Journal of Arts & Social Sciences
Vol 4, Issue 1, 1-17 (2020)

The Effects of Perceived Warmth and Perceived Competence on Passengers' Satisfaction and Airline's Image: The Moderating Role of Airline's Green Initiatives

Amir Batouei
Graduate School of Business, Universiti Sains Malaysia, Pulau Penang Malaysia

*Ai Ping Teoh
Graduate School of Business, Universiti Sains Malaysia, Pulau Pinang, Malaysia

Abstract

This paper empirically investigates the effects of social perceptions 'warmth' and 'competence' on passengers' satisfaction and airline's image. Based on the theoretical and practical background we also introduce "green initiatives" of airlines to our model as a moderator, in order to investigate if it strengthens the relationship between passengers' warmth and competence perceptions on satisfaction and image. Partial least square structural equation modeling was employed to test the research hypotheses, and the results indicate that perceived warmth and competence have a significant impact on both passengers' satisfaction and airlines' organizational image, where satisfaction itself also influences airlines image. Moreover, the findings show that green initiatives moderate the relationship among perceived warmth and passengers' satisfaction, as well as the relationship between perceived warmth and airlines' image. The results suggest that managers should be aware of perceived warmth, perceived competence and green initiatives as key variables contributing to enhancement of customer satisfaction and shaping their airline's image.

Key Words: Airline's Image, Passengers' Satisfaction, Service Encounter, Perceived Warmth, Perceived Competence, Airlines' Green Initiatives

* Corresponding author

Introduction

The intense competition among airlines, caused by the rapid growth in travel and tourism market, have forced them to continuously find ways to differentiate themselves from rivals. A significant differentiating effort that gives a competitive edge to airlines' businesses is the creation and maintenance of a positive organizational image (Liou and Chuang, 2009). As previous studies (e.g. Melewar, Karaosmanoglu, and Paterson, 2005; Atakan & Eker, 2007; He & Balmer, 2013; and Koll & Wallpach, 2009) indicated, a positive image generates competitive advantage for a business and serves as a key factor in the long-term success of that business or organization. In a more detailed view, the most prominent benefits that a positive image brings to organizations includes attracting and retaining customers while charging price premium on them, attracting higher-quality and larger amounts of investments from the stock market, and maintaining a high spirit among the company's staff (Barnett, Jermier, and Lafferty, 2006; Fombrun & Shanley, 1990; Van Riel, 1995).

Stated by Bernstein (1984), an organization's image is determined by the shared outcome of stakeholders' perceptions, judgments, experiences, and knowledge about the organization. Those perceptions can be created through reciprocal actions between stakeholders and the organization or they can be created by media or the organization's marketing activities (Cornelissen, 2000). In this study, airlines' image denotes the organizational image of airlines, that is derived from the personal experiences of passengers during their encounter with the airlines.

Passengers' service-related experiences and the satisfaction derived from those servicesare two main contributing factors to an airline's image, and one area that significantly influences the experience of passengers is their service encounter, where passengers interact with the front-line staff of airlines. As emphasized by Brady and Cronin (2001), front-line employees, by interacting directly with customers, play an important role in influencing customers' perceptions of service quality, their satisfaction, and their future behaviour. According to Arthur and Bennett (1995), front-line employees must be competent in listening to customers, expressing themselves clearly, understanding customers' needs, and explaining ideas and issues relevant to various service contexts.

In order to evaluate passengers' experience and satisfaction during their service encounter as well as the subsequent effect of those experiences on airlines' image, most of the existing studies (e.g. Park, 2007; Pakdil & Aydın, 2007; Geraldine, O., 2013; Han, Hyun, and Kim, 2014; and Han & Hwang, 2017) have adopted/adapted the SERVQUAL model, which mainly consists of five following dimensions: tangible aspects, reliability, responsiveness, assurance, and empathy.

Although, the SERVQUAL model has been proposed as a valid and reliable model in studying airlines' service quality (e.g. Gilbert and Wong, 2003; Park, Robertson, and Wu, 2004), there are still other aspects of a service encounter which are overlooked by SERVQUAL model. One aspect is the flight-crews' competence in delivering the services. As previous studies (e.g. Wu, Tsai, Hsiung, and Chen, 2015; Rainsbury, Hodges, Burchell, and Lay, 2002; Boshoff and Allen, 2000) suggest an excellent job performance in delivering a service requires technical and human/interpersonal competencies. However, in many cases, factors, such as work overload and emotional burnout, lead to poor performance of front-line staff or to their indifference towards customers concerns, and this negatively affects passengers' experience with service of the airlines(Cho, Choi, Lee, Jin, 2014; Mohr & Puck, 2007; Piko, 2006).

Another aspect of a service encounter, overlooked by SERVQUAL model, is the emotional perceptions formed in the minds of passengers, during a service encounter, towards the staff and the services they deliver. This aspect is neglected because the model does not include any emotional judgement/response of the passengers in a service environment. As Lemmink & Mattsson (2002) stated, emotions in a service encounter have both long term and short term effects on customers' perceptions and judgement about a service provider. They mentioned that, in order to interpret experience, customers continuously need to store and retrieve information; hence, short-term customer perception (e.g. their emotional perceptions in a service encounter) impacts their long-term perceptions (e.g. the firms image). Their study concluded that front-line employees behavior draw emotional responses (e.g. feelings of being treated warmly or in a friendly way) in customers, which subsequently affects customers' short-term perceptions (e.g. perceptions of staff's warmth during service delivery, service likability, satisfaction), and those short term perceptions affect long-term perceptions (e.g. organization's honesty, trust towards the organization, organization's image, and even perception of price fairness).

Despite their importance, these two facets of airlines' service encounter has been highly overlooked by scholars and many airliners. Therefore, to bring clarity on the role of these two often neglected facets of airlines' service encounters, we develop a conceptual framework by introducing the constructs "perceived warmth" and "perceived competence", and evaluate their relationships with passengers' satisfaction and airlines' image. In this study, "perceived warmth" reflects passengers' emotional perceptions of flight crews' behavior (i.e. friendliness, trustworthiness, being caring, etc.), as initially proposed by Lemmink & Mattsson (2002), and the construct "perceived competence" reflects the interpersonal and technical competencies of flight crew (i.e. skills, expertise, and usefulness in delivering services), as proposed by Rainsbury et al. (2002).

It is well documented in past literature that green initiatives of an organization affects the organization’s image, as well as its long-term customer relationships because these initiatives induce the public or customers to think that the organization acts responsibly toward the environment and the society in general (e.g. Batruch, 2011; Klein & Dawar, 2004; Lii & Lee, 2012; Martinez and Bosque, 2013). Prior research has shown that an organization’s reputation derived from its green activities strengthens the positive attitudes of customers towards the organization, consequently influencing consumers’ judgments about an organization (Bhattacharya & Sen 2003; Berens, Van Riel, & Van Bruggen 2005; Nikbin et al., 2016; Luo & Bhattacharya 2006). For example, in hospitality industry, Gao & Mattila (2014), showed that the level of customers’ perceptions about the services of green hotels’ warmth and competence were higher compared to non-green hotels. In other words, customers perceived green hotels to be warmer and more competent in delivering their services than those non-green hotels.

