Marketing of Public Services: The Impact of Service Quality, Reputation and Consumer Engagement on Customer Perceived Value, Satisfaction and Loyalty

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ABSTRACT
Public services are provided by government and have been traditionally supply-oriented. Changing citizen expectations put pressure on government agencies and public sector organizations to be accountable for efficiency and effectiveness. Further, the quest to enhance international competitiveness by ranking high in the echelons of world's best governments, led to the adoption of proven marketing philosophy and methodologies in the domain of public service as well. The present study aims at examining the impact of Service quality, Reputation and Consumer Engagement on Customer Perceived Value, Satisfaction and Loyalty for an important public service viz., Dubai Metro which operated in an intensely competitive market. The study developed and empirically tested a structural model of travel behavior which hypothesized that reputation, quality and customer engagement are major drivers of value and value in turn leads to satisfaction and loyalty. The findings supported the model with reputation having a stronger impact than quality. A positive association was found between value, satisfaction and loyalty. However, consumer engagement was not found to have a significant influence on customer perceived value.

Key words: *marketing of public services, service quality, Reputation and Consumer Engagement, Customer Perceived Value, Satisfaction and Loyalty*

JEL Classification: D4, H0

INTRODUCTION

Citizen expectations from public services have registered a significant shift during the recent decades resulting in growing demands for transparent, accessible, and responsive services from the public sector. Traditionally, Governments have functioned with a supply-orientation, focusing on their own requirements and processes instead of the needs of the people they serve (Dudley et al., 2015). The disenchantment with government performance, characterized by the bureaucratic public administration approach, gave way to the New Public Management paradigm which embodies a result oriented, entrepreneurial and citizen-centric management style (Gaebler and Osborne 1993). Public sector was encouraged to draw from the experience and lessons learnt by the private sector in ensuring effective service design and delivery. Gash et al., (2013) exhort: "government must urgently professionalize its approach to commissioning and overseeing public service markets, embracing what we call a 'market stewardship' approach."

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Moreover, Governments face competition from other countries for attracting foreign direct investment. Countries are vying with each other to enhance their competitive advantage and are rated on a number of indices related to government excellence. These challenges made transformation imperative. Some government agencies have successfully adapted themselves and implemented a customer-oriented approach to service design and delivery. They also regularly evaluate customer satisfaction levels and aim at effecting continuous improvements.

If marketing of services is more complex than that of goods due to their intangibility (e.g., Parasuraman et al., 1988; Zeithaml et al., 1985), the challenge is even greater in the case of public services which are complex value propositions that serve multiple publics (Osborne et al 2013). Data driven insights about citizen satisfaction and its determinants helps public service providers address the key elements for improving service design and delivery.

In this context, the present study aims at examining the impact of Service quality, Reputation and Consumer Engagement on Customer Perceived Value, Satisfaction and Loyalty for an important public service viz., Dubai Metro. The service chosen is highly competitive since Mass Rapid Transport (MRT) faces intense competition from other modes of transport including personal vehicles. The Government is encouraging residents to move from personal transport to the use of public transport as part of its sustainability strategy (UAE State of Green Economy 2014). Therefore, the objective of this study was to develop and empirically test a structural model of travel behavior based on variables such as satisfaction, value, quality, reputation and engagement that have been found to drive loyalty in various industry settings. It would therefore be useful to determine the pertinence of these variables in motivating riders to select MRT as their mode of transport, particularly for local authorities engaged in promoting the use of their MRT services. An understanding of the drivers of satisfaction would also contribute to the government's aim of delivering services that rival the best in the private sector (McKinsey 2016). Further, the study contributes to the neglected public service context in the service management literature (Hodgkinson 2017) and captures insights that help the shift to service-dominant thinking within the public sector.

LITERATURE REVIEW AND DEVELOPMENT OF CONCEPTUAL FRAMEWORK

Public services

Public services are the services provided by the government (or its agencies) to those residing within its jurisdiction. Unlike their private sector counterparts, public service delivery carries the mandate of ensuring universal access often associated with the fundamental rights of citizens and hence the service context is significantly different (Van de Walle 2016). For Example, provision of healthcare and education is the responsibility of the government towards its citizens. Another unique characteristic is ensuring justice involving fair and equitable treatment of all sections of society. The private sector firms can choose which segments they want to target, but the public services often have little choice in targeting segments that are accessible and profitable. Public services are targeted at all segments and have to offer value propositions to various stakeholders and not just the users, making it a complex service (Osborne et al 2013).

