SATISFACTION OF TOURISTS WITH PUBLIC TRANSPORT: AN EMPIRICAL INVESTIGATION IN DUBAI

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ABSTRACT. Availability and suitability of public transport enhances the perceived attractiveness of a destination for tourists. Since few studies have investigated how public transport influenced the tourist experience, this study developed and empirically examined a parsimonious conceptual model of satisfaction for tourists using public transport services, with quality and value postulated to influence value, which in turn influenced satisfaction. Using data collected from a judgmental sample of 169 tourists using the Dubai metro, confirmatory factor analysis was used to develop unidimensional and valid measures, after which the study hypotheses were tested using structural equation modeling. Reputation (gamma = 0.99, p < 0.01) was found to influence satisfaction via value, while quality was unexpectedly not found to be a driver for value. Various theoretical and managerial implications are discussed.

KEYWORDS. Public transport, metro, satisfaction, quality, value, reputation, Dubai

INTRODUCTION

Scholars have acknowledged the influence of both availability and suitability of public transport on the perceived attractiveness of a destination for tourists (Laws, 1995; Pritchard & Havitz, 2006), with the mobility of tourists visiting large cities being recognized as an essential factor for their comfort (Albalate & Bel, 2010). In this regard, the quality of transport at tourist destinations has been determined to influence visitor experience, their overall satisfaction, and their decision to return in future (Thompson & Schofield, 2007). However, with a few exceptions, there has been limited investigation of the factors driving tourist usage of public transport services within destination locations.

For example, in a study in the United States (US), Avgoustis and Achanca (2002) found that...
visitors to Indianapolis rated the availability of local transportation services fourth in importance among the 14 attributes that determined destination satisfaction, and the authors further determined that the availability of local transportation also influenced visitors’ choice of the destination. Others (e.g., Bakucz, 2002) focused on transport performance attributes such as “ease of getting around the city” and “accessibility of the city”. Consequently, in order to achieve satisfaction of visitors, urban authorities have developed specific transport strategies targeted at tourist segments. In Asia, the Taipei MRT Company attempted to increase the number of inbound tourists by providing a better travel experience (Chang & Lai, 2009). While a study in four European cities (Russo & van der Borg, 2002) determined that specific soft elements of the urban tourism product determined the attractiveness of a city for tourists, and yet these elements were often overlooked by city planners. More recently, Leung, Woo, and Ly (2013) investigated the effects of distance decay (i.e., cultural distance measured by Hofstede Uncertainty Avoidance index, and physical distance) on overall service satisfaction of tourists visiting Hong Kong, based on the tourists’ perceptions of individual service quality attributes across local-based airlines, public transportation, and government services. The authors found that while cultural distance had a negative relationship with overall tourist satisfaction, physical distance showed the opposite result. Nonetheless, limited research attention has been devoted to investigating how public transport influenced the tourist experience (Thompson & Schofield, 2007).

Consequently, to further the understanding of tourist satisfaction with a destination, the present study took a consumer perspective of public transport, investigating the factors that drove satisfaction of tourists with public transport services in the destination area. The objective of this study was therefore to develop a conceptual model of satisfaction for tourists that would be of theoretical interest by contributing to the sparse related literature, as well as of practical interest by providing insights into enhancing the experiences of tourists at destinations.

The new metro service launched in 2009 in Dubai by the Roads and Transport Authority (RTA) was selected as empirical context. The metro comprises of 46 stations on two lines connecting two terminals at the international airport to major landmarks and shopping malls of the city, and achieving the milestone of over 100 million passenger trips in 2012 (Dubai Statistics Center, 2013). Dubai ranks among the top 10 tourist destinations worldwide with the Emirate expecting to attract 8.8 million international visitors in 2012 (eTN Global Travel Industry News, 2012). The city over the past decade has increased the network and coverage of public transport services, notably launching its metro service to cater to the transport needs of the city, and to support various economic sectors, including tourism (O2 Public Relations, 2011). Given Dubai’s advanced economy, its major position as a touristic hub, and the multi-ethnic characteristics of its residents, it leads other regional cosmopolitan hubs and expanding urban centers so that the findings could be extendable to tourist behavior in the other regional cities. For example, Abu Dhabi, the neighboring Emirate, is planning the launch of a Mass Rapid Transit (MRT) service in 2016–2017 (Gulf News, 2012), Riyadh in Saudi Arabia is tendering for a new metro system in May 2012 (Reuters, 2012), while Doha in Qatar is similarly launching tenders for its rail project in the light of its hosting the 2022 football World Cup (Dubai Metro, 2013).