Despite its importance, there has been very limited research on air travelers’ perceptions and behaviour in respect to airlines’ involvement in environmental concerns (e.g. Mayer, Ryley, and Gillingwater, 2012; Hares, Dickinson, and Wilkes, 2010; Lynes and Dredge, 2006). Therefore, to bring more understanding about passengers’ perceptions towards airlines’ environmental concerns and also to expand the findings of Gao & Mattila (2014) to other service environments, particularly airlines, we introduce “green initiatives” of airlines to our model as a moderating variable. Therefore, in addition to the main objectives proposed earlier, this study aims at testing the moderating effect of airlines’ green initiatives on the relationships between 1) perceived warmth and passengers’ satisfaction, 2) perceived warmth and airline’s image, 3) perceived competence and satisfaction, and 4) perceived competence on airline’s image.

The significance of this study is worthy of attention to both academics and professionals in air-transportation industry. Firstly, the study helps the former by shedding light on the gap above, by proposing perceived warmth and perceived competence as two dimensions of service encounter, and empirically testing their effects on passenger’s satisfaction and airline’s image, a relationship that has only been viewed qualitatively. Secondly, we introduce Green initiatives as voluntary actions of service firms and use it as the moderator variable moderating the effects of warmth and competence on passengers’ satisfaction, as well as on airline’s image, which can have important implications for the service industry. This study also benefits managers and professionals in the industry who seek to offer quality services. The findings of this study would be of value to managers by providing insights about the performance of their crew from the perspectives of passengers. Findings can be used as a set of criteria for selection and recruitment of quality front-line staff or crew, planning and implementation of training programs for empowering the crew, and finally as a benchmark for monitoring the performance of the staff and crew.

Literature Review

Passenger Satisfaction and Airlines’ Image

Image was described as sum of terminologies such as credibility, reliability, cognition, belief, message, attitude, reputation, perception, and communication and relationship, which are vital for survival of every organization (Grunig & Dozier, 2003). A more precise and comprehensive view on image, by Aaker (1996), defines image as “the net result of all the experiences, impressions, beliefs, feelings and knowledge that people have about a company”. Image can be defined from different stakeholders’ perspective (e.g. customers, potential employees, investors, regulators, etc.). This study on the whole will address the marketing image of airlines in terms of fulfilling the needs of passengers and in respect to how customers view a particular airline brand compared to competitors.

In abundance, studies have accentuated the significant roles that a positive image can play for an organization by yielding a strong competitive advantage for the organization (e.g. Melewar, 2005; He & Balmer, 2008; Atakan, 2007). Koll & Wallpach (2009) addressed a favorable organizational image as a key success indicator of organizations. A positive image is also identified as a driver of customer satisfaction (Barnett, 2006). Hence, building, managing, and maintaining a desired organizational image, however challenging, are critical for an organization's long term success.

According to Kennedy (1997), organizational image consists of both functional and emotional facets. The functional facet comprise of measurable and tangible attributes of image; whereas, the emotional facets encompass the psychological aspects such as the beliefs, emotions, and behaviors that are directed towards an organization. The emotional dimensions of image are created by the knowledge a person holds about an organization, that was obtained through the individual's evaluation of the functional attributes of an organization's image within his/her interaction with the organization. In other words, the knowledge that they obtained through their experience with the consumption of that company's services or products. Although diverse in conceptualization, the general consensus among researchers is to measure the overall experience of consumption through assessment of individuals' satisfaction (Johnson, Anderson, & Fornell, 1995; Oliver, Rust, and Varki, 1997). As if customers assess their overall consumption experiences favorably, it is likely that their satisfaction levels and their willingness for consumption will increase (Jani & Han, 2013). Therefore, in this study, we use the construct "satisfaction" in measuring passengers' experience of airlines' services.

In airline industry, abundant research has been done on both airlines' image and satisfaction. For example, the study of Chiou and Chen (2010) indicated that passengers' service attribute perceptions played significant role on satisfaction and the image of airlines, which eventually generated behavioral intentions in those passengers. Mikulic and Prebezac (2011) developed a conceptual framework that demonstrated the generation of airlines' image through physical aspects (air conditioning, sanitary facilities, and cabin design) and performance (cabin crew performances and in-flight meals) aspects of the services they provided. Liou and Chuang (2010) emphasized on the safety record and the services quality of airlines as critical indicators of airline's corporate image.

Similarly, many other studies in the field have examined the causal relationship between service experience, satisfaction and airlines' image. To the authors knowledge, most of the them have adopted, or in cases adapted, SERQUAL model in carrying out their research. Others (e.g. Han, Hyun, and Kim, 2014; Han & Hwang, 2017, etc) have developed and utilized other measurement scales; however, either the items of those measurements already exist in the SERVQUAL model, or they measure and evaluate constructs that, in nature, are similar to those of SERVQUAL. The commonly used SERVQUAL model evaluates 5 dimensions of services, which include tangible aspects, responsiveness, reliability, assurance, and empathy of a service. The model has been proposed as a valid and reliable model in studying airline service quality (e.g. Gilbert and Wong, 2003; Park et al., 2004); however, it neglects to profoundly measure other important aspects of a service encounter; for example, passengers' emotional perceptions (Lemmink & Mattsson, 2002) and their perceptions of the front-line employees' competence (Wu et al, 2015; Rainsbury et al., 2002; Brady and Cronin, 2001; Boshoff and Allen, 2000). Therefore, the main objective of this study is to evaluate the effects of these two facets of airlines' services on passengers' satisfaction and airlines' image.

Warmth and Competence in a Service Encounter

Perceptions of "warmth" and "competence" are identified as universal dimensions of social perception (Fiske, Cuddy, and Glick, 2007). Warmth perception represents characteristics like being caring or helpful (with positive intentions); while, competence perceptions represent characteristics like expertise and usefulness (e.g. the ability of pursuing one's intention). Initially, warmth and competence were established in social psychology and, from there, they have been expanded to consumption contexts (e.g., Scott, Mende, & Bolton, 2013; Aaker, Vohs, and Mogilner, 2010).

Warmth as has been studied in different contexts. In a service encounter, it has been found that warmth judgments are developed involuntarily in the minds of customers, and they significantly influence the customers' subsequent behavior and attitudes (Cuddy, Fiske, and Glick, 2008; Cuddy, Glick, and Beninger, 2011). Studies have shown that perceived warmth can be a key factor affecting consumers' satisfaction, intentions, loyalty behaviors, as well as their perceptions towards an organization's service quality (Rust & Zahorik, 1993; Lemmink & Mattsson, 2002; Grandey et al., 2005). Moreover, customers' perception of warmth is of significant value in the services context as it reflects the employees' friendliness and attentiveness in customers' minds (Stauss, 2002; Mittal & Lassar, 1996).

In addition to warmth, perceived competence reflects customers' beliefs in the employees' effectiveness, intelligence, capability, skills, and competitiveness in delivering a service (Grandey et al., 2005). Previous studies including the ones of Coulter and Coulter (2002) and Wirtz and Mattila (2004) showed that perceived competence strengthens customers' trust and their relationships with service providers, while reducing the possibility of stability attributions in case of service failure. Wu et al. (2015) developed a scale specifically for measuring front-line employees' competence, which included both interpersonal competencies and technical competencies. Further, by empirically testing their scale, they found that both type competencies influenced perception of service quality in customers.