MRT services and Dubai metro

Mass Rapid Transit Systems (MRTS) are collective urban or suburban passenger services operating at high levels of performance, particularly with regard to travel times and passenger carrying capacity (CDM, 2010). They are more efficient time-wise for consumers and have numerous environmental benefits as compared to private transportation, leading to many cities adopting strategies to encourage this shift in ridership (Fouracre, 2003). Dubai metro, launched in 2009 to cater to the transport needs of a modern city (PR 2.0, 2011), was chosen as the

empirical context of this study. Dubai metro is a fully automated system with a total length of 74.7 km, and the longest driverless metro network in the world. Furthermore, summer weather conditions in Dubai serve as a conduit to the posh air conditioned malls being a social space where residents and visitors spend considerable time. The linkage of the Dubai metro to the city's major shopping malls therefore helps in reducing traffic congestion since the malls generate 4 000 to 10 000 vehicles per hour (Maitha, 2011), while the connection of the metro network to the international airport provides tourists with increased mobility. The monthly number of metro users has increased from 1.8 million passengers in October 2009 to 5.5 million passengers in October 2011, with the cumulative total number of passengers crossing 275 million in the first half of 2017 accounting for 36.4 percent of all public transport ridership (Dubai Metro, 2017). Financially, the metro project cost the RTA approximately US$ 7.6 billion, but authorities are expecting the metro to generate US$ 4.9 billion in income over the next 10 years (Wikipedia, 2012).

Dubai shares a profile similar to other metropolitan hubs and expanding urban centers in the region, consequently making the findings generalizable to other regional cities that are launching MRT projects, including Abu Dhabi, Riyadh and Doha.

Even though there are considerable advantages to draw consumers to MRT usage, many MRT schemes have experienced severe financing and debt repayment problems due to poor financial returns, resulting in public authorities inevitably being involved in financially supporting the projects (Fouracre, 2003). For this reason, it is crucial for management of MRT services to develop passenger loyalty to motivate maximum ridership so as to maximize revenue from the MRT operations to help recoup the large investments associated with launching and operating MRT projects. Hence, loyalty is chosen as the output variable of the study model and its drivers and their relationships are next discussed through a review of the extant literature.

Dependent variables

Customer loyalty

Customer loyalty, or one's intention or predisposition to purchase from the same firm again is a key construct within the service industry (Edvardsson et al., 2000). The motivation for understanding and improving loyalty emerges from empirically validated studies linking customer loyalty and profitability (Turel and Serenko, 2006; and Oliver, 1997). In practice in the MRT context, this translates into commuters in a city adopting the service on a regular basis ahead of other transportation alternatives. Industry experience shows that has not always been easy to achieve with Seoul MRT initially reporting half of the forecast occupancy (Chang and Lee, 2008), while for Chennai's MRT the corresponding occupancy was only 10 % (Madhavan, 2010). Loyal customers also act as prescribers, spreading positive word-of-mouth (Reichheld and Teal, 1996) which may increase the utilization of the service. Since, the MRT is a perishable service, unoccupied capacity on a train journey cannot be inventoried and sold later, thereby representing lost revenue. Further, while operating a train journey involves high fixed costs increasing the number of passengers transported represents only marginal cost increases. Given the inherent flexibility in transportation capacity of MRT by accommodating standing passengers in a train compartment, it would be desirable from purely profitability considerations that MRT trains operate ideally near maximum capacity or in factoring in passenger comfort, near optimum capacity.

Customer satisfaction

Customer satisfaction has been identified as a key determinant of customer loyalty (e.g. Deng et al., 2009; Liang et al., 2009; Ha and John, 2010), and as a key global construct for predicting consumer behavior (Garbarino and Johnson, 1999). It represents the core construct of

marketing, and has been defined as "a judgment that a product or service feature, provides a pleasurable level of consumption-related fulfillment" (Oliver, 1997). The pertinence of satisfaction as a driver of loyalty is well recognized in the MRT industry illustrated for example by Melbourne MRT where performance figures have been linked to customer satisfaction ratings (Metro, 2012). In Dubai, SERCO, the Dubai Metro management company stated: "The Dubai metro is similar to a railway system we run in the UK that has customer satisfaction levels of at least 90% and close to 100% availability for services such as ticket machines, escalators and information displays" (www.joindubaimetro.com/serco.asp). The preceding discussion leads to the following hypothesis:

H1: Passenger satisfaction with Dubai Metro is positively associated with customer loyalty.

Perceived value

Satisfaction is often conceptualized through its key antecedent perceived value (e.g. Mc Dougall and Levesque, 2000; Butcher et al, 2001; Cronin et al., 2000), and has been defined 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 a cognitive trade-off between quality and sacrifice (Lee, 2010). Value has been proposed to be the core purpose and central process of economic exchange (Vargo and Lusch, 2008), and as a stable construct to predict loyalty (Nguyen, et al., 2018; Trasoras et al., 2009; Pura, 2005; and Hellier et al., 2003). But while traditional models of value creation have focused on the firm's output and price (e.g. Kleine et al., 2009), Vargo and Lusch (2008) have shown that value is fundamentally derived and determined by use rather than in exchange. This leads to the following two hyotheses:

H2: Value perceived by passengers of Dubai metro is positively associated with their satisfaction.

H3: Value perceived by passengers of Dubai metro is positively associated with their loyalty.

