeholders would ensure that businesses are taking consideration about the problem and increase their responsibility towards environmental issues by integrating the adaptation plan into their business strategies. Therefore, the focus of this paper is to investigate the perceptions of the hotel's managers with regards to climate change. Their awareness are important to gauge the readiness of hotel operators towards the impacts brought by climate change.

2   Research context: Kapas Island in Malaysia

Climate change affects the demand of tourists to stay in hotels. Although Malaysia's climate has been known for its uniform temperatures, high humidity and rainfall throughout the year, these have changed due to unexpected extreme weather conditions. For instance, one of the worst flooding events in Malaysia occurred in 2014. The flood, which hit Malaysia from December 2014 to January 2015, was reported as the worst flood in a decade. The major areas affected by this tragedy were Kelantan and some other areas in the East Coast region. Business infrastructure like shop premises, restaurants, banks and business activities were badly affected by the flood. The tourism sector was also adversely impacted by major destruction during the flood event. During this time, most hotels located in East Coast area were unable to operate due to safety reasons. The accommodation operators had to bear losses due to damages to their properties and declining sales during the event. Indeed, a decrease in tourism has been reported in 2015 due to the horrendous floods that hit Malaysia in November 2014 (Tourism Malaysia, 2017).

The above evidence suggests that as the change in the seasonal period has influenced the revenue stream of hotels. With the climate change challenge facing the hotel industry environment, a crucial need exists for organisations to adjust their resources, to conform to the expectations of the stakeholders, and to stay relevant in the market. To date, studies on measuring the efficiency of hotels operation is still under researched (Yen and Othman, 2011). The Malaysian Government has strongly supported this sector by providing assistance in terms of financial, training, funding policy and infrastructure. As the government has prioritised this sector in achieving sustainable development and economic growth, there are increased interests in developing the hotel industry.

The scope of this study is on small hotels/resorts in Kapas Island, Malaysia. Kapas Island is one of the popular islands located in the East Coast of Peninsular Malaysia. The island is famed for its white sandy beaches and beautiful coastline. With its beautiful and unique landscape, Kapas Island is one of the main choices for diving and

snorkelling activities in Malaysia. Another attraction of this island is its close proximity to the mainland, which translates into a convenient journey for the tourists as they do not have to spend much time on the road before arriving at the destination. The island attracts many local and international tourists. This contributes to the development of accommodation services providers in the area. Previous research found that size play an important role in influencing the hotels' environmental responses where bigger hotels are more informed about the issue compared to the smaller ones (Kassim et al., 2017). The contention has been that small and medium size hotels are lacking in terms of awareness and understanding on environmental issues such as climate change. Since most accommodation providers in the Kapas Island are small in size, therefore the focus of this study is to explore the contextual elements of this island that influence the perceptions of their managers on the interactions between climate change and their hotel management. For the purpose of this study, the small hotel/resort is defined as accommodation providers that have 60 rooms and below.

3   Perceptions about climate change

Researchers believed that perceptions about climate change can vary over time (Capstick et al., 2015). Importantly, the change of perceptions among members of the public on the issue of climate change requires due and careful attention because of its effect on further resolutions that will be taken by impacted parties. This is because the trend of changing public perceptions can be consequential for national and international responses to climate change and may be underpinned by a range of different social forces and physical phenomena. With different understanding and experiences, it is thus plausible that changing meteorological conditions may influence public perceptions based on context. It is therefore important for the research on the climate change impact to consider contextual elements in their investigation to ensure that the adaptation approach offered to the impacted parties are according to their actual conditions.

In Malaysia, although the awareness about climate change is high among the corporate managers, however this awareness does not reflect their actions towards mitigating the climate change impact to the company (Begum and Pereira, 2013). Researchers suggested that this situation might occur mainly due to the lack of a clear understanding about the climate change impacts. The fact that Malaysia has not faced any severe threats from climate change and natural disasters influences the perception of managers about the risks of unexpected events due to climate change in operating their businesses. In one study conducted in Malaysia, respondents were asked about factors other than business profit that motivate them to actively address the issue of climate change at their companies. A majority of the respondents indicated that education and awareness building as the most important factors to motivate them to participate in climate change mitigation exercises. The study also found that the business community and managers felt that financial evidence and records such as profits and revenues are the only way to communicate the need to consider the climate change impacts to the businesses and their employees (Begum and Pereira, 2013). The above findings suggest that although it has been known as a global issue, awareness programs conducted to educate people in Malaysia about the risks of climate change were insufficient. Moreover, community awareness about the issue is highly dependent on their experience

of real events, and efforts to resolve the issue are unlikely to be taken until the event occurs.

