

Identifying Constructs of Customer Satisfaction for Customer Experience Management: A Case of Road and Transport Authority Dubai

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Abstract—Customer satisfaction determines future profit and growth prospects for the organization. It is believed that a customer should always be at the center of attention because no business can be profitable without selling its product or service to its satisfied customers. Unfortunately, the word customer satisfaction sometimes is most underrated, in terms of its true potential and corporate organizations often fail to realize significance of customer satisfaction as a quantifiable driver of revenue growth and profitability. This primary research was driven by the fact that customer satisfaction is an important determinant in customer experience management. The data was collected on customers' of Road & Transport Authority (RTA) Dubai using questionnaire survey method. The data was analyzed using SPSS v. 20 to assess which factor, as a construct, contributes highest in terms of standardized beta coefficients towards predicting customer satisfaction in RTA services. The research findings have implications for service providers, transport planners and relevant government authorities and instigate the need to take cognizance of perceptions of the customers' satisfaction and align strategies to improve customer experience management. The paper also proposes three strategic policy level recommendations for formulating a framework of customer experience management using customer satisfaction by the RTA Dubai.

Index terms-Customer Satisfaction, Customer Experience Management, RTA Dubai

I. INTRODUCTION

Harvard Business Review reports that corporate organizations many at times fail to realize significance of customer satisfaction as a quantifiable driver of revenue growth and profitability [1]. It is primarily due to lack of plethora of literature justifying the association of customer satisfaction with revenue generation. The confusion remains, as many researchers are of the view that if customers are provided expensive or costly level services, it will be more difficult to sustain their satisfaction in the long run as costly the customer care are, more it is required to exceed customer expectations [2]. A customer should be at the center of attention because no business can be profitable without selling its product or service to its customers. It means that every activity must be seen in its *impact* on customer satisfaction so as to understand how the customer views the organization's performance.

Some researchers, however, argue that even if a customer has had a bad experience in terms of value of money, the

chances of him/her remaining loyal are relatively higher than leaving the service, altogether [3]. Research also indicates that these common ideas on customer satisfaction may result in making the wrong decisions. It shows that poor customer experience may result in either lower customer business (fewer purchases, less repeat business, smaller basket size) or increased customer attrition. While most unhappy customers may not bother to complain, a majority will simply leave [4]. It is important to highlight that highly developed economies give not only due significance to customer satisfaction but also ensure to collect data on performance of all industries, and companies who are indulged in selling products and services for the prime reason to collect customer's feedback and highlight their concerns at the appropriate forums, e.g.,

1. The UK Customer Satisfaction Index is the national measure of customer satisfaction, based on a six-monthly online survey of consumers demographically representative of entire UK's population [5].
2. The American Customer Satisfaction Index provides unique customer experience benchmarking capabilities that come from the Index's one-of-a-kind, cross-industry structure. For two decades, the ACSI has used its science-based, proprietary methodology to analyze customer satisfaction for 10 economic sectors and more than 40 key industries that together represent a broad swath of national economy [6].
3. Customer Satisfaction Index Australia brings together responses of over 34,000 customers, and demonstrates current satisfaction levels across all public transport. The results of the surveys are published to keep public transport operators and ourselves accountable for the decisions made and to drive continual improvement across the transport network [7].

Based on available literature, a gap was identified in context of the U.A.E who has not introduced the Customer Satisfaction Index as measure of performance of its services to customers. Therefore, to substantiate the argument that customer satisfaction is important for the management of overall customer experience, data has been collected on Road and Transport Authority (RTA) Dubai as part of primary data collection to assess customer satisfaction on RTA's existing services. The analysis of data is proposed to provide following benefits:

- It will provide active up-to-date feedback to stay on top of customer trends. It will also help RTA to gain useful insight into how their customers are currently responding to all aspects of their business/services.
- It will facilitate in benchmarking results as RTA can administer the same survey on a regular basis to customers to gain continued insight. Data collection on customer satisfaction will allow RTA to compare data over time and benchmark survey data across previous years to determine if any changes need to be made.
- It will show to customers that RTA really cares and is sensitive to customer needs and requirements.

The findings of this research are important because RTA, being a premier transport regulation agency, is targeting public transport to serve 20 percent of its customers by 2020 and as per RTA’s estimates; percentage of population using Dubai’s public transport has risen from merely 6 percent in 2006 to 13 percent in 2013 [8] [9].

To achieve new targets by 2020, efforts put in by the RTA are commendable as it is planning to expand Dubai’s transport system. The current 75-kilometre rail network is planned to be increased to 421km, which will include a link to the Etihad Rail network. By 2020, the RTA is planning to increase the existing Red and Green lines on the metro, including a 20.6 km extension of the Green Line and a 3.5km extension to the Red Line. The state transport body is also planning an 8-15km extension of the existing Red Line to the planned Dubai Expo site, which will include between two and four stations [10]. The realization of these heavy investment projects by the RTA depend on its existing customer satisfaction and how well satisfaction is reflected in RTA’s consumer experience management in its future projects.