Independent variables

Service quality

One's cognitive evaluation of the service experience (Ha and John, 2008) or "judgment about the superiority or excellence of a product" (Parasuraman et al., 1988), is known as service quality. It may be influenced by consumer preferences such as utilitarian benefits (Roy and Ng, 2012). In the airline industry, service quality has long been considered as key to supporting a differentiation strategy (Bamford and Xystouri, 2005; Rhoades and Waguespack, 2008), between what might otherwise be considered as a homogeneous service. Therefore, service quality has become an expectation of customers that businesses strive to meet or exceed, including the RTA who as part of their mission seeks to provide 'quality service' of the highest standard to all Dubai metro passengers (RTA, 2011).

Value represents a cognitive trade-off between perceptions of quality and sacrifice (Lee, 2010), with quality identified as what one gets, whereas sacrifice is seen as what one gives up (Drew and Bolton, 1987). Under constant gives, when higher service quality is perceived by customers, this will lead to an increase in benefits derived from the product or service, indicating that value is also increased. This perceived service quality-perceived value relationship has been empirically demonstrated by many authors (e.g. Butcher, et al, 2001; Parahoo, 2012; Lee, 2010;). Therefore, the following hypothesis emerges:

H4: Service quality perceived by passengers of Dubai metro is positively associated with the value perceived

Reputation

Reputation is important to a service organization as it represents a valuable intangible asset (Vidaver-Cohen, 2007). Three related terms have been used interchangeably: in the reputation literature: organizational identity, organizational image, and corporate reputation (Barnett et al, 2006). But in actuality, the three constructs may be differentiated in terms of whether they refer to internal or external stakeholders, or both. Helgesen and Nesset (2007) state that organizational identity refers solely to internal stakeholders, organizational image to only external stakeholders alone, while corporate reputation to refers to both internal and external stakeholders, particularly employees and customers.

Corporate reputation has therefore been defined as the 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). Furthermore Wang et al. (2004) acknowledged the critical role of reputation, where an organization's reputation is based on its past actions (Nguyen and LeBlanc, 2001). And as expected, developing a good reputation is crucial to a business as it leads to value creation (Roberts and Dowling, 2002).

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 and Bansal, 2007; Parahoo, Harvey, and Radi, 2014). In MRT industry, public authorities setting up MRT schemes have consequently focused on positioning their service to reflect a positive image and reputation illustrated by Singapore's MRT representing a symbol of "Smart Singapore" (Richmond, 2008), by Dubai metro with its aesthetically designed modern stations, and having the longest driverless metro system in the world (Gulf News, 2012), and with Chennai's MRT having "15-odd futuristically-designed stations" each having parking spaces (Madhavan, 2010).

The appeal of metro services, particularly for passengers who have an alternative choice for transportation, therefore depends on its reputation. 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, as this affects their self-image (Kwak, and Kang, 2009). It has been argued that a good reputation is crucial as it leads to value creation (Roberts and Dowling, 2002). Therefore it was important to effectively incorporate the effect of reputation of MRT services in the study model, particularly since consumer reputation studies in the field have been scarce (Graham and Bansal, 2007); mostly concentrating on theoretical reasoning, and lacking empirical research designs (Jarvinen and Suomi, 2011). The above discussion leads to the following Hypothesis:

H5: Reputation of Dubai metro is positively associated with perceived value.

Consumer engagement

Finally, traditional consumer behavior models have considered passengers of public transport passive consumers, while management created 'value-in-exchange' (Lovelock et al., 1987) using methods such as improving efficiency and punctuality of traffic services, and enhancing travel comfort (Knutsson, 2003). However, the emerging service-dominant logic literature has shifted to operant resources, which are considered as core competences or organizational processes, with customers acting as active participants in relational exchanges and as co-producers of the service. Within the Service-Dominant Logic paradigm, management involves social and economic processes largely based on operant resources with which the firm is striving to make better value propositions than its competitors. It is often debated as to whether an enterprise may create value independently, or may only do so collaboratively following acceptance of its value propositions by customers (Vargo and Lusch, 2008). In the present study, the construct of engagement adopted an ongoing emotional, cognitive and behavioral activation state in

individuals (Wefald and Downey 2009), for the engagement of passengers in public-transport has been shown to be a major driving force behind consumer behavior and decision making (Vargo and Lusch, 2008), and to be proactively co-created as value-in-use by engaging customers in the service process (Gebauer et al., 2010). Therefore, it is proposed:

H6: Customer engagement in service co-creation is positively associated with perceived value

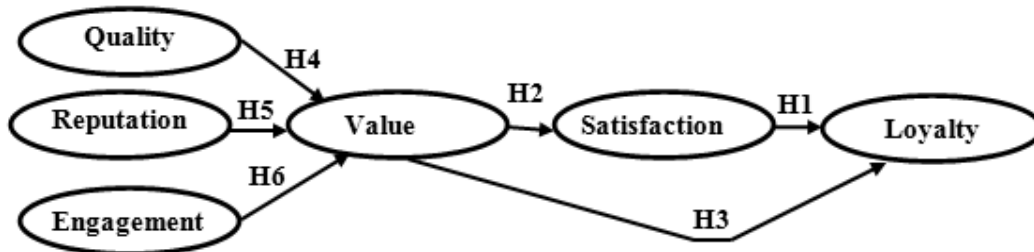These hypotheses are represented by the structural model below (see Figure 1).