Despite the attention given to the issue, scant research exists on the development of an adaptation strategy for climate change, focusing on the tourism industry (Scott and McBoyle, 2007). This is an important gap to be filled because the tourism industry is an important sector contributing to the development of many countries especially in terms of the economic and society. More importantly, an understanding of the relationship between tourism and climate change has the potential to be explored in depth without relying solely on general assumptions (De Freitas, 2001). Because the impact of climate change has the potential to alter tourism demand and development of a particular country, the exploration of the managers' perception would be critical to guide the hotel's operation for the future. In fact, the effectiveness of managing unexpected events like climate change could be increased if the beliefs about its impact can be targeted accordingly (Juvan and Dolnicar, 2014).

4   Attribution theory of perception

Attribution theory examines the cognitive processes underpinning individual's inferences or perceptions regarding cause and effect of the certain context (Joslyn and Haider-Markel, 2017). The attribution process happens when individuals observe, explain, and analyse behaviours and events with the causal explanations and he also argued that individuals tend to seek control and stability in their social environments (Joslyn and Haider-Markel, 2017). Causal explanations are grouped into two categories which include internal (dispositional) and external (situational) attributions. Internal attributions implicate personal characteristics of the individual such as ability or personality (as the cause of a specific behaviour or event) while external attributions focus on items beyond the reach of individuals such as luck, the behaviour of others, or larger social and political forces (Joslyn and Haider-Markel, 2017). Similarly, other researchers discussed about how an individual perceive things and showed that people actions are interpreted and understood based on their social environment (Shaver, 2016).

From a broader perspective, the approach and method of attribution theory owe an intellectual debt to the general area of studies called social psychology. As such, through this study area, attribution theory assumes that perceivers will try to identify the causes of the behaviour that they observe (Shaver, 2016). If people are familiar with some of the traditional concerns of a person's perception, such as models of the process, description of the stimulus, and action of the person that contribute to the perceiver's impression, they will find it probably easier to understand one's action and vice versa. Based on this understanding, researcher proposes three elements of attribution; observation (behaviour), interpretation (distinctiveness, consensus, consistency), and attribution of cause (high, low) (Shaver, 2016).

While the application of attribution theory has long been known in social psychology's area of study, the application and extension of attribution theory to the field of human resources management (HRM) is still at the early stage (Hewett et al., 2018). Human resource scholars have recently realised that understanding of the process in which individuals explain the causes of behaviours and events will provides insight to solve human resource related issues. For instance, one study in the HRM field by Sanders

and Yang (2015) applied the attribution theory to see the influence of employees' attribution in order to explain the HRM-performance relationship. The findings showed that the effect of HRM on affective organisational commitment was stronger when employees understood HRM as that of intended by management.

In the case of hotel management, attribution theory is used to explain the causes of employees as well as customer's behaviour. A study by Wen et al. (2016) was conducted and using the attribution theory to investigate how employees in the hotel sector understand the causes of customer mistreatment behaviour and their due responsibility to deal with the problem. The study aims to determine the hotel's employees' work attitude and behaviour towards their job. Findings of this study show that when facing customer mistreatment behaviour in negative events, hotel employees with internal control personality were more sensitive to customer mistreatment behaviours than hotel employee with external control personality (Wen et al., 2016). This demonstrates the strength of individual internal characteristics in influencing the behaviour of employee to perform their job responsibility especially in ensuring the customer's satisfaction on the services offered by the hotel.