Despite the significant role that perceived warmth and perceived competence of flight crew can play on the experience of passengers during their service encounters (Gao & Mattila, 2014), they have received scant attention by scholars.

Airlines' Green Initiatives

During the last 15 years, there have been notable studies on consumers' attitudes and behaviour towards the environment and ecological sustainability. Consumers have reshaped their purchasing behaviour in favour of environmentally friendly products, and companies have reacted to this trend by addressing these ‘‘environmental needs’’ (Do Paco, Raposo, and Leal Filho, 2009). Companies progressively have been putting effort in transforming their offerings into green and environment-friendly product/services. This movement was started in food and beverage industry (e.g. Organic) and, now, many of huge organizations in different fields are providing their offerings as green or environmentally friendly in an attempt to demonstrate their concerns about the environment and the whole community (Myers & Lumbers, 2008); Schreiber, Zapp, and Kuckshinrichs, 2009). The airline industry is also affected by this trend. Due to their destructive effects on the environment (Becken, 2007; Choueke, 2006; Stern, 2007); airlines are forced to put particular efforts in becoming more environment friendly.

Existing literature suggests that green initiatives of an organization affects the organization's image, as well as its long-term customer relationships because these initiatives make the public or customers to think that the organization acts responsibly toward the environment and the society in general (e.g. Batruch, 2011; Klein et al., 2004; Lii & Lee, 2012; Martinez and Bosque, 2013). Prior research has shown that an organization's reputation derived from its green activities strengthens the positive attitudes of customers towards the organization, consequently influencing consumers' judgments about an organization (Bhattacharya & Sen 2003; Berens, Van Riel, and Van Bruggen 2005; Nikbin et al., 2015; Luo & Bhattacharya 2006). For example, in hospitality industry, Gao & Mattila (2014), showed that the level of customers' perceptions about the services of green hotels' warmth and competence were higher compared to non-green hotels. In other words, customers perceived green hotels to be warmer and more competent in delivering their services than those non-green hotels. In airline industry, Mayer et al. (2012), emphasized that the green initiatives of airlines affect the airlines overall image in the minds of customers, and they can possibly differentiate the airline from others.

Despite their importance, air travelers' behaviour and perceptions in respect to airlines' environmental concerns have received very scant attention (e.g. Mayer et al., 2012; Hares et al., 2010; Lynes and Dredge, 2006). Therefore, to bring more understanding about passengers' perceptions towards airlines' environmental concerns and also to expand the findings of Gao & Mattila (2014) to other service environments, particularly airlines, we introduce "green initiatives" of airlines to our model as a moderating variable.

Proposed Conceptual Model and Hypotheses

To empirically test the primary objectives of this study we proposed the model shown in Figure 1.

Our main interest was to provide greater clarity on the associations among perceived warmth, perceived competence, satisfaction, and airlines' image. A total of five hypotheses (H1 to H5) were developed to evaluate the proposed model. In addition, we proposed that green initiatives of airlines moderates the relationships between 1) perceived warmth and passengers' satisfaction, 2) perceived warmth and airline's image, 3) perceived competence and satisfaction, and 4) perceived competence on airline's image. Therefore, hypotheses H1a, H1b, H2a, and H2b were formulated to test the effects of the moderating variable.

The followings are the proposed hypotheses of this study:

H1: There is a positive relationship between perceived warmth and passengers' satisfaction.

H2: There is a positive relationship between perceived competence and passengers' satisfaction.

H3: There is a positive relationship between perceived warmth and airlines' image.

H4: There is a positive relationship between perceived competence and airlines' image.

H5: There is a positive relationship between passengers' satisfaction and airlines' image.

$H6_a$: Airline's Green Initiatives moderate the relationship between perceived warmth and passengers' satisfaction.

$H6_b$: Airline's Green Initiatives moderate the relationship between perceived competence and passengers' satisfaction.

$H6_c$: Airline's Green Initiatives moderate the relationship between perceived warmth and airlines' image.

$H6_d$: Airline's Green Initiatives moderate the relationship between perceived competence and airlines' image.

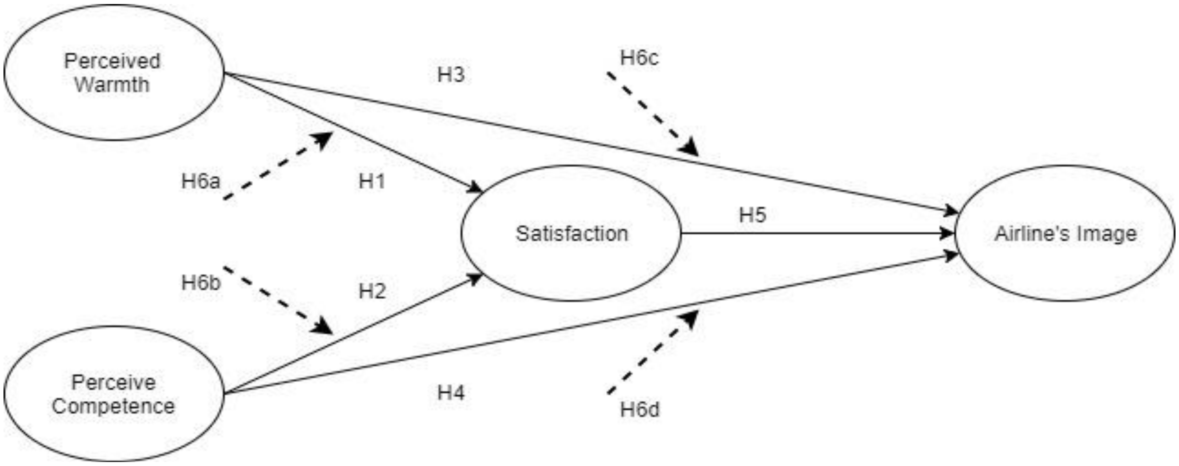

Figure 1: Proposed Conceptual Model

Methodology

Survey design and data collection

In order to empirically test the conceptual framework of this study, we used judgmental sampling method, which is proposed suitable for exploratory studies. This method is also of value in this case because implementing random sampling is not possible, due to difficulty in identifying population size. Hence, based on the judgments of two service quality experts, we tested out hypotheses from the data collected as follow. In order to assure the recency of passengers' perceptions about the flight experience, the required data was collected, through a set of survey questionnaire, in arrival hall of Kuala Lumpur International Aiport (KLIA), Malaysia. The high volume of passenger traffic, from a diverse cultural/nationality backgrounds, was the reason for choosing KLIA for collecting the data required for this study. According to Malaysia Airports Bhd Annual Report, in 2016, KLIA handled 52 million passengers from all over the world for both domestic and international flights, and the number has been growing rapidly ever since.