Figure 1. Conceptual structural model

Source: Developed based on literature review above

The conceptual model incorporates the hypothesized drivers of loyalty and their interrelationships in an MRT setting. In the next section, an empirical study is designed to determine the influences, if any, of two specific constructs, reputation and engagement, which have rarely been investigated quantitatively in driving passenger loyalty in MRT service, thereby filling a gap in the literature.

METHODOLOGY

To develop measures for the six study constructs, a pool of items was constituted by sourcing from literature validated measures that matched the conceptualization of each of the related constructs in the present study. To supplement and contextualize this pool of items, 20 open-ended interviews were conducted with passengers at 4 different metro stations, followed by in-depth interviews with the managers at the stations. The resulting draft questionnaire (40 items) was discussed with industry experts, and pilot tested with seven passengers which led to some minor refinement of question wording. All items were measured on a seven point semantic differential scale from strongly disagree to strongly agree. An overall measure of each study construct was also included in the questionnaire to assist with item purification.

The sampling frame was designed after consultation with industry experts to constitute a representative sample of passengers using the metro. It involved selection of seven stations (out of 28) on the red line and four stations (out of 18) on the green line. Personal interviews were conducted as it enabled clarification of any queries, and the data collection was completed during a one week period at various times of day and on multiple days to capture different categories of passengers. A total of 520 passengers were interviewed by a trained interviewer with 511 represented usable responses, and the data analysis was derived using SPSS (questionnaire purification and descriptive analysis) and LISREL (modeling) software packages.

Purification of questionnaire

The measures for the study constructs were purified using item-to-total correlations (Churchill, 1979), as well as correlation with an overall measure of the related construct (e.g overall how would rate the service quality of the metro?). At this stage, items having loadings greater than 0.7 on their associated construct were retained (Fornell et al, 1982). This process purified the 40-item pool to 18 items (see Table 1).

A necessary condition for assigning meaning to estimated constructs is that the measurement items postulated as alternate indicators of each construct must be unidimensional (Gerbing and Anderson, 1988). The retained 18 items were therefore subjected to a confirmatory factor analysis (CFA) to establish the unidimensionality of the measurement scales. While the p value associated with the chi-square statistic was significant, it is known to be sensitive to sample size. Therefore, other fit indices were investigated which pointed to an good fit of the model according to prescribed criteria (e.g. Hu and Bentler, 1999): chi-squared to degrees/ degrees of freedom (322.68/120) =2.69; IFI=0.99; GFI=0.93; SRMR=0.033; RMSEA=0.056. The measurement models reflecting the study constructs were confirmed to be one-dimensional and each measurement item having a path loading exceeding 0.70 on its associated latent variable, with the loading being statistically significant at $p<0.05$.

Reliability of the model was determined using Cronbach alpha with each of the 6 scales having alpha values generally > 0.70, indicating excellent reliabilities (see Table 1 below).

In addition to reliability, a measurement scale must demonstrate validity and hence several forms of validity were next measured. Concurrent validity was measured by correlating the composite score of a construct scale with the overall measure of the same construct, and construct validity was captured by the correlation of the composite score of a construct scale with a related measure (their outcome variable as per Figure 1). The high values of the Pearson correlation coefficients and their statistical significance ($p<0.01$) for both concurrent and construct validity confirmed the validities of the six study constructs (see Table 1).

Table 1. Summary characteristics for scales of constructs

Construct	Initial No. of Items	Final No. of items after purification	Cronbach alpha	Concurrent validity: correlation	Construct validity: correlation.
Quality	17	3	0.81	0.535	0.698
Reputation	4	3	0.82	0.584	0.728
Engagement	4	2	0.71	0.434	0.529
Value	7	3	0.80	0.429	0.729
Satisfaction	3	2	0.77	0.606	0.727
Loyalty	5	5	0.91	0.626	0.727

(*- all correlations are significant at 1 percent levels with p<0.001)

Source: Constructed from data analysis statistics in SPSS

One final measure was further undertaken to determine discriminant validity by constructing a 95% confidence interval (± two standard errors) around the correlation estimate (φij) among each of the exogenous latent variables (Anderson and Gerbing, 1988). None of the confidence intervals included unity, with values of 0.77-0.89 for quality-reputation, 0.49-0.65 for quality-engagement and 0.62-0.78 for reputation-engagement, thereby confirming discriminant validity among the constructs. Having ascertained reliable and valid unidimensional measures for the study constructs, data analysis was undertaken followed by modeling to test the study hypotheses.

DATA ANALYSIS AND DISCUSSION

Descriptive analysis and discussion of findings

It was observed that the metro passengers represented a mix of different age groups, however nearly 84% were 40 or younger (see Table 2). In terms of gender, males (57.3%) slightly outnumbered female passengers, while there were approximately equal proportions of singles

(49.7%) and married respondents. The respondents came from a wide range of occupational types, with well over 65% holding administrative positions and above (see Table 3).