More importantly, researchers noted on errors that potentially distort the application of the attribution theory (Robbins and Judge, 2015). This includes fundamental attribution error and self-serving bias. These errors occur due several factors including cultural differences. As such, individualistic and collectivist culture may perceive the failure of an organisation differently. While an individualistic culture tend to openly expose those who are responsible for the failure, the organisation in the collectivist culture would opt to expose the issue as an overall organisational breakdown. Although the intensity of errors differs between cultures, each error may happen across cultures (Robbin and Judge, 2015). The biases in developing perceptions due to cultural differences potentially influence individual's actions towards certain events, particularly in regards to a new phenomenon with uncertain consequences and impacts like climate change. Thus, gathering sufficient information about the event would be crucial to reduce the biases and uncertainties, so that appropriate actions could be taken by the organisational members to sustain their operation regardless of the changing situations.

5 Methodology

Qualitative research through case study was conducted at five accommodation providers in Kapas Island. This approach is expected to provide rich insights (Hewett et al., 2018) and understandings of phenomena more deeply (Atieno, 2009). Interviews were conducted with the owners or managers responsible to manage the operation of the hotels or resorts. Drawing on the assumptions of attribution theory, interview questions were tailored to investigate the awareness of the hotel management about the risks of climate change and their preparation to face unexpected events that may occur at their hotel. Following that, the process of the owners'/managers' perception will be to identify the main reason of their behaviour. In particular, the analysis of the interview data will be tailored to the perception on the usage of the hotel's strategy in the adaptation of the climate change impact, based on two main concepts of attribution theory: internal and external. Attempt is made to provide insights about the interaction between climate change and the hotel management, and assist in the development of a better interpretation

of the potential climate change impact that could influence the effort to sustain the hotel operation.

6   Results and discussion

This study is conducted to comprehend the reaction of hotel management response to climate change events. The reactions of hotel managers are translated by their perceptions about the impact of climate change to their hotel operation. Demographic characteristics of the respondents are illustrated in Table 1. A total of six respondents representing five hotel/resorts in Kapas Island were interviewed. The number of rooms owned by the case study hotels/resorts varied from 1 to 60 rooms. Three case studies owned about the same number of rooms; KB, KP and KQ. The majority of respondents are Malay, male and have secondary school education. Respondents differ in terms of age and tenure with the youngest respondent is 20 years and the oldest is 72 years of age. Two respondents have longer tenure than others with ten years of experience in the hotel industry.

Respondents agreed that the climate change event happened in the Kapas Island as observed by its effects on beach structure, flora and fauna and increased maintenance costs to maintain the hotel's infrastructure during the monsoon season due to strong winds and increased sea level. This identification of indicators are likely the potential climate change impact that found in the climate change study (Bulla et al., 2016). The indicators were identified by respondents through their experience when the event happened at their resorts or nearby locations. Although two respondents worked less than a year with the hotel/resort, they noticed the situations when they were informed by other employees. They also said some effects can still be seen in certain areas.

Most respondents agreed on their experience with some unexpected climate change event, but results of the interviews reported low awareness among the managers about the need to change the hotel operation or business strategy in adapting to these environmental impacts. This understanding is given in relation to the occupancy rate and revenue generated by the operation of their hotel/resorts. One respondent said:

> "There is no need to make any changes because our hotel is always fully booked. Most guests who stayed in this hotel are regular customers and they are satisfied with the services no matter what." (R1, KB)

Half of the respondents noticed that the tourists' demand to stay in their hotel is effected whenever the climate change happen. This is encapsulated through their response:

> "Yes, the room bookings has decreased. We are also facing some cancellations, but there is nothing we can do." (R4, KP)

In this study, the low awareness among the managers on environmental issues has impacted their preparation to deal with unexpected events like climate change. The above finding suggests that the perceptions of the managers will have a great influence on the planning of the hotel/resorts operations. As such, the more managers are aware on the importance of managing environmental changes, the greater responsibility will be shown on planning and organising the adaptation plans to deal with climate change. The finding is in accords with previous studies that recorded positive relationship between managers' management leadership and environmental responsibility (Jang et al., 2017; De Hoogh and Den Hartog, 2008). Managers who have a good quality of leadership that emphasise

on environmental sustainability would be more aware on the changes that happen within their business environment. This quality can be seen through the effort to engage with the activity and program to support the environmental sustainability effort. Findings of this study can be considered as the outcome of the weaknesses in the selection of hotel managers that have been reported to give more priorities on personal characteristics than the ability of the individual (Situmorang and Japutra, 2019). A hotel manager with good personality may not understand the need for the hotel to be aware of environmental changes that may impact the hotel operation. Further, the importance of leadership quality is highlighted by previous researcher (Cho, 2019), especially in the context of small businesses as of the focus of this study. The small business is described as those companies with a unique operation and so the leadership quality may influence the success and failure of the business.