The survey was conducted from January 8th to January 12th ,2019, at different times of the day in order to get the responses of a wider range of respondents. Passengers were approached, based on convenience, and after obtaining their consents, they were given the questionnaire to answers based on their last flight's experience. The initial projected sample size was 200 responses, according to Barclay, Higgins, and Thompson's (1995) rule of thumb for the analysis in SmartPLS, that suggested 10 multiply by the number of items used in the questionnaire. However, after statistical data cleaning, a total of 190 responses were used for the final analysis.

The questionnaire collected demographic data of the passengers as well as general information related to their air travel behavior, using single choice questions and open end questions. Further, to empirically test the constructs in the proposed model, respondents were requested to select their answers on 7-point measurement scales developed and validated by previous studies, which include: 4 items used for perceived warmth adapted from Gao and Mattila (2014), 7 items for perceived competence adopted from Wu et al. (2015), 3 items for measuring airlines' green initiatives adapted from Mayer, Ryley, and Gillingwater (2012), 4 items related to organizational image adapted from Tarus and Rabach (2013), and finally 3 items for passengers' satisfaction adopted from Han et al. (2014). The final questionnaire was reviewed and commented on by three faculty members of Universiti Sains Malaysia, who possessed expertise in the field of services marketing.

Analysis Method

To analyze the relationship stated in this research, we used Partial Least Squares (PLS), SmartPLS 3.0. This approach was used because of the exploratory nature of the research (Hair et al., 2011). Another reason for using Smart PLS software is due to its high efficiency in parameter estimation, or in other words, higher statistical power in drawing model evaluations from smaller sample sizes. Like all other studies, which use this method, we have employed the two-step approach recommended by Henseler et al. (2009) for data analysis. The first step requires the analysis of the measurement model (i.e. composite reliability and convergent and discriminant validity of the measurement instrument), and the second step evaluates the structural relationships between the latent constructs by using non-parametric bootstrapping model.

Results

Profile of Respondents

Table 1 presents the demographic profile of the respondents. The final sample consisted of 190 respondents who were grouped based on their age, gender, race, nationality, and the frequency of their air travel. There were 71 (37.4%) respondents aged between 18 and 25 years old, 48 (25.3%) respondents between 26 and 35 years old, 38 (20%) respondents between 36 and 45 years old, and 33 (17.4%) aged above 45. The number of male respondents was 86 (45.3%) and the number of female respondents was 104 (54.7%). The greater number of the respondents, 158 (83.16%), were citizens of Malaysia, whereas the other 32 (16.84%) had nationalities other than Malaysian. Majority of the respondents, 110 (57.9%) were Malays, followed by Chinese 36 (18.9%). There were also 8 (4.2%) Indian respondents and 36 (18.9%) from other races. Out of the 190 respondents, 143 (75.3%) claimed to take flights more than 2 times a year, 26 (13.7%) took two flights a year, and 21 (11.1%) took only one flight a year.

Table 1. Demographic Features

Demographic Features	Frequency	Percent	Valid Percentage	Cumulative percent
Age				
18 - 25	71	37.4	37.4	37.4
26 - 35	48	25.3	25.3	62.6
36 - 45	38	20	20	82.6
45<	33	17.4	17.4	100
Total	190	100	100	
Gender				
Male	86	45.3	45.3	45.3
Female	104	54.7	54.7	100
Total	190	100	100	
Race				
Chinese	36	18.9	18.9	18.9
Malay	110	57.9	57.9	76.8
Indian	8	4.2	4.2	81.1
Others	36	18.9	18.9	100
Total	190	100	100	
Nationality				
Malaysian	158	83.16	83.16	83.16
Others	32	16.84	16.84	100
Total	190	100	100	
Number of flights				
Once a year	21	11.1	11.1	11.1
Twice a year	26	13.7	13.7	24.7
More than two times a year	143	75.3	75.3	100

Assessment of Measurement Model

For the analysis of the measurement model, it is required to assess the reliability and validity of the reflective constructs. To achieve this purpose, it was required to assess both the composite reliability (CR) and internal reliability of the construct. The results showed composite reliability of above 0.7 for all variables, which satisfied the rule of thumb recommended by Hair et al. (2012). Furthermore, items loading were assessed based on Hair et al. (2012), that suggested values of 0.6 and above. The results showed that all the items have values greater than recommended value of 0.6. Therefore, the individual items reliability was satisfied. Finally, to evaluate convergent validity, the average variance extracted (AVE) of the constructs was assessed. Fornell & Larcker (1981) recommended a value of 0.5 and above for the AVE, and in this study all AVE values were above 0.5, which satisfied the rule.

Table 2. Measurement Model Evaluation

Constructs	Items	Factor Loadings	CR	AVE
Perceived Warmth	My perception of this airline's friendliness is	0.872	0.928	0.764
	My perception of this airline's warmth is	0.884		
	My perception of this airline's trustworthiness is	0.857		
	My perception of this airline's sincerity is	0.884		
Perceived Competence	The flight crew possessed the ability to communicate effectively when dealing with passengers' issues	0.835	0.942	0.730
	The flight crew possessed the ability to understand passengers' needs	0.865		
	The flight crew could apply professional abilities to handle passengers' needs	0.883		
	The flight crew possessed the expertise to analyze passengers' needs	0.892		
	The flight crew retained technical skills to solve passengers' problems in efficient ways	0.870		
	The flight crew had the knowledge to help passengers better understand the products and services	0.776		
Green Initiatives	This airline has positive attitudes towards the environment	0.852	0.877	0.705
	This airline offers "Carbon Offsetting"	0.867		
	This airline is testing bio-fuel	0.796		
Airline's Image	My perception of the reputation of the airline	0.947	0.959	0.855
	My perception of the airline's prestige	0.950		
	My perception of the reputation of the airline's products/services	0.894		
	My perception of the airline's reputation, compared to competitors	0.908		
Passengers' Satisfaction	Overall, I am satisfied with my experience when using this airline.	0.926	0.923	0.800
	Overall, compared to other airlines, I am satisfied with this airline.	0.912		
	My decision to use this airline was a wise one.	0.844		

Next, two approaches were used to assess the discriminant validity of the variables. Firstly, indicator's cross loadings were checked and found that no indicator loading was higher than an opposing construct, and that satisfied the rule suggested by Hair et al. (2012). Secondly, we utilized the Fornell and

Larcker (1981) criterion which suggested that the AVE of each construct should be higher than its squared correlation with the remaining constructs (Table 3). These two analyses confirmed the discriminant validity of the variables

Table 3. Discriminant Validity of Constructs

	PW	PC	GI	PS	AI
PW	0.874				
PC	0.583	0.854			
GI	0.249	0.306	0.839		
PS	0.692	0.485	0.260	0.924	
AI	0.544	0.447	0.287	0.568	0.894

Assessment of the structural model

The structural model was assessed after getting satisfactory outcomes from the previous section, assessment of the measurement model. In order to evaluate structural model's predictive accuracy, portion of variance explained "R^2" is used. Findings in this section highlighted that the model is capable to explain 49.4% of the variance in satisfaction and 39.3% in airline's image. To assess the relationships between variables in the structural model, as suggested by Wetzels et al (2009) a non-parametric bootstrap with replication of 500 was run. Figure 2. illustrates the summary of the analysis. As it is displayed, all the hypotheses for the direct relationships were supported. As the findings illustrate perceived warmth ($\beta=0.630$, $p < 0.001$) and perceived competence ($\beta=0.117$, $p < 0.01$) have a direct effect on satisfaction. Moreover, as the results show, perceived warmth ($\beta=0.239$, $p < 0.01$) and perceived competence ($\beta= 0.132$, $p < 0.05$) have a direct effect on airline's image. In addition, it is found that there is a significant relationship between satisfaction and airline's image ($\beta=0.345$, $p < 0.001$).