Table 2. Age Distribution

Age	Frequency	Percent
16-20	33	6.5
21-30	241	47.2
31-40	154	30.1
41-60	70	13.7
>60	13	2.5
Total	511	100

Source: Primary Data

Table 3. Type of occupation

	Frequency	Percent
Manual	31	6.1
Skilled Labor and Clerical	63	12.3
Students and Others	82	16.0
Administrative/ Managerial	272	53.3
Executive/Director	63	12.3
	511	100

Source: Primary Date

Dubai's cosmopolitan profile was reflected in the nationalities of the respondents as shown in Table 4. Arabs constituted the most common users of the metro (35.4%), followed by Europeans (28.8%), and Asians (25.8%) comprising Indians, Pakistanis and Philipinos. In addition, nearly a third (33%) of the users identified themselves as tourists.

Table 4. Nationality of respondents

	Frequency	Percent
Emirati	27	5.3
Other GCC National	29	5.7
Other Arab	125	24.4
Asian	132	25.8
European	147	28.8
Others	51	10.0
Total	511	100

Source: Primary Date

Among all Dubai MRT riders, 28.1% reported owning a vehicle, moreover 32% of local residents were car owners. Further analysis to make sure non-resident riders were not a

confounding variable was analysed but not found to be significant. But frequency/usage status showed that among riders just over half were heavy users (50.8%, with a metro usage rate of 11-30 days per month), while 19.5 % used the metro more moderately (1-9 days/month), with the rest using the metro even less frequently. Thus management needs to identify a means to motivate casual riders to use the metro more regularly.

On a more positive outcome more than three-quarters (77%) of passengers reported having used metros in other countries, and 91% of these respondents rated Dubai metro better than the metro they used elsewhere. But while the majority had a positive rating for the MRT, passengers had mixed feelings regarding accessibility of feedback mechanisms. There was considerable room to increase forums for interactions with customers.

Finally, the respondents' ratings on the six study variables were generally quite high, (see Table 5) with one exception, engagement. While this is a very positive signal for metro management and reflective of current success in their operations, it does not preclude continuous improvement efforts as customer needs are known to be dynamic.

Table 5. Mean ratings on study constructs

	Quality	Value	Reputation	Engagement	Satisfaction	Loyalty
Mean	6.2050	6.0049	6.2162	5.6833	6.0078	6.2537
Std. Deviation	.98711	1.10001	1.02355	1.31868	1.15212	1.08217

Source: constructed from data analysis in SPSS

Testing of hypotheses by structural equation modeling

The conceptual model depicted in Figure 1 along with the measurement models associated with each of the latent variables were tested using LISREL 8. An inspection of the measurements models confirmed that the measurement variables were good indicators of the constructs, with statistically significant loadings over 0.70 and much smaller corresponding error terms. Further, an evaluation of the structural model confirmed that all model paths were statistically significant ($p<0.05$), except for the path from engagement to value (t = 1.47, and path loading= 0.08), indicating that the postulated relationship between engagement and value based on theoretical considerations was not empirically supported by the data. As a result the model was reformulated by deleting engagement as well as its two associated measures, and a path analysis was again run with the revised model.

The new output files showed that all the paths in the measurement and structural models were now significant at $p<0.05$ (see Figure 2). The chi-square statistic was non-significant ($p<0.000$) and too sensitive to sample size to be used in the present study having a large sample size. The path loadings in the structural model were as postulated by the six study hypotheses (see Figure 3). Therefore other fit indices were examined and they supported a good fit of the model to the data (chi-square/df = 258.45/98=2.64; GFI= 0.94; AGFI=0.92; RMSEA= 0.057; SRMR=0.032; NNFI= 0.99; CFI=0.99).

It may therefore be concluded that the study hypotheses (H1-H5) proposing quality and reputation as drivers of the hierarchical marketing chain represented by variables value-satisfaction-loyalty could be accepted, while the relationship between engagement and value (hypothesis 6) was not supported. In this regard, it was noteworthy that reputation and quality exerted strong indirect effects of 0.67 (t=9.11) and 0.15 (t=2.24) respectively on loyalty, thereby emphasizing the major influence of reputation as the primary driver of loyalty.