The remainder of the paper is structured as follows: first in the literature review, the main factors that influence tourist satisfaction as passengers of public transport are identified and conceptualized. Building on this, a parsimonious conceptual model of passenger satisfaction is then developed. The methodology section describes the approach used to develop measures for the study constructs, as well as details of the judgmental sampling approach used, the data collection method, and data analysis tools and techniques. The conceptual model is then subjected to empirical scrutiny to test the study hypotheses following which theoretical and managerial implications are discussed.
LITERATURE REVIEW

Tourist Satisfaction and Public Transport

In the context of the present study, satisfaction was proposed as the output variable of the study model, as it captures the feelings of tourists towards the transport service. Achieving the overall satisfaction of tourists remains an important objective for which the mobility of tourists in the destination city plays an important role (Albalate & Bel, 2010; Chang & Lai, 2009). Because tourism is a service industry, and tourist dollars are limited, a major concern within the industry has been to achieve a positive tourist experience at the destination.

In this regard, satisfaction that represents the core construct of marketing has been defined as: “a judgment that a product or service feature, or the product or service itself, provides a pleasurable level of consumption-related fulfillment” (Oliver, 1997, p. 86). The key role of satisfaction derives from the fact that it has a positive impact on profitability (e.g., Anderson, Fornell, & Lehmann, 1994), while in the tourism sector it was a good predictor of one’s intentions to repurchase cruise passenger services (Petrick, 2004). Given the recognized pertinence of the construct, satisfaction surveys are expectedly common in the MRT industry, and Serco, the Dubai Metro management company, considers the Dubai metro to be similar to a railway system they also manage in the United Kingdom (UK) that “has a punctuality rating of more than 96%, and customer satisfaction levels of at least 90%” (Serco, 2011).

Over the past two decades, Dubai has evolved into a major tourist destination in the region, welcoming travelers from around the world, originating mainly from Asia and Africa (33.3%), Europe (30.5%), Arab countries (25.5%), American countries (7.9%), and a few other destinations (Dubai Statistics Center, 2013). In its landmark document, “Dubai’s Vision for Tourism for 2020”, released in May 2013, the Emirate unveiled its strategy to more than double its number of current tourists over the next seven years (Gulf News, 2013). By 2020, Dubai plans to achieve the milestone of 20 million annual visitors by using a multi-pronged strategy of maintaining existing market share in current source markets, increasing consideration to visit in other emerging global markets, and finally, increasing the number of repeat visits (Gulf News, 2013). The year 2020 is significant as it coincides with the year when Dubai, if it wins the bid, is expected to host the World Expo 2020 (see http://www.expobids.com/2020.htm).

Visitors consider various factors when making a destination choice. The contribution of transport, as a secondary destination feature to destination image and visitor satisfaction is a theme which has been considered within the scope of wider studies of the destination experience (Albalate & Bel, 2010). In examining user satisfaction with different passenger transport service providers in Spain, Gimeno and Vila (2007) found that the providers (bus, train and metro, taxi) were making great efforts to adapt to user preferences and to differentiate their services. Lumsdon, Downward, & Rhoden (2006) established that a multi-modal passenger transport ticket, marketed for recreational and tourism purposes, had the potential to offer a more sustainable modal choice to visitors. Indeed, other authors have highlighted the ways in which transport can become a pleasurable feature of the tourist experience, citing such examples as water buses and boat trips (Law, 2002). In addition to conveying passengers across the city, the metro, by the fact that it runs on elevated platforms in certain parts of Dubai, may enhance the experience of tourists by providing a pleasant bird eye’s view of different parts of the city. Despite research attention to the experience of tourists, few studies (Thompson & Schofield, 2007) have considered the impact that efficient and cost-effective local public transport has on tourists, although Suh & Gartner (2004) clearly established that providing these services can be a form of competitive advantage.