This study will facilitate RTA Dubai in assessing its current offered services from the perspective of customer satisfaction and provide strategic policy level recommendations for incorporating customer’s emotions in management of overall customer experience.

II. RESEARCH METHODOLOGY

A. Constructs to Measure Customer Satisfaction

Literature review was performed to develop constructs of the customer satisfaction questionnaire. Following three studies were relevant to nature of investigation of this study:

- Ohio RTA in United States annually collects feedback of its customers on RTA services using questionnaire method. The parameters it collects data on safety, cleanliness, on-time performance, availability, ease of use, comfort, information, customer care[11].
- Singapore’s Land Transport Authority evaluated customer satisfaction across eight constructs in 2014 using a questionnaire method and concluded satisfaction levels improved by close to three percentage points to 91.3%, from 88.5% in 2013. The constructs included safety and security, waiting time, reliability, service information, bus interchange/bus stop/MRT station accessibility, comfort, travel time, customer service[12].

- New Zealand Transport Agency conducts public transport customer satisfaction surveys as part of its procurement manual. It evaluates satisfaction of customers on these parameters time, value for money, service quality, seats availability, ease of getting on and off, comfortable temperature, readiness to help and facilitate by onboard staff, security, access to information, and convenient to pay [13].

Based on [11], [12] & [13] relevant constructs were evaluated and a questionnaire was developed to serve the purpose of the research. Further details are listed as under:

- Measuring Constructs - Security factors, Time factors, Services factors, Professionalism
- Respondents - 100 respondents selected through systematic random sampling
- Reliability Analysis
- Descriptive Analysis
- Hypotheses Testing

B. Reliability Analysis

Cronbach's alpha determines the internal consistency or average correlation of items in a survey instrument to gauge its reliability [14]. Cronbach's Alpha of four measuring constructs was 0.691 and an alpha value of 0.7 is acceptable for a measurement scale [15].

C. Descriptive Analysis

Table 1: Descriptive Results

Constructs	Mean	SD	N
Security factors	1.8250	.48915	100
Time factors	2.1967	.53412	100
Services factors	2.2433	.44910	100
Professionalism	2.7833	.34898	100

As shown in Table 1, mean estimation for the four measuring constructs was computed and results showed that respondents rated favorably in terms of having more professionalism (M = 2.78, S.D = .34898) and services factors (M = 2.24, S.D = .44910) in RTA. The time factors (M = 2.19, S.D = .53412) and security factors (M = 1.82, S. = .48915) were not highly favorably rated.

D. Mean Interaction Charts

The interaction chart as shown in Figure 1 indicated that male respondents’ of the questionnaire who *had a license* rated relatively unfavorably their overall satisfaction with RTA Dubai compared to female respondents who also had a license. Likewise, male respondents who did not have a license rated less favorably their overall satisfaction with RTA Dubai, while interestingly, female respondents of the questionnaire who did not have a license rated highly in favor of overall customer satisfaction. This finding suggests that RTA should implement a strategy to capture this niche market of its female customers, who despite of not having a license, like to travel with RTA and feel comfortable as well.

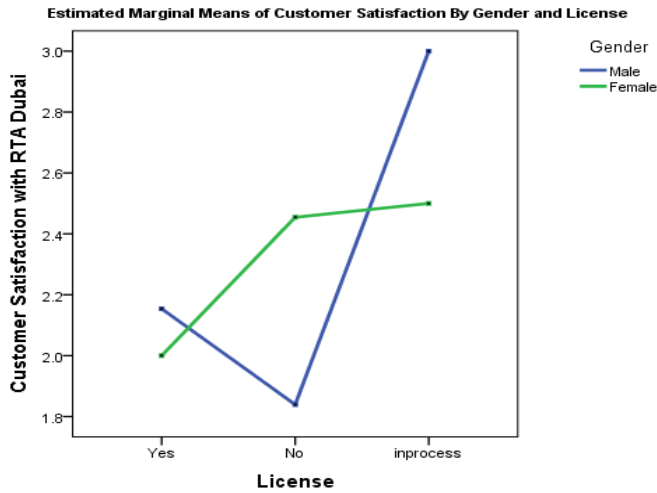


Figure 1: Customer Satisfaction in RTA Services Classified By Gender Type With/Without License

E. 2.3. Hypotheses Testing

Ho = There will be no difference among the four measuring constructs (security factors, time factors, services factors and professionalism) in evaluating customer satisfaction in RTA services.

Ha = There will be difference among the four measuring constructs (security factors, time factors, services factors and professionalism) in evaluating customer satisfaction in RTA services.

III. RESULTS AND DISCUSSION

A. Analysis of Variance

The following results showed that all four measuring constructs differed significantly in evaluating customer satisfaction in RTA’s services.