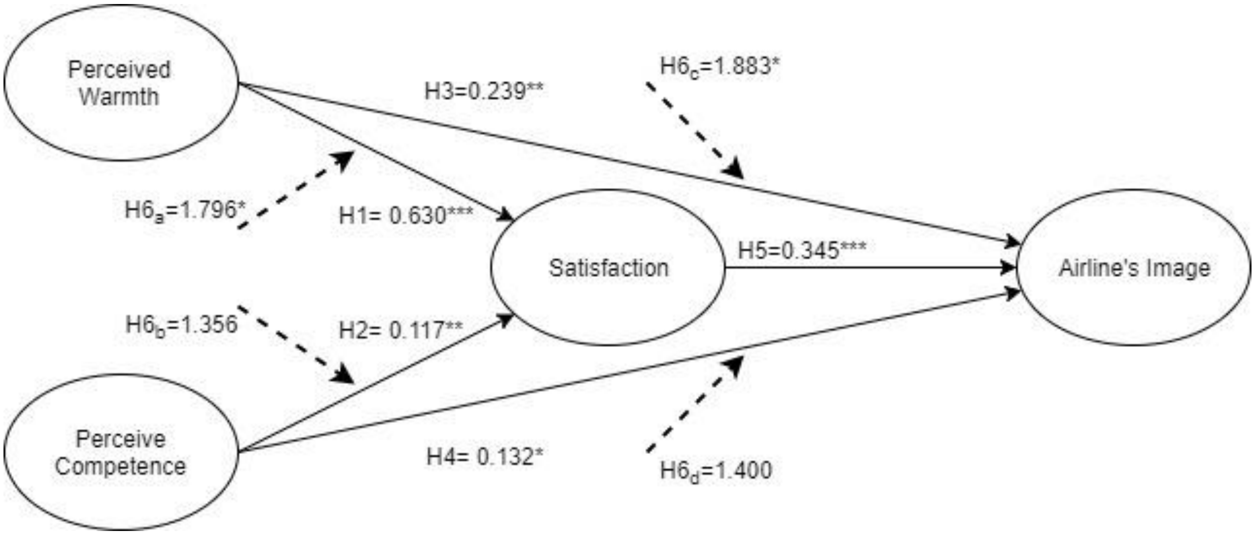

Figure 2. Results of The Structural Equation Modeling

To further examine whether the moderation role of airlines' "Green Initiatives" (GI) is supported, its moderating effects were studied. The moderating effect of GI was assessed using the interaction term between the exogenous variable and the moderating variable. As shown in table 4, based on the PLS results for the interaction effect, GI moderated the relationship between perceived warmth and satisfaction ($\beta = 0.169$, $p < 0.05$). Similarly, GI moderated the relationship between perceived warmth and airline's image (β = 0.112, $p < 0.05$). Figure 3 presents the interaction effect of perceived warmth and GI on satisfaction and Figure 4 shows the interaction effect of perceived warmth and GI on image. The findings show that a good green reputation strengthens the positive effects of perceived warmth on satisfaction, as well as on image. This means that when there is an increase in the level of perceived warmth, a strong green reputation is more likely to improve satisfaction and enhance the airline's image. As such, H1a and H1b are supported, whereas H2a and H are not.