A review of the extant literature shows that value perceived is a major factor influencing customer satisfaction in various industry contexts, and public transport is no exception.
**Perceived Value**

Value has been conceptualized as the consumer’s overall assessment of the utility of a product based on their perceptions of what is received and what is given (Zeithaml, 1988), or similarly, as a cognitive trade-off between quality and sacrifice (Lee, 2010). It has become a key construct in business settings as driver of satisfaction (Babin & James, 2010; Cronin, Brady, & Hult, 2000) being the central process of economic exchange (Vargo & Lusch, 2008).

Value is conceptualized as an explicitly customer-oriented variable; hence the term “perceived value” is often used to emphasize this customer perspective. Within the service-dominant logic literature (e.g., Gronroos, 2008; Vargo & Lusch, 2008), value is considered to reside not in the product/service offered to satisfy a customer need, but in the benefit that the product provides to the customer. In other words, a product or service delivers value to a customer only if it may be made use of. In this way, value is created through use or consumption where the customer is no longer considered as a passive recipient of the service effort (Babin & James, 2010), but instead as the co-creator of value (Ng & Forbes, 2009).

In the public transport industry, perceived value has been found to influence customer behavior. In their study comparing railroad and highway travel, Zamora, Vasquez-Parraga, Rodriguez, and Gonzalez (2011) determined that customers’ long-term relationships with the respective provider significantly differed according to their idiosyncratic motivations of seeking value or money savings, and their expectations of mutual loyalty. Similarly, Thompson and Schofield (2007) identified three factors, namely, ease of use, efficiency and safety, and good parking, as influencing the perceptions of overseas visitors towards public transport performance. The key determinant of perceived value is service quality (Lee, 2010), which is discussed next.

**Service Quality**

Service quality is a key construct in the marketing literature, and its effect on customer behavior is well-documented (Lee, 2010). Research on public transport usage in various parts of the world has tended to focus on service quality attributes. Santos, Yajima, Sakamoto, and Kubota (2012) investigated ridership of commuters using the bus and train for work in Japan, and determined that service quality improvement led to a 14% increase in ridership among the train commuters. Cheng (2011) studied the effect of quality of Taiwan High Speed Rail’s website and found that accuracy of information, information on stations’ surrounding areas, and completion of transactions influenced user satisfaction. Ji and Gao (2010) determined that accessibility of bus stops in Beijing, China, increased passenger satisfaction, while the impact of service quality provided by public bus transportation in Chennai, India, could serve as a basis for improvements in rider satisfaction (Rita and Ganesan, 2010). After a review of criteria for touristic attractiveness and city livability measures, the “ease of finding and reaching places within the city” was determined to be a salient attribute of visitors’ assessment of the quality of the urban tourism experience (Haywood & Muller, 1988, p. 456). In Spain, Pérez, Abad, Carrillo, and Fernández (2007) empirically established a relationship between the five dimensions of service quality and purchase intentions in public transport. Australian studies more recently have explored rider perceptions of safety and its effect on public transportation usage in Melbourne (Delbosc & Currie, 2012).

Therefore, perceived service quality or “the consumer’s judgment about the superiority or excellence of a product” (Parasuraman, Berry, & Zeithaml, 1988, p. 15) is one of the factors influencing customer value. Service quality is a cognitive evaluation of the service experience (Ha & John, 2008), which may be influenced by consumer preferences such as utilitarian benefits (Roy & Ng, 2012). Therefore, service quality is a key expectation of customers that public transport operators strive to meet or exceed. For example, a stated objective of the RTA has been to provide a “quality service” of the highest standard to all Dubai metro passengers (Roads and Transport Authority, 2011).
Reputation