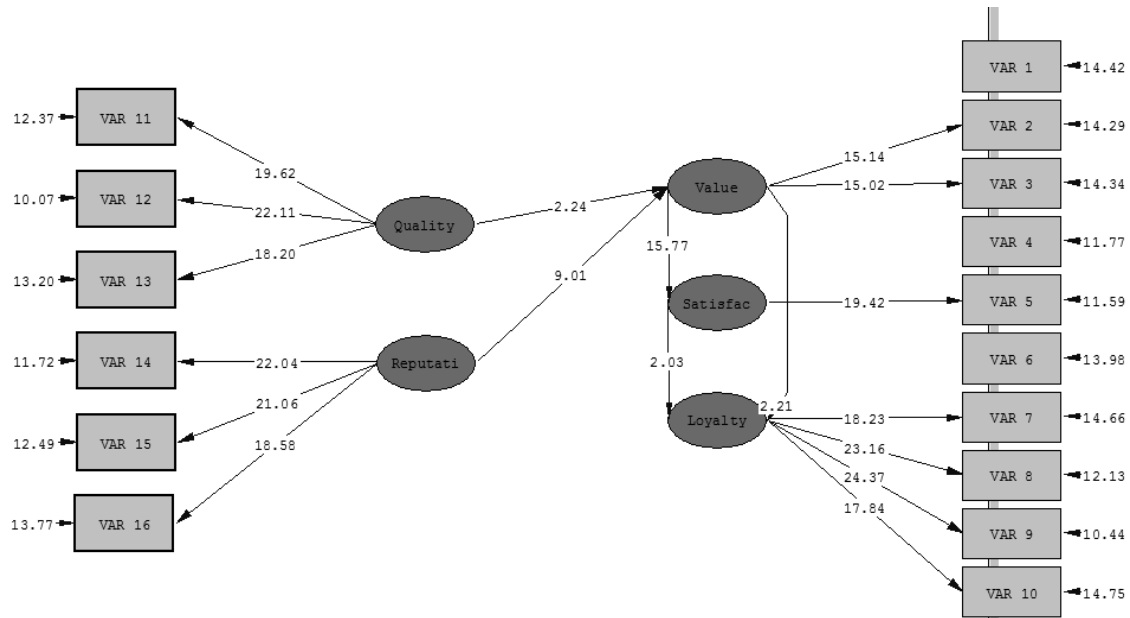**Figure 2:** t-values of paths in structural and measurement models
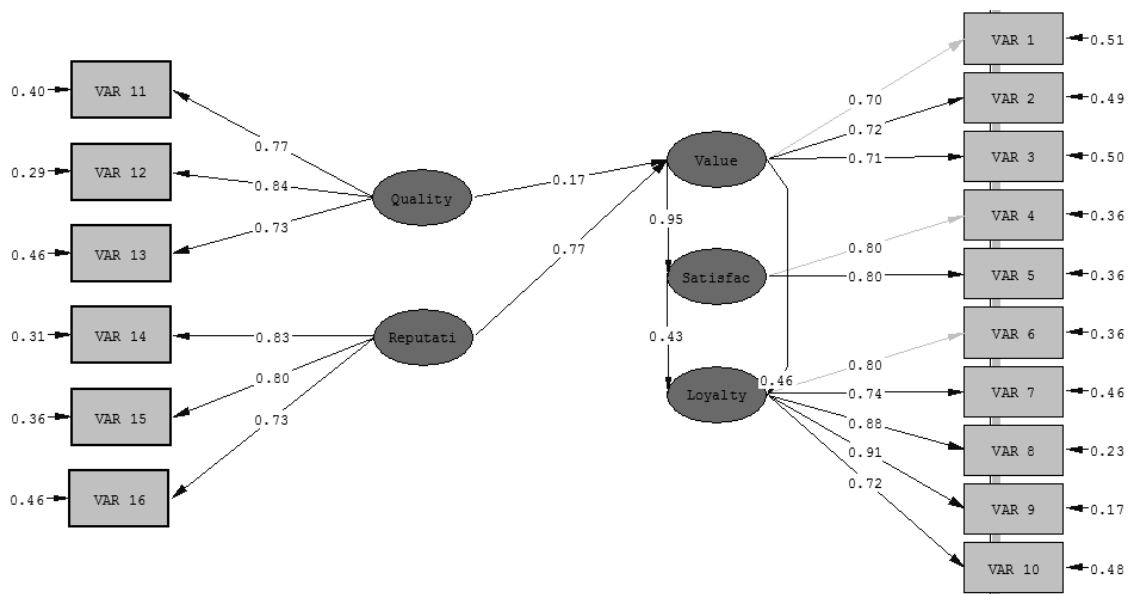*Source: LISREL output*

Figure 3: Paths in the structural and measurement models
Source: LISREL output

DISCUSSION AND IMPLICATIONS

Theoretical

As a result of the study analysis, the passenger behavior model in MRT services – which posited that reputation and quality are the major variables that drive the marketing chain value-satisfaction-loyalty for passengers using Dubai metro - was empirically validated, with the

exception of passenger engagement, which was not found to have a significant influence on value perceived by passengers.

While the positive association between value, satisfaction and loyalty was expected having been determined in studies in other industry contexts (e.g. Cronin et al., 2000; Lee, 2010), the major contribution of this study was in identifying reputation and quality as drivers of loyalty for Dubai metro passengers. The study model explained 85%, 76%, and 64% of the respective variance in the three dependent variables: value, satisfaction and loyalty, which was encouraging particularly in view of the model's parsimony.