Although mixed responses were reported in regards to the hotel's revenue when unexpected climate events occurred, all respondents believed that their current operation and strategy is sufficient to ensure the survival of their businesses. Respondents are aware that the operating time of their hotel is tuned to minimise the risks of climate change to their business. Consensus arrived amongst respondents that accommodation providers in Kapas Island operated at the same period as most accommodation providers in the other islands in Malaysia. During the monsoon season, no operation is reported among island hotel/resorts. This is mainly due to safety reasons and a common routine that have long been applied. The second factor that is attributable to the respondents' perception about the impact of climate change to their hotel management is the type of customers they have. Most respondents said that they have international and local tourists as regular customers. As their customers have experienced and are well-versed about the services offered by respective hotels, respondents suggest that the possibility of their customers to come again is very high. Respondents said:

> "Our business can survive because this hotel is highly dependent on our regular customers. Most of them are international tourists." (R5, KQ)

In discussing about the relationship between climate change and the hotel revenue, the finding suggests that respondents perceived no association between both elements. Although they are aware that climate change is an important global issue, their current hotel's operation does not incorporate environmental performance as part of their goals. Instead, the management of the hotel/resorts in this study placed the consideration of the hotel achievement solely based on financial performance. In order to improve the sustainability of the environment particularly by the impact of the climate change impact, researchers suggest for financial and non-financial performance of the organisation to be blended together in the business strategies (Jiang et al., 2017). In this study, the lack of focus on environmental issues as part of the non-financial performance of the hotels has led to the perceptions to ignore the development of the adaptation effort to manage the climate change impact. In fact, environmental performance need to have a clear measurement tool in order to ensure the hotel/resort could get the benefit from the association between financial and non-financial performance. Therefore, the findings of this study are inconsistent with most studies that demonstrate a relationship between corporate social responsibility (CSR) with corporate financial performance (Kim et al., 2017; Lee et al., 2018; Singal, 2014; Youn et al., 2015).

Table 1   The demographic background of the respondents

	Case 1 KB	Case 2 KC	Case 3 KI	Case 4 KP	Case 5 KQ
Gender					
Male	1	1	1	1	
Female			1		1
Age					
>50			1		1
40–50				1	
30–39	1				
20–29		1	1		
<20					
Ethnicity					
Malay	1	1	2	1	1
Educational level					
Bachelor	1				
Diploma		1			
Secondary school			2	1	1
Department					
F&B					
Administration	1	1	1	1	1
Front office			1		
Tenure					
<a year		1	1		
1 to 5 years	1		1		
5 to 10 years					
>10 years				1	1
No. of hotel rooms	13	26	60	12	12

The majority of respondents perceive less personal control over their actions towards preparing their hotel's operation to face unexpected climate events. Instead, they believed that the local authority and state government should play an important role in assisting them with the climate change impact. This is encapsulated through these statements:

> "Climate change event is out of our control. So I don't think that hotel can do anything to solve the problem." (R1, KB)

> "Local authority should take most actions when it comes to the big issue like climate change. They have more authority with the island. As for us, what we can do may be limited only to our hotel's area." (R5, KQ)

The above findings indicate that respondents who manage the hotel/resort choose to give up some perceived control they have over their hotel management with the expectation that the other party could take more control to solve the climate change issue. Most responses from interviews demonstrate the influence of external forces in developing respondents' perception of the climate change issue. This finding is supported by other study on tourism experiences that evidence the shift of the attribution process among tourist from internal to the external forces (Jackson et al., 1996). This is especially true in relation to new issues of tourism experiences which occur due to insufficient information amongst public on the issue or poor communication from the related parties (Jackson et al., 1996). Although respondents believed that local authority and state government are not attributable to the perceptions about the interactions between climate change and the hotel management, these parties could play an important role to enhance the awareness of climate change impacts among players in the hotel industry. This finding is in line with the contention made by Adger et al. (2005) on the importance to involve the important stakeholders in the business decision to ensure the successful implementation of the effort to manage climate change impact.