To complement service quality, the present study investigated reputation as a driver of passenger behavior. Although the construct has been commonly investigated in more exclusive transportation modes (e.g., airlines, cruise), it has rarely been associated with public transportation contexts. Nonetheless, it was deemed appropriate to include reputation in the study model for various reasons. In the MRT industry, operators setting up MRT schemes have consistently focused on positioning their service to reflect a positive image and reputation, as illustrated by Singapore’s MRT representing a symbol of “Smart Singapore” (Richmond, 2008), by Dubai metro with its aesthetically designed modern stations, with the longest driverless metro system in the world (Gulf News, 2012), and with Chennai’s MRT having “15-odd futuristic stations”, each having parking spaces (Madhavan, 2010). In addition, reputation assumes importance in the context of cultures with high uncertainty avoidance (Bartikowski, Walsh, & Beatty, 2011). The Hofstede Centre (2013) established their uncertainty avoidance index representing “the extent members of a culture feel threatened by ambiguous or unknown situations and have created beliefs and institutions that try to avoid these”. The United Arab Emirates (UAE) and the Arab world are assigned high index scores of 80 and 68 respectively, while the USA in comparison scores a much lower 46. This implies that Middle East residents tend to avoid uncertainty, which would in turn support the reassuring effect of reputation on influencing consumer behavior.

Reputation is important to a service organization as it represents a valuable intangible asset (Vidaver-Cohen, 2007). To clarify the conceptualization of the construct, it is useful to distinguish between three terms which have often been used interchangeably: organizational identity, organizational image, and corporate reputation (Barnett, Jermier, & Lafferty, 2006). A major point of differentiation between the three constructs has been made in terms of whether the concepts refer to internal or external stakeholders, or both. Helgesen and Nesset (2007) state that “organizational identity” refers to internal stakeholders alone, “organizational image” to external stakeholders alone, while “corporate reputation” refers to both internal and external stakeholders, particularly employees and customers. Walker (2010) confirmed that a consensus had evolved towards this distinction based on the above stakeholders’ perspective.

Corporate reputation has consequently been defined as the “observers collective judgments of a corporation based on assessments of the financial, social, and environmental impacts attributed to the corporation over time” (Barnett et al., 2006, p. 34). It has been argued that developing a good reputation is crucial to a business as it leads to value creation (Roberts & Dowling, 2002). Once established, it becomes an extrinsic factor by which consumers/tourists make decisions based on the businesses’ honesty and concern about their consumers, which is not easily changed (Jin, Park, & Kim, 2008), since an organization’s reputation is based on its past actions (Nguyen & LeBlanc, 2001).

In the transportation industry, the influence of corporate reputation on consumer behavior is well-documented, with airline passengers developing a reputation judgment of a service, which then influences their consumer behavior in the service (Graham & Bansal, 2007), while Hsu and Lee (2002) determined that reputation and safety were important for tourists using motor-coach services, within a tourist destination.

DEVELOPMENT OF MODEL AND HYPOTHESES

Based on the preceding discussion, the main objective of this study may therefore be refined as determining how reputation, quality, and value impact on satisfaction within MRT services. Branding and reputation development are prominent in the marketing strategies of firms, as customers prefer not to patronize a service that does not have a good reputation (Kwak & Kang, 2009). The appeal of MRT services to
passengers, including tourists, may therefore be expected to depend on its reputation (e.g., Richmond, 2008). It has been argued that a good reputation is crucial, as it leads to value creation (Cretu & Brodie, 2007; Roberts & Dowling, 2002). Similarly, perceived service quality by public transport passengers has been found to play a key role in delivering positive experiences to the passengers (e.g., Ji & Gao, 2010; Rita and Ganesan, 2010; Santoso et al., 2012). Many authors empirically demonstrated a service quality–value relationship (e.g., Lee, 2010; Parahoo, 2013; Zins, 2001). Value has in turn been demonstrated to be a driver of satisfaction in the public transport industry (Cheng, 2011), as well as in other industry contexts (e.g., Butcher, Sparks, & O’Callaghan, 2001; Cronin et al., 2000; Ryu, Han, & Kim, 2008).

Therefore, based on these findings, the following hypotheses (H) were developed (graphically represented in Figure 1):

**H1:** Service quality delivered by metro service is positively associated with the perceived value by tourists using the metro.