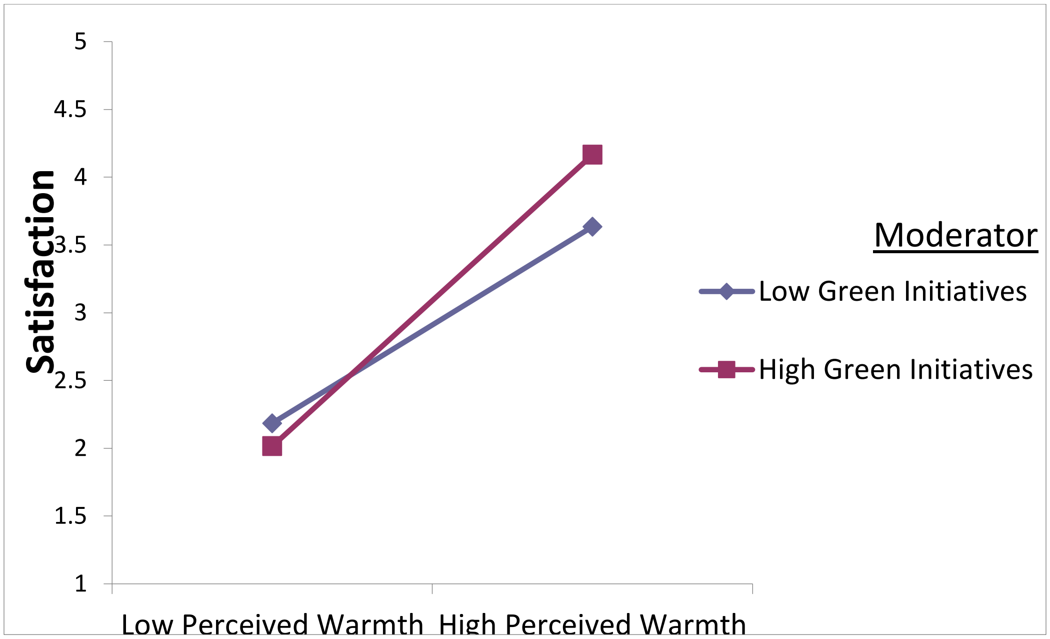

Figure 3. Interaction Effect between Perceived Warmth and Satisfaction

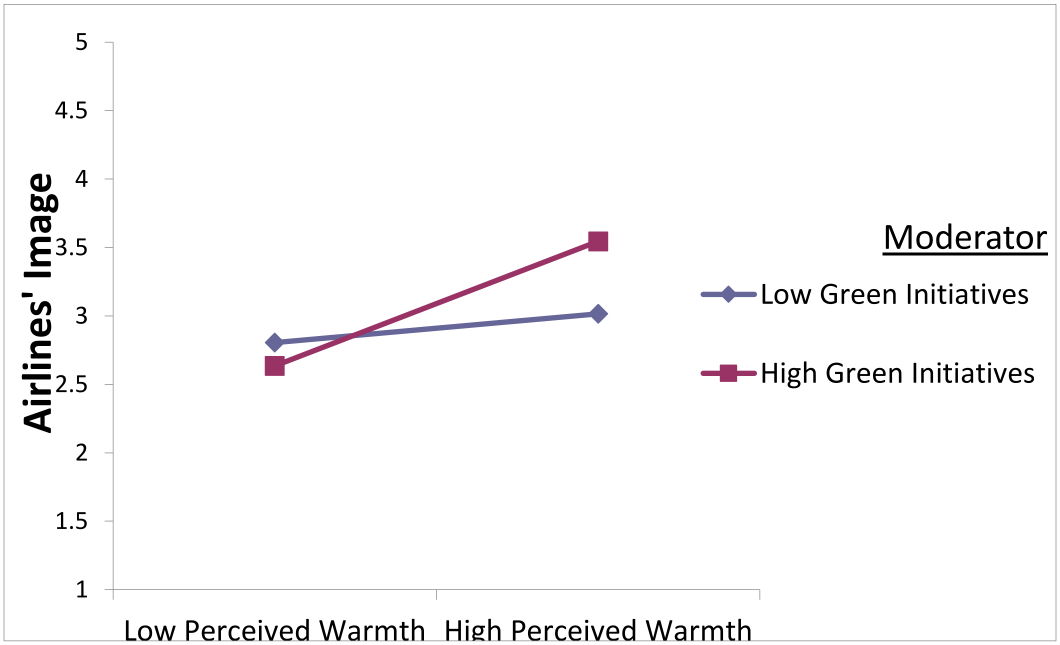

Figure 4. Interaction Effect Between Perceived Warmth and Image

Table 4. Results of the Structural Equation Modeling

	Relationships	Path Coefficient	Standard Error	t-value	Decision
H1	**PW → PS**	0.630	0.059	10.622***	Supported
H2	**PC → PS**	0.117	0.055	2.117**	Supported
H3	**PW → AI**	0.239	0.079	2.396**	Supported
H4	**PC → AI**	0.132	0.071	1.794*	Supported
H5	**PS → AI**	0.345	0.094	3.667***	Supported
$H6_a$	**PW*GI → PS**	0.169	0.039	1.796*	Supported
$H6_b$	**PC*GI → PS**	0.111	0.081	1.356	Not Supported
$H6_c$	**PW*GI → AI**	0.156	0.086	1.883*	Supported
$H6_d$	**PC*GI → AI**	0.131	0.093	1.400	Not Supported

Discussion

In the existing body of literature, majority of the studies on passengers' satisfaction and airlines' image have been confined to considering only service quality dimensions of airlines. Most of these studies, adopted SERVQUAL model, which measures 5 dimensions of a service including tangible aspects, responsiveness, reliability, assurance, and empathy of a service. Despite being used as a valid and reliable model in studying airline service quality, SERVQUAL model does not effectively reflect two important service aspects, which are the emotional concerns of passengers and their perceptions about the competence of the flight crew during their encounters with the flight crew.

Both of these aspects have been identified as influential factors on customers' experience during service encounters and their further behavior and responses to those experiences (e.g. Rust & Zahorik, 1993; Mittal & Lassar, 1996; Lemmink & Mattsson, 2002; Stauss, 2002; Wirtz & Mattila, 2004; Wu et al., 2015). However, to date no research has studied these two facets in airlines' services environment, where the front-line employees (i.e flight crew) play critical roles in influencing customers' perceptions of service quality and satisfaction. Therefore, to bring clarity on the role of these two often neglected aspects of airlines' service encounters, this study proposed an evaluation model that reflected the impacts of these two aspects on passengers' satisfaction, as well as airlines' image. The model considered "perceived warmth" as an emotional perception of passengers, and "perceived competence" as a sum of technical and interpersonal competencies of flight crew in delivering their services.

The findings of this study highlighted that both perceived warmth and competence play critical roles on enhancing passengers' satisfaction and on eliciting a positive organizational image for airlines. The significant effects of perceived warmth on satisfaction is consistent with the findings of existing literature that found significant correlations between perceived warmth and customers' satisfaction during a service encounter (Rust & Zahorik, 1993; Lemmink & Mattsson, 2002; Grandey et al., 2005; Gao & Mattila, 2014). In addition, the significant effect of perceived warmth on airlines' image is also consistent with the existing literature. As Lemmink & Mattsson (2002) stated, customers' short term emotions during a service encounter can influence and shape their judgement about the image of an organization as a whole. Furthermore, the effect of perceived competence on passengers' satisfaction was also consistent with the findings of the past literature, that states the competencies of front line employees significantly influence the satisfaction of customers (e.g. Brady and Cronin, 2001; Gao & Mattila, 2014; Wu et al., 2015). In addition, this study found that passengers' perception of flight crews competence influences the image of that airline in the minds of passengers.

Moreover, it was hypothesized that passengers' satisfaction affect airlines' image. Consistent with previous studies (e.g. Kim et al., 2008; Park et al., 2004; and Hu et al., 2009), the results of this study confirmed the relationship between passengers' satisfaction during service encounter and airlines' image.

Finally, this study proposed to investigate the moderating effect of airlines' green initiatives on the relationships among the constructs of proposed conceptual model. In this regard, the results of this study indicated that green initiatives of airlines moderate the relationships between perceived warmth and passengers' satisfaction. This confirms the findings of previous studies, which have supported the positive impact of green movements on consumer satisfaction (e.g. Eisingerich et al., 2011; Lee and Heo, 2009; Luo and Bhattacharya, 2006). The results also showed that airlines' green initiatives moderate the relationship between warmth and airline's image. This result also is congruent with the prior research that has shown the role of an organization's green activities on strengthening the positive attitudes of customers towards the organization, consequently influencing consumers' judgments about the organization (Bhattacharya & Sen 2003; Berens, Van Riel, & Van Bruggen 2005; Luo & Bhattacharya 2006; Nikbin et al., 2015). In contrast to our expectations, the findings of this study did not support the moderating effects of airline's green initiatives on the relationships between perceived competence and satisfaction, and neither on the relationship between perceived competence and image.

Managerial Implications

The results of this study help airline managers to have a better insight about their service encounters with passengers, specifically from passenger's perspective. The findings of this study indicate that both perceived warmth and competence are critical for eliciting consumer satisfaction and creating a positive organizational image. Hence, warmth and competence should be one of the considerations of airline managers when selecting and recruiting their crew, planing and providing the training programs, and monitoring the crew's performance.

Managers should also arrange and allocate the workload of the staff in a way that the crew can deliver their optimum performance. As stated by previous studies (e.g. Cho, Choi, Lee, Jin, 2014; Mohr & Puck, 2007; Piko, 2006), in many cases, factors, such as work overload and emotional burnout, lead to poor performance of front-line staff or their indifference towards customers concerns, even though the staff are aware of their responsibilities and customers' expectations towards passengers.

The results of this study also suggest that managers of airlines should not only focus on service excellence, but they should also invest in programs and activities that show their concerns for the environment. They also should educate the passengers and the public about their airline's green programs and how those initiatives contribute to the environment. The most effective approach to be environmentally friendly is to use newer aircraft, which benefits airlines by reducing their costs of fuel as well as improving airlines' green image. Airlines also should address their environmental movements to the public through their public relations and marketing strategies, in order to create a positive image. However, the messages need to be based on real environmental benefits of the brand, to avoid 'greenwashing'. According to Ottman (2011), airlines need to convince passengers that their efforts are genuine and the motive behind those efforts are concerns for the environment and not the benefit of the organization.

