The effect of physical environment on passenger delight and satisfaction: Moderating effect of national identity

Faizan Ali [a, *], Woo Gon Kim [b], Kisang Ryu [c]

[a] College of Hospitality & Technology Leadership, University of South Florida Sarasota Manatee, 8350 N. Tamiami Trail, Sarasota, FL, 34243, USA
[b] Dedman School of Hospitality, The College of Business, Florida State University, Tallahassee, FL, USA
[c] College of Hospitality and Tourism Management, Sejong University, Seoul, Republic of Korea

HIGHLIGHTS

- Tests relationships among physical environment, passenger delight and satisfaction.
- Examines the moderating role national identity.
- Airport's physical environment influences passengers' delight and satisfaction.
- National identity is a significant moderator.

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ABSTRACT

This study aims to examine the influence of an international airport's physical environment on passengers' delight and satisfaction. This study also aims to assess the moderating role of national identity on the relationship between physical environment and passengers' delight and satisfaction. A convenient sampling technique was used to select the sample. A total of 271 questionnaires distributed at Kuala Lumpur International Airport, Malaysia were used for data analysis. The result from the structural analysis suggests that physical environment in an international airport influences passengers' delight and satisfaction. Moreover, national identity portrayed in airport moderates the relationships between physical environment, passengers' delight and satisfaction. Overall, findings of this study extends the understanding of physical environment, passengers' delight and satisfaction and national identity in the context of an international airport and offer implications for international airport authorities. Discussions and implications for airport practitioners, limitations, and suggestions for future research are also provided.

1. Introduction

Deregulation and the emergence of low-cost carriers are among the factors that have created competition in international airports by providing different prospects and services to passengers and business operators alike (Graham, 2013). This has caused higher demand for air transportation and rising passenger traffic globally (Moon, Yoon, & Han, 2015). For instance, after outsourcing the operations of their national airlines (Malaysia Airlines) and launching of budget airlines such as Air Asia and Malindo Air, Kuala Lumpur International Airport (KLIA) in Malaysia has recorded a count of 15 million incoming international passengers during the first quarter of 2014, a 16% growth in passenger numbers, which follows a 19% growth rate in 2013, making it the fastest growing major airport in Asia (http://www.malaysiaairports.com.my). This growth rate is predicted to increase further in coming years because of mega events, festivals, and other initiatives taken by Malaysian government including naming 2015 as the 'Year of Festivals'. Consequently, we can assume an increasing number of passengers and other visitors to international airports. Given this context, where airports focus on developing strategies to ensure delightful experiences among visitors, their physical environments are steadily gaining more attention as part of that purpose (Ariffin & Yahaya, 2013; Moon et al., 2015).

The air transport business has become a huge enterprise, and

* Corresponding author.
E-mail addresses: faizanali7@hotmail.co.uk (F. Ali), wkim@cob.fsu.edu (W.G. Kim), Kryu11@sejong.ac.kr (K. Ryu).

airports have started to offer various retail, shopping, and entertainment services like duty free shops, retailers, restaurants, cafes, and even hotels (Han, Kim, & Hyun, 2014). This has changed the airport's role to include entertainment (Moon et al., 2015), where increasingly, passengers and visitors significantly affect the financial success not just of the airlines but all of these service providers as well. For instance, in first quarter of 2015, Kuala Lumpur International Airport recorded terminal retail sales of $123 million (US), 3% higher than terminal retail sales in the year 2014 (www.trbusiness.com, 2015). Consequently, Lu (2014) suggests that the traditional purpose of airports as a transportation hub has expanded into entertainment with commercial facilities that generate non-aviation sales. With the growth in the air transport industry and diversification in the role of airports, authorities focus on developing passenger delight during their time in airports. While satisfied customers are merely at ease, delighted customers are more satisfied with more appreciation for service providers (Kim & Mattila, 2013). Consequently, service providers now focus on identifying how to develop positive behavioral intentions among customers by delighting them (Kim, Vogt, & Knutson, 2015).

The physical environment in service industries is a critical determinant of customer emotion and positive responses (Ryu, Lee, & Kim, 2012), but little to no research has examined how the physical environment of international airports can develop customer delight and satisfaction (Jeon & Kim, 2012; Moon et al., 2015). Thus, this study was designed to begin filling this gap by revealing how airport physical environments influence passenger delight and satisfaction. Moreover, this study also enhances existing satisfaction scales by incorporating recent amenities added to airports and in doing so, reflect changes in traveler needs caused by demographic shifts and changes in technology.