**H2:** Reputation of metro is positively associated with perceived value by tourists using the metro.

**H3:** Perceived value by tourists using metro services is positively associated with their satisfaction.

**METHODOLOGY**

In order to develop the questionnaire, discussions were held with industry experts to identify validated measures from literature that matched the conceptualization of the study constructs, and to contextualize the measures to the context of the present study. Three items were derived for each construct as follows: satisfaction items were sourced from Forgas, Moliner, Sánchez, and Palau (2010) as they matched the conceptualization of the construct in the present study (e.g., “I am very satisfied with Dubai Metro (DM)”, “DM has met my expectations”, “DM has fulfilled my needs”) (Table 1). Similarly, value items sourced from Forgas et al. (2010) (e.g., “DM provides a convenient means of transportation to me”, “DM enables me to reach different parts of the city in a convenient way”, and “DM is accessible to me”). Service quality was measured using one tangible item from Parasuraman et al. (1988), relating to passenger satisfaction. The table below summarizes the wording of construct measures, and associated CFA statistics and reliabilities.

**TABLE 1. Wording of Construct Measures, and Associated CFA Statistics and Reliabilities**

<table>
<thead>
<tr>
<th>Latent Variable</th>
<th>Item</th>
<th>Lambda (λ) and t-value</th>
<th>Cronbach alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction</td>
<td>I am very satisfied with the services provided by DM</td>
<td>λ = 0.88; t = 14.1</td>
<td>0.907</td>
</tr>
<tr>
<td></td>
<td>DM has met my expectations</td>
<td>λ = 0.92; t = 15.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DM has fulfilled my needs</td>
<td>λ = 0.85; t = 13.5</td>
<td></td>
</tr>
<tr>
<td>Value</td>
<td>DM provides a convenient means of transportation to me</td>
<td>λ = 0.79; t = 11.5</td>
<td>0.726</td>
</tr>
<tr>
<td></td>
<td>DM enables me to reach different parts of the city in a convenient way.</td>
<td>λ = 0.72; t = 10.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DM is accessible to me</td>
<td>λ = 0.73; t = 10.5</td>
<td></td>
</tr>
<tr>
<td>Quality</td>
<td>I receive excellent customer service at DM</td>
<td>λ = 0.69; t = 9.8</td>
<td>0.782</td>
</tr>
<tr>
<td></td>
<td>The physical appearance of DM and its infrastructure is visually appealing</td>
<td>λ = 0.70; t = 10.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I feel safe when using DM*</td>
<td>λ = 0.78; t = 11.5</td>
<td></td>
</tr>
<tr>
<td>Reputation</td>
<td>DM has a good reputation</td>
<td>λ = 0.81; t = 12.3</td>
<td>0.823</td>
</tr>
<tr>
<td></td>
<td>The image associated with DM is positive</td>
<td>λ = 0.79; t = 12.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DM represents a smart way to travel</td>
<td>λ = 0.73; t = 10.7</td>
<td></td>
</tr>
</tbody>
</table>

Notes: *This item later loaded on reputation in structural equation modeling. CFA = confirmatory factor analysis; DM = Dubai Metro.
The physical appearance of DM, as well as two specific items that were deemed by experts to capture the expectations of tourists: “I receive excellent customer service at DM”; and “I feel safe in using DM” (sourced from Leung et al., 2013). Reputation was measured using validated measures (Brown & Dacin, 1997; Forgas et al., 2010) pertaining to “DM has a good reputation”, “The image associated with DM is positive”, and finally, “DM represents a smart way to travel”.

The items were rated on a 7-point Likert scale anchored at extremities (strongly disagree–strongly agree) and with no labels on intermediate scale points. A pilot test with nine tourists enabled minor refinement of terminologies.

A judgmental sample design was used for data collection. Recognizing that such sampling may lead to subjectivity and bias in unit selection for interviews, industry experts were consulted to identify metro stations that would be used by a representative mix of tourist segments, thereby lending generalizability to the findings. This process helped to identify four metro stations used extensively by tourists in Dubai, which were thus selected for data collection: Burj Khalifa, near the world’s tallest building and the iconic Dubai Mall; and three stations linked to famous malls geographically spread over the city: Deira City Center (north); Mall of the Emirates (center), and Ibn Batuta Mall (south). Permission was sought from the RTA, and interviews were conducted at different times during a one-week period by one of the authors using quotas at each station. Passengers were approached as they entered or exited the stations, and after a screening question to identify tourists, their permission was sought for the interviews. Two versions of the questionnaire were used, an English version for global tourists who were generally quite proficient in the language, and Arabic for some regional tourists who opted for the Arabic version. The Arabic translation of the questionnaire was effected by one of the authors whose mother tongue was Arabic, and was independently approved. A total of 169 personal interviews were thus satisfactorily completed at the four stations.