The role of service quality in influencing consumer behavior in various services is well documented in literature (e.g. Lee, 2010; Parahoo, Harvey, and Tamim, 2013, Ahrholdt, Gudergan, and Ringle, 2016). Specifically, in the transport industry, various studies have identified service quality as a major determinant of airline positioning (Rhoades and Waguespack, 2008), and in influencing demand for public transport (Paulley et al., 2006). Therefore, the present study confirms the influence of service quality in driving passenger behavior in the context of Dubai metro as well.

What was more unforeseeable however was that reputation exerted a much stronger effect on the value-satisfaction-loyalty chain than quality, demonstrated by an indirect effect of 0.67 (t=9.11) for reputation on loyalty compared to quality on loyalty 0.17 (t=2.24). This overriding influence of reputation in influencing travel behavior in a mass public transport service is not common, with the influence of reputation being previously associated with more exclusive transport services such air travel. In fact, anecdotal evidence shows that in commuting between cities business executives generally opt for air rather than rail travel (a mass public transport) even if the journey time differential between the two travel modes is practically the same. The study findings that reputation is the key variable driving passenger loyalty in what could be considered as a less exclusive transport mode- metro services -is therefore innovative, particularly that mass public transport is a visible service likely to affect its passengers' self-image. The reasons for this shift in consumer attitude and behavior therefore needs to be investigated further.

At this stage, it may be proposed that a shift in traveler expectations towards a "smart way to travel" is illustrated by one indicator of the reputation construct (see Annex). This seems to be supported by several mutually reinforcing underlying factors. First of all, in an era of growing environmental consciousness, using a cleaner and more efficient mode of transport becomes a lifestyle statement likely to boost a traveler's self-image. Further, Dubai metro is based on state-of-the art infrastructure and facilities, with aesthetically designed stations, excellent functional passenger flow, and a good network of connecting allied transport services, which reinforces its image and reputation, making it desirable for various passenger segments. Finally, the image of the metro with its futuristic design and image mirrors that of the Emirate of Dubai projecting global standards of modernity and excellence, thereby motivating its use. A parallel could be drawn here with the MRT service in Singapore, a city state to which Dubai is often compared, with Singapore being described as having a "reputation as a well-oiled city-state, replete with a peerless transport system" (Mahtani and Wong, 2011). As a conclusion, enhancing the reputation of the metro is the factor that will motivate its enhanced patronage.

The lack of empirical support for the influence of engagement on the value-satisfaction-loyalty chain warrants further discussion, for it contrasts the emerging literature on Service-Dominant logic, as well as recent studies (e.g. Gebauer, 2010, Edvardsson et al., 2011). It is recognized that consumers increasingly wish to act as active participants within relational exchanges with the service firms to co- create value for themselves (Vargo and Lusch, 2008). Instead of concluding that engagement of passengers is not a driver of their loyalty, it is proposed that the conceptualization of engagement measures in the study may be a cause for its weak non–significant effect in the study model. In hindsight, this lack of support for engagement as a driver for value may have been linked to the fact that engagement was measured in the present study

on the ability (e.g. "I play an active role in my travel by using self-service equipment at Dubai metro stations") rather than the willingness of customers to co-create the service (see item details at Annex). For 41.9 % of passengers reported they did not have easy access to a feedback system, thus their engagement was not readily facilitated by management, implying they could not effectively participate in value co-creation, reflected by engagement scoring the lowest average rating among study constructs (see table 5). To rectify a similar situation in future studies, it would be appropriate to measure customer engagement by customer willingness rather than their ability to co-create the service, for the ability to be engaged is moderated by the design of the service process by its provider.

The empirically validated travel behavior model in public transport services in Dubai, identified and highlighted the major role of reputation as a driver of passenger loyalty, contributes a new insight to the sparse literature of public transport usage which has so far emphasized mainly service quality and passenger satisfaction to drive usage. The multiethnic profile of residents and economic development stage of Dubai make the study findings generalizable to public services being offered in highly competitive contexts.

Managerial

The major decision problem that operators of an MRT system face is how to increase their ridership to maximize revenue generation in order to recoup their investments in infrastructure and operational costs, as well as to achieve environmental benefits associated with clean, safe and efficient travel. The present study has demonstrated that to achieve enhanced ridership on the metro, management must focus on developing its reputation and enhancing the service quality offered, for these two variables had significant effects on driving the value-satisfaction-loyalty chain with path loadings (gamma) on value of 0.77 (t=9.01) for reputation and 0.17 (t=2.24) for quality.

The validated measurement model for reputation (see wording of items at Annex) also demonstrates that Dubai metro management should focus on image or brand development as well as positioning the metro as a "smart way to travel" by highlighting its lower cost of travel, its associated environmental benefits, and its stress free travel experience (e.g. no traffic jam, comfortable journey). While, for service quality, metro management needs to maintain their emphasis on the quality of infrastructure, pleasant design and excellent passenger amenities at the stations, the quality of service at stations, enhance the passengers' experiences through the ambience created through interior design, signage and a sound system that matches the positioning of the metro as representing global standards of modernity and excellence.