Findings of this study suggest that new tourism issues like climate change are possible to influence incorrect interpretation amongst the impacted parties. As such, low awareness on the possible impact of climate change has led most resort/hotels management to exclude the adaptation plan for climate change from their business strategy. This is consistent with the study by Capstick et al. (2015) who found that changing perception among public should receive serious attention for its influence on further action being taken to tackle the issue of climate change. Although the issue of climate change has long been discussed by researchers in the Western context, however, the issue is still in its infancy for the Malaysian context. Thus, findings of the current study support the contention that climate change impact is often treated as a distant problem because the impact varied depending on the location (Amelung et al., 2007). This is evidenced from the action towards preparing to face the climate change impacts by the respondents. Most respondents provide a similar feedback that they are satisfied with the current operation without the need to change their business strategy. Before anything actually happened, it is unlikely for the hotel's managers to act and formulate the necessary plan.

It is interesting to note that, in most aspects discussed to explore the nexus between climate change and the hotel management, the quality of the managers could play a crucial role in developing a clear perception towards integrating the environmental issue like climate change into business strategies. The value held by managers who manage the hotel/resort will strongly influence the awareness of other stakeholders to engage with the environmental effort such as the adaptation program for managing the climate change impact. This is true as previous studies showed that the greater environmental value held by managers, the higher the possibility for them to address the issue and communicate it with other stakeholders especially those key people who are involved in the decision making process (Jang et al., 2017). In addition, the opportunity to change the behaviour of other organisational members can be done through the managers. Since managers act as an intermediary between top management and employees, they potentially become the anchor who can lead towards a development of appropriate efforts in dealing with the impact of climate change. In fact, previous studies reported that the success of changing people behaviour is dependent on the right target that influences their beliefs (Juvan and

Dolnicar, 2014). Therefore, as the main role of the managers is to satisfy the interest of their business stakeholders, their environmental values could lead the manager to prioritise the issue as part of the requirements to achieve the business strategies. This is due to the unexpected risks that the climate change issue could bring to the business operation if it is not being managed well. Hotel management will need to emphasise more on promoting a clear understanding of the effective environmental management before the adverse impacts of climate change event bring more environmental hazards that are detrimental to hotels/resorts performance and competitiveness.

7   Conclusions

Despite efforts to develop sustainable tourism at the state and national level, the impact of climate change has a great potential to influence the hotel's revenue in Kapas Island as well as the Malaysian hospitality industry in general. The purpose of this study is to investigate the perceptions of the hotel managers/owners in Kapas Island about climate change and its impact to their hotel operations. This study found low awareness among hotel managers on the potential impact of climate change events. Hotels managers perceived insignificant relationship between climate change impact and their hotel operations. Thus, they believed no actions need to be taken to prepare the hotels to overcome unexpected events of climate change. From this finding, it demonstrates the important of perceptions in influencing one's action. It is particularly true in discussing about small and medium hotels located on islands. Due to the unique characteristics of its operation, the success of the small and medium hotels may be highly influenced by the ability of the hotel managers to counter act uncertainties of the business environment with necessary actions. To provide good outcomes, the hotel management has no choice but to be aware of changes that may occur and impact their business operation. As such, this necessitates the hotel operation to be adaptable to the unexpected conditions. Whilst most Western studies reported high consideration has been put for the adaptation strategy in dealing with climate change, it differs with that of Kapas Island in Malaysia. This study contributes to the literature on the climate change adaptation by providing information gathered from a non-Western context. In particular, this study focuses on Malaysia as one of the Southeast Asian countries that depends on tourism industry as one of the major contributors to its national income. Some limitations of this study could be considered to guide future research. Other than research context, this study is limited to explore the internal and external forces of attribution. Further research may explore the attribution process based on three main stages; observation, interpretation and attribution. This could provide in-depth understanding in the context-based elements that influence the perception among key related parties to manage the climate change impact and lead to a more responsible agenda to promote sustainable tourism activities.

Acknowledgements

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