After data collection, the questionnaires were cleaned and coded before data entry and analysis using SPSS (descriptive analysis) and LISREL 8 (modeling). Cronbach’s alpha was used to determine the reliabilities of the scales (Nunnally, 1978), while data from a confirmatory factor analysis (CFA) was used to determine unidimensionality (Gerbing & Anderson, 1988), and various forms of validity (Anderson & Gerbing, 1988). Structural equation modeling (SEM) was used to test the study hypotheses due to the strength of the modeling technique, guided by three central principles (Steenkamp & Baumgartner, 2000):

- It makes a clear distinction between a latent variable and its observable measures;
- it recognizes measurement error in the scale measures; and
- it assesses the degree to which the model is in agreement with the data in a novel way by comparing the variances and covariances implied by the model with the observed variances and covariances.

**DATA ANALYSIS**

**Establishing Unidimensionality, Reliability, and Validity for Study Scales**

The scale items were subjected to a CFA to establish the unidimensionality of the measurement scales (Gerbing & Anderson, 1988). While the p value associated with the chi-square statistic was significant (p < 0.001), it is known to be sensitive to sample size. Therefore, other fit indices were investigated which pointed to a satisfactory fit of the model according to prescribed criteria (e.g., Hu & Bentler, 1999): chi-squared to degrees/degrees of freedom = 2.76; IFI = 0.98; NFI = 0.96, CFI = 0.98, SRMR = 0.05, RMSEA = 0.10). Furthermore, with the exception of the first quality item (with a borderline value of 0.69), the loadings of the scale measures from their underlying latent constructs were all above the threshold of 0.7 (Fornell, Tellis, & Zinkhan, 1982), thereby ensuring the reliability and validity of the model.
confirming that they were all good reflectors of their constructs (see Table 1).

Having established unidimensionality in the measurement models, the reliability of the core constructs for each sample was determined. Cronbach alpha values were all well above the accepted limit of 0.70 (Nunnally, 1978): satisfaction = 0.907, quality = 0.782, value = 0.726, and reputation = 0.823, hence indicating excellent reliabilities.

Face, convergent, and discriminant validity were also assessed. Face validity was incorporated into the measures by using existing validated measures. As evidence of convergent validity, all the measurement items in the CFA model were statistically significant (see Table 1), and had loadings close to or exceeding 0.7 on their latent constructs (Johnson, Herrmann, & Huber, 2006). Furthermore, the average variances extracted (AVE) were all above 0.50 (satisfaction = 0.88, value = 0.54, reputation = 0.61, and quality = 0.58) affirming convergent validities (Fornell & Larcker, 1981). As recommended by Anderson and Gerbing (1988), discriminant validity was determined by constructing a 95% confidence interval (± two standard errors) around the correlation estimate ($\phi_{ij}$) between each pair of latent variables. None of the intervals included unity confirming discriminant validity in the study constructs, although it was noted that the correlation between quality and reputation was high at 0.91 with a standard error of 0.03.

Having established that the scales were unidimensional, reliable, and valid, the study hypotheses were ready for empirical examination through structural equation modeling using LISREL8. Prior to that, some descriptive analysis of the data was undertaken.

### Profiles of Tourists Surveyed

The sample comprised slightly more married respondents (52.7%) than singles, with almost two-thirds (65.7%) of the passengers being males. In terms of employment, the majority (67.7%) held middle managerial positions or above (Table 2). In terms of nationalities, the majority of tourists using the metro were European 41.5%, followed by Gulf Cooperation Countries nationals and other Arabs making up just over a third at 34.9%, with Asian tourist representing 11.2%, and others (12.4%). In order to determine whether tourists’ perceptions of satisfaction varied based on their cultural background, independent sample t-tests were used to compare the mean and overall satisfaction scores of Arab as compared to European tourists. The results showed comparable mean satisfaction (Arabs = 6.02 and Europeans = 6.07) and overall satisfaction scores (Arabs = 6.27 and Europeans = 6.39), with none of the differences being significant at $p < 0.10$. This finding is in line with that of a recent study in Hong Kong (Leung et al., 2013) where physical distance was found to have a positive relationship with overall tourist satisfaction.