In actual practice, Dubai metro management has been successful in increasing its ridership and has opened up new lines and stations since 2009, by precisely focusing on image development and offering a quality service both through human intervention (ticket counters) as well as automated ticketing machines. This is confirmed by the overwhelming majority of passengers of various nationalities (see Table 4) who have used metro services overseas, and who rate Dubai metro as a better service.

While this is an encouraging and motivating situation, in perspective of continuous improvement, efforts must be sustained to maintain the reputation of the metro. For example, the PR campaign of (free) Public Transport Day on November 1, where national leaders, top executives, and private transport users are encouraged to swap their cars for the metro, is a good approach for building the metro's reputation.

Targeted advertisement campaigns to car owners, emphasizing the environmental benefits of the metro, as well as its stress free riding experience, may encourage even more residents to swap their cars for the metro, for currently only 32% of the local transit riders reported owning a vehicle. In addition, there is an opportunity to engage the senior managers (among the 41.4 % of users in managers/directors category) in a long-term relationship by proposing monthly

passes for first class travel. This service may be leveraged through value added services such as provision of reserved car parking spaces at the park and ride stations, and incorporating free Wi-Fi in the first class compartment. Other services may be offered to these high-end passengers resulting in a win-win partnership, based on qualitative research, for with more executives being encouraged to use the service, the process would enhance the reputation of the metro, and, this could have a multiplier effect on other segments of passengers as well.

In a perspective of continuous improvement, metro management should focus on continual feedback from their customers both through visible suggestions boxes at stations as well as electronic means in an attempt to track their expectations, which may then be considered for implementation which would enhance their satisfaction. For example in the present study, certain passengers willingly contributed numerous valuable suggestions: proposing that passengers should be educated to keep clear of the train entrance and to be prepared to exit before reaching their destination; requesting for seats on platforms; and better directional signs to Dubai Mall. Such comments from passengers, if effectively implemented, could lead to higher value and satisfaction.

LIMITATIONS AND FUTURE RESEARCH

Although this research was carefully designed, there were inevitably some limitations: for safety reasons it was not possible to conduct the survey inside the trains, which may have provided a more relaxed atmosphere for the interviews. In addition, while the findings may be generalizable to other cities in the region that are launching metro services with which they share similarities including: customer demographics, economic development stage, and state of infrastructure, it may not be extended to metropolitan hubs in the West (European and US markets) where the higher gas prices may be a driving factor for use of MRT in the Western cities.

Since very few academic studies have investigated passenger behavior in MRT services, there are various future research directions. Confirmatory studies should be conducted in other metropolitan cities to determine generalizability of the study findings in other markets, and it would be pertinent to use in-depth studies to delve deeper into the reasons why reputation plays such a key role in influencing consumer behavior in Dubai. In addition qualitative techniques may be used to determine how customer engagement may be further enhanced in metro services. Such techniques may also shed light on the unexpected lower effect of quality on value, as compared to reputation. Further research can also aim at understanding customer journey and customer experience as a source of innovation for enhancing customer delivered value in public service management.

CONCLUSION

The present study has validated a model of travel behavior in Dubai MRT industry demonstrating that a good reputation associated with the metro as well as delivering a quality service were the factors driving passenger loyalty, with the effect of reputation on value being over 4 times that of quality on value. The travelers considered a good reputation to be primarily associated with a positive image as well as the metro representing a smart way to travel. Quality was associated with excellent stations, appealing physical infrastructure and a pleasant ambience. Various suggestions have been made to support management to enhance metro ridership by focusing primarily on enhancing its reputation, which will help to increase revenue for the metro operator. Furthermore from a perspective of social responsibility the city benefits due to reduced traffic congestion, decreased road accidents and reduced carbon emissions thereby improving quality of life, and reducing the negative carbon footprint. Thus the study makes a contribution to enhance value not only for the specific user groups but to the larger goal of enhancing the effectiveness of sustainable public services.

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ANNEX: MEASUREMENT ITEMS

Customer Loyalty
1. I intend to continue to use Dubai metro in future.
2. If I have the opportunity, I intend to increase the use of Dubai metro in future.
3. I say positive things about Dubai metro.
4. I recommend Dubai metro to my friends.
5. As far as possible, I consider Dubai metro as my choice for travel.

Customer Satisfaction
1. I am very satisfied with the services provided by Dubai metro.
2. Dubai metro has fulfilled my needs.

Value
1. Dubai metro represents a convenient means of transportation to me.
2. Considering the price I pay and the benefits I get, using Dubai metro represents a good option to travel.
3. Dubai metro is accessible to me.

Service Quality
1. I find that Dubai metro has excellent stations.
2. The physical appearance of Dubai metro and its infrastructure is visually appealing.
3. I like the ambience at Dubai metro stations.

Reputation
1. Dubai metro has a good reputation.
2. The image associated with Dubai metro is positive.
3. Dubai metro represents a smart way to travel.

Engagement
1. I play an active role in my travel by using self-service equipment at Dubai metro stations.
2. I have good interactions with Dubai metro in self-managing my transport service.