Limitations and Future Research

The main constraint to this study is related to the small sample size. To strengthen and confirm the results of the current study we suggest the future studies to consider larger number of observations. Furthermore, this study only considered "warmth" as the emotional perception of passengers. However, during their service encounters, passengers experience different kinds of emotions such as anxiety, emotional fairness, etc. Hence, future studies should identify more dimensions to emotional perceptions of passengers during their service experience. Further, future studies should also take into account the possible effects of travelers' characteristics such as their educational background, annual income, and lifestyle. As suggested by Cuddy et al. (2008) those may increase the possibility of bias in the answers of travelers.

Acknowledgement

This study was supported by USM Fellowship Scheme, Universiti Sains Malaysia

References

Aaker, D. A. (1996). Measuring brand equity across products and markets. *California Management Review, 38*(3), 102-120.

Aaker, J., Vohs, K. D., & Mogilner, C. (2010). Nonprofits are seen as warm and for-profits as competent: Firm stereotypes matter. *Journal of Consumer Research, 37*(2), 224-237.

Alamdari, F. (1999). Airline in-flight entertainment: the passengers' perspective. *Journal of Air Transport Management, 5*(4), 203-209.

Arthur, W., & Bennett, W. (1995). The international assignee: The relative importance of factors perceived to contribute to success. *Personnel Psychology, 48*(1), 99-114.

Atakan, M. S., & Eker, T. (2007). Corporate identity of a socially responsible university–a case from the Turkish higher education sector. *Journal of Business Ethics, 76*(1), 55-68.

Barclay, D., Higgins, C., & Thompson, R. (1995). *The Partial Least Squares (pls) Approach to Casual Modeling: Personal Computer Adoption Ans Use as an Illustration*. *Technology Studies, Special Issue on Research Methodology, 2* (2), 285-309.

Barnett, M. L., Jermier, J. M., & Lafferty, B. A. (2006). Corporate reputation: The definitional landscape. *Corporate reputation review, 9*(1), 26-38.

Batruch, C. (2011). Does Corporate Social Responsibility Make a Difference? *Global Governance, 17*(2), 155-159.

Becken, S. (2007). Tourists' perceptions of international air travel's impact on the global climate and potential climate change policies. *Journal of Sustainable Tourism, 15*(4), 351–368.

Berens, G., Riel, C. B. V., & Bruggen, G. H. V. (2005). Corporate associations and consumer product responses: The moderating role of corporate brand dominance. *Journal of Marketing, 69*(3), 35-48.

Bernstein, D. (1984). *Company image and reality: A critique of corporate communications.* Taylor & Francis.

Bhattacharya, C. B., & Sen, S. (2003). Consumer-company identification: A framework for understanding consumers' relationships with companies. *Journal of Marketing, 67*(2), 76-88.

Boshoff, C., & Allen, J. (2000). The influence of selected antecedents on frontline staff's perceptions of service recovery performance. *International Journal of Service Industry Management, 11*(1), 63-90.

Brady, M. K., & Cronin Jr, J. J. (2001). Customer orientation: Effects on customer service perceptions and outcome behaviors. *Journal of Service Research, 3*(3), 241-251.

Chiou, Y. C., & Chen, Y. H. (2010). Factors influencing the intentions of passengers regarding full service and low cost carriers: A note. *Journal of Air Transport Management, 16*(4), 226-228.

Cho, J. E., Choi, H. C., & Lee, W. J. (2014). An empirical investigation of the relationship between role stressors, emotional exhaustion and turnover intention in the airline industry. *Asia Pacific Journal of Tourism Research, 19*(9), 1023-1043.

Choueke, M. (2006). Heat is on for short-hauls. *Marketing Week, 29*(45), 20–21.

Cornelissen, J. (2000). Integration in communication management: Conceptual and methodological considerations. *Journal of Marketing Management, 16*(6), 597-606.

Coulter, K. S., & Coulter, R. A. (2002). Determinants of trust in a service provider: the moderating role of length of relationship. *Journal of Services Marketing, 16*(1), 35-50.

Cuddy, A. J., Fiske, S. T., & Glick, P. (2008). Warmth and competence as universal dimensions of social perception: The stereotype content model and the BIAS map. *Advances in Experimental Social Psychology, 40*, 61–149.

Cuddy, A. J., Glick, P., & Beninger, A. (2011). The dynamics of warmth and competence judgments, and their outcomes in organizations. *Research in Organizational Behavior, 31,* 73–98.

Do Paco, A. M. F., Raposo, M. L. B., & Leal Filho, W. (2009). Identifying the green consumer: A segmentation study. *Journal of Targeting, Measurement and Analysis for Marketing, 17*(1), 17-25.

Dowling, G. (2001), *Creating Corporate Reputations: Identity, Image and Performance,* Oxford University Press, London.

Herstein, R., Mitki, Y., & Jaffe, E. D. (2008). Communicating a new corporate image during privatization: the case of El Al airlines. *Corporate Communications: An International Journal, 13*(4), 380-393.

Gray, E. R., & Balmer, J. M. (1998). Managing corporate image and corporate reputation. *Long range planning, 31*(5), 695-702.

Fiske, S. T., Cuddy, A. J., & Glick, P. (2007). Universal dimensions of social cognition: Warmth and competence. *Trends in Cognitive Sciences, 11*(2), 77–83.

Fombrun, C., & Shanley, M. (1990). What's in a name? Reputation building and corporate strategy. *Academy of Management Journal, 33*(2), 233-258.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50.

Gao, Y. L., & Mattila, A. S. (2014). Improving consumer satisfaction in green hotels: The roles of perceived warmth, perceived competence, and CSR motive. *International Journal of Hospitality Management, 42,* 20-31.

Geraldine, O. (2013). Effects of airline service quality on airline image and passengers loyalty: Findings from Arik Air Nigeria passengers. *Journal of Hospitality Management and Tourism, 4*(2), 19-28.

Gilbert, D., & Wong, R. K. (2003). Passenger expectations and airline services: a Hong Kong based study. *Tourism Management, 24*(5), 519-532.

Grandey, A. A., Fisk, G. M., Mattila, A. S., Jansen, K. J., & Sideman, L. A. (2005). Is "service with a smile" enough? Authenticity of positive displays during service encounters. *Organizational Behavior and Human Decision Processes, 96*(1), 38-55.

Grunig, J. E., & Dozier, D. M. (2003). *Excellent public relations and effective organizations: A study of communication management in three countries.* Routledge.

Gursoy, D., Chen, M. H., & Kim, H. J. (2005). The US airlines relative positioning based on attributes of service quality. *Tourism Management*, *26*(1), 57-67.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice, 19*(2), 139–152.

Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the Academy of Marketing Science, 40*(3), 414–433.

Han, H., & Hwang, J. (2017). In-flight physical surroundings: Quality, satisfaction, and traveller loyalty in the emerging low-cost flight market. *Current Issues in Tourism, 20*(13), 1336-1354.

Han, H., Hyun, S. S., & Kim, W. (2014). In-flight service performance and passenger loyalty: A cross-national (China/Korea) study of travelers using low-cost carriers. *Journal of Travel & Tourism Marketing, 31*(5), 589-609.