One interesting finding was that the majority of tourists (80.4%) reported having used metros in other countries. Among this group, 73.2% rated the Dubai metro better than the metro they used elsewhere (Mean = 5.32 on a 7-point scale), proving positive feedback for the Dubai metro management.

### Testing of Study Hypotheses

The conceptual model represented in Figure 1 and its associated measurement models represented by indicators in Table 1 were tested through SEM using LISREL8. It was confirmed that the manifest measures were good indicators of the latent variables, with statistically significant loadings well over 0.70 and much smaller associated corresponding error terms. However, for the variable “quality”, the path loading was not statistically significant ($t = −0.03$). Furthermore, the proposed
modification indices recommended that the third quality item ("I feel safe when using Dubai metro") be loaded with reputation to improve the fit of model. In hindsight, this made theoretical sense, for tourist safety is an important consideration (e.g., Delbosc & Currie, 2012; Hsu & Lee, 2002), and would thus affect reputation of the service. Therefore, the model was reformulated to omit the quality construct while loading the safety item with reputation construct. This reformulated model was analyzed, as expected; the model fit parameters improved considerably with all paths in the measurement and structural models now being statistically significant (Figure 2). The chi-square was not statistically significant ($p = 0.08$), thereby confirming the hypothesized relationships. Other fit indices further confirmed an excellent fit of the model to the data (criteria of Hu & Bentler, 1999): chi-square/df ratio = 1.37; RMSEA = 0.047; SRMR = 0.034; NFI = 0.98; and CFI = 0.99. Consequently, hypothesis 1 was rejected, while hypotheses 2 and 3 could not be rejected.

**DISCUSSIONS AND IMPLICATIONS**

**Theoretical Implications**

The important contribution of the present study is that it has identified reputation ($\gamma = 0.99$, $t = 11.36$) as the sole driver of value for tourists using the Dubai metro. Since value was in turn a driver of satisfaction, reputation was determined to have an indirect effect of 0.82 ($t = 10.25$) on satisfaction. It was encouraging that despite their parsimony, the model still accounted for a substantial variance in the dependent variables: 97% of the variance in value and 67% in satisfaction respectively. The novelty of the study finding is that previous transportation studies have rarely, if ever, determined that reputation of public transport services would influence passenger satisfaction, with reputation being associated with more exclusive transport services such as air travel.

What was unexpected, however, was that service quality was not found to be a determinant of value for tourists using the metro. This contradicted previous studies that identified quality as a key determinant of value (e.g., Lee, 2010; Parahoo, 2013; Zins, 2001) in various industry contexts, and Thompson and Schofield (2007) who highlighted the important role of service quality in tourist satisfaction. However, the finding was in line with that of Chang and Lai (2009) who identified a related concept to reputation (i.e., tourism image) as one of the five factors that were attractive to tourists using the Taipei MRT service. Nonetheless, caution should be exercised before drawing definite conclusions. Service quality perceptions may be considered as supporting reputations judgments, and indeed in the present study, one quality item (safety) loaded equally on reputation, accounting for the high correlations between the constructs discussed earlier. Furthermore, it is reasonable to suggest that metro riders, like other service customers,
expect a minimum threshold of quality in the service delivery process so that quality acts to prevent dissatisfaction rather than to create satisfaction. In the transport industry, a parallel may be drawn here to the study by Pantouvakis and Lymeropoulos (2008) who determined an asymmetrical relationship between satisfaction and loyalty on ferry passengers, where dissatisfaction almost guaranteed switching but satisfaction did not ensure loyalty.