In addition to the physical environment, this study also chose elements of national identity as important parts of any competitive strategy by airport management. As Ariffin and Yahaya (2013) suggested, international airports can promote a national consciousness and create an awareness of national identity. Therefore, an amalgamation of unique elements of national identity in designing service in international airports can provide passengers and visitors a distinctive cultural experience (Ali, Kim, & Park, 2015). Moreover, as Jeon and Kim (2012) have stated, airports are international gateways that provide the first impression of a nation; inexperienced customers visiting a nation for the first time may form their first images of the nation in an international airport, and particularly in experiencing the airport's physical surroundings. Ariffin, Nameghi, and Soon (2015) pointed out the primary motive for visiting a foreign destination is to experience new and different cultures and environments. Thus, incorporating a country's national identity into the physical environment of international airports may help shape visitor delight and satisfaction, not just with the airport but with the country itself.

Despite the significance of physical environment and national identity in creating customer's delight and satisfaction, they have not been studied in the context of international airports. A limited number of studies have considered the effect of physical environment on customer delight and satisfaction. However, the question remains: will incorporating national identity in the physical environment of international airports help increase passenger delight? It is the focal problem that this study addresses, and the main objective was to examine the influence of physical environment on passenger delight and satisfaction. We also wanted to know if national identity as part of that physical environment moderated the effect of the physical environment itself on passenger delight and satisfaction.

The remainder of this paper is organized as follows: the first section addresses the theoretical background and those concepts central to the study. The next section focuses on the theoretical model and discusses the relationships among model elements, as well as the research methodology and data collection. The last part provides findings, implications, and suggestions for future research.

2. Literature review

2.1. Physical environment

Studies on environmental psychology take their base from Kotler (1973) to Baker (1987). Kotler (1973) proposed the concept of 'atmospherics' as a marketing tool and defined it as "*the design of buying environments to produce specific emotional effects in the buyer that enhance his/her purchase probability*" (p. 50). Baker (1987) also discussed how physical environment influences customer perceptions of service. Drawing on these two studies, Bitner (1992) coined the term 'servicescape' to describe "*the man-made physical environment where service products are delivered*" (p. 58). Bitner (1992) further postulated that physical environment stimulates customer and employee internal responses and shape their behaviors. This phenomenon is an important component of consumers' satisfaction with the service. Consequently, a suitable physical environment result in favorable behavioral intentions i.e., loyalty and positive word of mouth intentions (Ryu et al., 2012).

Scholars have focused on a number of dimensions of the physical environment, revealing some disagreement on any unified physical environment dimensions for all service organizations (Jeon & Kim, 2012). Initially, Bitner (1992) classified servicescape into three dimensions: (a) ambient conditions, (b) spatial layout and functionality, and (c) signs, symbols, and artifacts. Ambient conditions refer to characteristics of the environment that can stimulate the five senses of customers (temperature, lighting, noise, music, and scent). Spatial layout refers to the size, shape, and arrangement of machinery, equipment, and furnishings whereas functionality refers to the ability of these items to fulfill customer needs. Lastly, signs, symbols, and artifacts indicate tools that can provide customers with information about service facilities (Moon et al., 2015). Using this initial classification, other researchers have proposed essential dimensions of the physical environment for other contexts (see Table 1). For instance, Wakefield and Blodgett (1996) conducted a study of leisure services (e.g., Division I college football, minor league baseball, and casinos) and proposed the attributes of physical environment should include layout accessibility, facility aesthetics, seating comfort, electronic equipment and displays, and cleanliness. In another study on festivals, Lee, Lee, Lee, and Babin (2008) coined the terms 'festivalscape', to reflect particular characteristics of physical environments at festivals: ambient conditions, space/facilities, and signs, symbols, and artifacts. Similarly, in the context of upscale restaurants, Ryu and Jang (2007) developed a physical environment scale, Dinescape, with dimensions like facility aesthetics, lighting, ambience, layout, table settings, and service staff.

Despite many previous studies on how physical environments affect various industries, the aviation and airport industries have not benefitted from the research, especially on understanding multidimensional physical environments. Recently, based on studies conducted by Wakefield and Blodgett (1996) and Wu and Weber (2005), Moon et al. (2015) proposed four dimensions for evaluating the physical environment in airports: layout accessibility, facility aesthetics, functionality, and cleanliness. These dimensions do cover some aspects of an international airport's physical environment. However, Moon et al. (2015) ignored other significant aspects of that environment: signage, baggage trolleys, passengers with special needs, retail and dining options, aroma, crowding, internet/WiFi connectivity, power sockets, and elevators