Hares, A., Dickinson, J., & Wilkes, K. (2010). Climate change and the air travel decisions of UK tourists. *Journal of Transport Geography, 18*(3), 466-473.

He, H. W., & Balmer, J. M. (2013). A grounded theory of the corporate identity and corporate strategy dynamic: A corporate marketing perspective. *European Journal of Marketing, 47*(3/4), 401-430.

Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. *Advances in International Marketing, 20*(1), 277–320.

Jani, D., & Han, H. (2013). Personality, social comparison, consumption emotions, satisfaction, and behavioral intentions: How do these and other factors relate in a hotel setting?. *International Journal of Contemporary Hospitality Management, 25*(7), 970-993.

Johnson, M. D., Anderson, E. W., & Fornell, C. (1995). Rational and adaptive performance expectations in a customer satisfaction framework. *Journal of Consumer Research, 21*(4), 695-707.

Kennedy, S. H. (1977). Nurturing corporate images. *European Journal of marketing, 11*(3), 119-164.

Klein, J., & Dawar, N. (2004). Corporate social responsibility and consumers' attributions and brand evaluations in a product–harm crisis. *International Journal of Research in Marketing, 21*(3), 203-217.

Koll, O., & von Wallpach, S. (2009). One brand perception? Or many? The heterogeneity of intra-brand knowledge. *Journal of Product & Brand Management, 18*(5), 338-345.

Lemmink, J., & Mattsson, J. (2002). Employee behavior, feelings of warmth and customer perception in service encounters. *International Journal of Retail & Distribution Management, 30*(1), 18-33

Lii, Y. S., & Lee, M. (2012). Doing right leads to doing well: When the type of CSR and reputation interact to affect consumer evaluations of the firm. *Journal of Business Ethics, 105*(1), 69-81.

Liou, J. J., & Chuang, M. L. (2010). Evaluating corporate image and reputation using fuzzy MCDM approach in airline market. *Quality & Quantity, 44*(6), 1079-1091.

Luo, X., & Bhattacharya, C. B. (2006). Corporate social responsibility, customer satisfaction, and market value. *Journal of marketing, 70*(4), 1-18.

Lynes, J. K., & Dredge, D. (2006). Going green: Motivations for environmental commitment in the airline industry. A case study of Scandinavian Airlines. *Journal of Sustainable Tourism, 14*(2), 116-138.

Malaysia Airports Bhd. An Immerse Airport Experience [2016 Annual Report]. Retrieved Jan. & feb., 2017, from http://ir.chartnexus.com/malaysiaairports/doc/ar/ar2016.pdf

Martínez, P., & del Bosque, I. R. (2013). CSR and customer loyalty: The roles of trust, customer identification with the company and satisfaction. *International Journal of Hospitality Management, 35*, 89-99.

Mayer, R., Ryley, T., & Gillingwater, D. (2012). Passenger perceptions of the green image associated with airlines. *Journal of Transport Geography, 22,* 179-186.

Melewar, T. C., Karaosmanoglu, E., & Paterson, D. (2005). Corporate identity: concept, components and contribution. *Journal of General Management, 31*(1), 59-81.

Mikuli, J., & Prebeac, D. (2011). What drives passenger loyalty to traditional and low-cost airlines? A formative partial least squares approach. *Journal of Air Transport Management, 17*(4), 237-240.

Miles, S. J., & Mangold, W. G. (2005). Positioning Southwest Airlines through employee branding. *Business Horizons, 48*(6), 535-545.

Mittal, B., & Lassar, W. M. (1996). The role of personalization in service encounters. *Journal of Retailing, 72*(1), 95-109.

Mohr, A. T., & Puck, J. F. (2007). Role conflict, general manager job satisfaction and stress and the performance of IJVs. *European Management Journal, 25*(1), 25-35.

Myers, H., & Lumbers, M. (2008). Understanding older shoppers: a phenomenological investigation. *Journal of Consumer Marketing, 25*(5), 294-301.

Nikbin, D., Hyun, S. S., Iranmanesh, M., Maghsoudi, A., & Jeong, C. (2016). Airline Travelers' Causal Attribution of Service Failure and Its Impact on Trust and Loyalty Formation: The Moderating Role of Corporate Social Responsibility. *Asia Pacific Journal of Tourism Research, 21*(4), 355-374.

Oliver, R. L., Rust, R. T., & Varki, S. (1997). Customer delight: foundations, findings, and managerial insight. *Journal of retailing, 73*(3), 311-336.

Ottman, J. (2011). *The new rules of green marketing: Strategies, tools, and inspiration for sustainable branding.* Berrett-Koehler Publishers.

Pakdil, F., & Aydın, Ö. (2007). Expectations and perceptions in airline services: An analysis using weighted SERVQUAL scores. *Journal of Air Transport Management, 13*(4), 229-237.

Park, J. W. (2007). Passenger perceptions of service quality: Korean and Australian case studies. *Journal of Air Transport Management, 13*(4), 238-242.

Park, J. W., Robertson, R., & Wu, C. L. (2004). The effect of airline service quality on passengers' behavioural intentions: a Korean case study. *Journal of Air Transport Management, 10*(6), 435-439.

Piko, B. F. (2006). Burnout, role conflict, job satisfaction and psychosocial health among Hungarian health care staff: a questionnaire survey. *International Journal of Nursing Studies, 43*(3), 311-318.

Rainsbury, E., Hodges, D. L., Burchell, N., & Lay, M. C. (2002). Ranking workplace competencies: Student and graduate perceptions. *Asia-Pacific Journal of Cooparative Education, 3*(2), 8-18

Rust, R. T., & Zahorik, A. J. (1993). Consumer satisfaction, consumer retention, and market share. *Journal of Retailing, 69*(2), 193–215.

Schreiber, A., Zapp, P., & Kuckshinrichs, W. (2009). Environmental assessment of German electricity generation from coal-fired power plants with amine-based carbon capture. The International *Journal of Life Cycle Assessment, 14*(6), 547-559.

Scott, M. L., Mende, M., & Bolton, L. E. (2013). Judging the book by its cover? How consumers decode conspicuous consumption cues in buyer–seller relationships. *Journal of Marketing Research, 50*(3), 334-347.

Stauss, B. (2002). The dimensions of complaint satisfaction: process and outcome complaint satisfaction versus cold fact and warm act complaint satisfaction. *Managing Service Quality: An International Journal, 12*(3), 173–183.

Stern, N.H. (2009). Travails of going Green. *Aviation Week & Space Technology, 171*(16), 83.

Van Riel, C. B. (1995). *Principles of corporate communication.* Prentice Hall.

Wetzels, M., Odekerken-Schroder, G., & Van Oppen, C. (2009). Using PLS path modeling for assessing hierarchical construct models: Guidelines and empirical illustration. *MIS Quarterly, 33*(1), 177–195.

Wirtz, J., & Mattila, A. S. (2004). Consumer responses to compensation, speed of recovery and apology after a service failure. *International Journal of Service Industry Management, 15*(2), 150-166.

Wu, Y. C., Tsai, C. S., Hsiung, H. W., & Chen, K. Y. (2015). Linkage between frontline employee service competence scale and customer perceptions of service quality. *Journal of Services Marketing, 29*(3), 224-234.