In line with Walker (2010), who proposed that reputation be considered as a key organizational asset, the prominent emergence of reputation in the present study requires careful consideration so as to determine its root cause as well as its implications for the metro industry in Dubai. Pending future detailed research attention, two factors may be cautiously postulated to support the emergence of reputation. Firstly, reputation assumes an important role in cultures with high uncertainty avoidance (Bartikowski et al., 2011), an index where Dubai and the Arab world score high (Hofstede center, 2013). Since over one third of the tourists were from the region, a high effect of reputation on consumer behavior could be expected. Furthermore, Dubai enjoys a strong market positioning as a shopping destination with its iconic malls accommodating a selection of the world’s most exclusive fashion brands. Also, the emirate’s branding as “Definitely Dubai” supporting its positioning as “a unique destination that is both a dynamic business center and a tourist paradise, offering more attractions, shopping, fine dining and quality hotels” (Department of Tourism and Commerce Marketing, 2013) sets up a favorable environment for the prominent role of reputation in influencing consumer behavior. Dubai being considered among the best-known global examples of a city brand (Grovers, 2012) would therefore lead tourists to integrate the emirate’s successful emphasis on place branding with the city’s metro so that the tourists may be inclined to judge the metro using the yardstick of reputation.

Managerial Implications

While the present study showed that tourists were overwhelmingly impressed with Dubai’s metro when compared with MRT services they used in other countries, it is important that metro management focuses on continuous improvement to meet the changing needs of the tourists. Providing an effective means for tourist riders in the metro to provide continual feedback will allow metro management to strive to meet the passenger expectations, and hence enhance their satisfaction. For example, in the present study, certain respondents willingly contributed numerous valuable suggestions: requesting seats on platforms and better directional signs to Dubai Mall, which may accordingly be considered by metro management.

Since the satisfaction of tourists with the metro is solely driven by its reputation, metro operators should focus on the four observable variables that drive the reputation of the metro (see Table 1). For example, it is important to develop a positive corporate image for the metro. Furthermore, since the metro reputation for tourists is driven by its perception as “a smart way to travel”, metro management may focus on positioning their service by emphasizing its stress-free riding experience unhindered by traffic congestion, as well as the associated environmental benefits. Finally, metro management should emphasize personal safety considerations which may easily be linked with the place branding of Dubai as one of the safest cities in the world.

The RTA therefore needs to sustain its public relations (PR) efforts to enhance the reputation of the metro. For example, the excellent current initiative of free public transport day on November 1 when ridership on all modes of public transport is free, and executives in both public and private sectors are encouraged to swap their cars for public transport, should be further publicized because it reinforces both metro image and its corporate identity.

It is important, however, that the tourist experience in using the metro be viewed holistically, for tourists inevitably experience other modes of transport (e.g., buses, taxis) in commuting between metro stations and their hotels or city destinations. In this regard, metro operators should endeavor to make the linkage between the metro and the other modes of transport as smooth and convenient as possible by
providing tourists with information services particularly at metro stations used heavily by tourists. Since the reputation of firms is influenced by inter-organizational interdependence, firms must endeavor to manage this interdependence (Barnett & Hoffman, 2008). Consequently, the RTA may focus on the smooth linkages between the different modes of public transport that it manages (bus, metro, taxis, and water taxis) for a pleasant holistic tourist experience that will in turn enhance the reputation of the metro. Details of how these linkages may be used to reach key touristic destinations in the city may be communicated to tourist segments, which would motivate their enhanced usage of the metro.

Since the use of portable electronic devices by passengers on intercity transportation services has risen markedly (Schwieterman & Fischer, 2011), tourists, particularly their younger segments, would benefit from WiFi systems and cell-phone signal boosters for passenger use on the MRT lines. This would enhance passenger experience in the service and enhance its reputation.

Finally, the reputation of Dubai metro could be further enhanced by management through activities promoting corporate social responsibility (CSR), for there is considerable overlap between CSR and corporate reputation (Hillenbrand & Money, 2007). Such activities may then be communicated in tourist communications.

**Limitations and Future Research**

Although this research was carefully designed, there were inevitably some limitations, a probabilistic methodology was not possible for practical reasons. To determine generalizability in other markets, the study should now be replicated in other regional tourist hubs with MRT services to confirm the study findings. Furthermore, it would be interesting to investigate how reputation as a driver of satisfaction evolves over time by conducting a longitudinal study. Finally, qualitative techniques may be used to identify the expectations of tourists and to identify core concepts within reputation so as to meet the needs of tourists better, as well as to assess the overlap between service quality and reputation in the transport service sector.

**REFERENCES**


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