- Security factors $F(99) = 8.155, p = .000 < 0.01$, significantly differed at two tails in measuring customer satisfaction.
- Time Factors $F(99) = 3.034, p = .021 < 0.05$, significantly differed at one tail in measuring customer satisfaction.
- Services factors $F(99) = 5.062, p = .001 < 0.01$, significantly differed at two tails in measuring customer satisfaction.
- Professionalism $F(99) = 4.004, p = .005 < 0.01$, significantly differed at two tails in measuring customer satisfaction.

B. Multiple Regression Analysis

- Multiple Correlation Coefficient (R) among all four predicting Independent variables and customer satisfaction in RTA is 0.569 indicating a relatively strong relationship of all independent variables in determining customer satisfaction.
- Based on R^2 value = 0.449 it can be said that all four independent variables approximately account for 45% of the variation in predicting customer satisfaction.

- The shrinkage estimated ($0.449 - 0.418 = .031$ or 3.1%) indicated 3.1% less variance in the outcome if outcome was based on population and not on the sample.

C. Model Parameters

The model parameters based on standardized regression beta coefficients were examined and it was found out:

- Services factors ($T = 5.992$) have a significant contribution towards predicting customer satisfaction in the RTA at $p = .004 < p = 0.01$ level, two tailed.
- Time factors ($T = 1.170$) have a significant contribution towards predicting customer satisfaction in the RTA at $p = .044 < p = 0.05$ level, two tailed.
- Security factors ($T = 2.339$) have a significant contribution towards predicting customer satisfaction in the RTA at $p = .018 < p = 0.05$ level, two tailed.
- Professionalism ($T = 3.129$) have a significant contribution towards predicting customer satisfaction in the RTA at $p = .040 < p = 0.05$ level, two tailed.

In context of weighting of four independent variables relative to other independent variables in explaining the variation of customer satisfaction in RTA, services factors made the highest contribution in terms of per unit increase. Therefore, based on results of analysis of variance, multiple regression and standardized coefficients, statistical evidence was found reject null and accept alternative hypothesis.

IV. ANALYSIS OF QUALITATIVE DATA

The questionnaire also had two open-ended questions to requesting to indicate positive and negative aspects of RTA services affecting customer’s satisfaction. The summary points of *positive* and *negative* customer feedback are as under:

A. Positive Customer Feedback

- *High quality infrastructure is a positive thing for RTA*
- *Maintains good relationship with customers*
- *Smooth transport*
- *Ensures safety and works for environment sustainability*
- *Faster connectivity, integration, cooperation and information management to all*
- *RTA has integrated transportation and urban planning*
- *Pioneering service to all levels of people in UAE*
- *Reduction in traffic and fuel usage*
- *Cleanliness in all its services*
- *Legal framework for roads and transport system*
- *Good law enforcement has made public wanting to obey rules and regulation*
- *Quality policy to achieve company’s vision*
- *Safety policy to achieve customer retention*
- *RTA maintains the social accountability policy to increases ethical values in customers*

B. Negative Customer Feedback

- *No relevant dissemination of information procedure on RTA bus stops and routes*
- *No internal checking by staff in Metro*

- *The drivers drive rashly, black points for driving license*
- *RTA trams relatively slower and cost is high*
- *No information dissemination procedure for Marina Loop Tram*
- *Does not maintain bus stops on outer city of Dubai*
- *Penalty is more compared to other countries*
- *No proper and clear signage outside the station and inside the trams*
- *Fare and toll-fare are high*
- *No check and balance for people misusing gold cabins for VIP executives in Metro*
- *Negative perception due to high penalty fines given to pedestrians crossing from undesignated places*
- *RTA Buses are not maintained properly*
- *RTA drivers do not have professional attitude in handling and dealing with public.*
- *No air conditioners in double decker buses of Metro*
- *Escalators, Travellators and Elevators require active maintenance in footbridges to facilitate public*
- *Ticket vending machines do not accept credit cards in Tram stations of RTA*
- *RTA monorail leading to Atlantis accepts cash only, hence trouble for customers*

V. RECOMMENDATIONS

The analysis of data confirmed that customer services in terms of value creation and facilitation happen to be the core construct in determining customer’s satisfaction in RTA. It is therefore important for RTA to incorporate customer’s satisfaction in its customer experience management action plans. In the similar context, three strategic level recommendations are also discussed in this paper.

A. Assess “what customer experience is RTA trying to deliver to its customers?”

It is important for RTA to articulate customer experience if it wants to become and evolve as customer centric organization. Sometimes, organizations attach a lot of importance to customer experience but are unable to articulate in their vision due to lack of coherence in the vision of top management, strategic managers and operational units.

Yorkshire Water’s Customer Experience case study is a good example to quote here [17]. Yorkshire Water is a utility company in the UK and they researched on satisfaction of their customers with an objective to find out what customer experience is intended to be delivered to them in the future. The Yorkshire model has classified customer experience in emotional and physical dimensions. RTA Dubai has taken many steps and measures to enhance physical experience of its customers, however on the emotional needs, which roughly accounts for sometimes over 50% of customer’s overall experience, is proposed to be developed using an effective strategy as well.

B. Assess “what emotions RTA would like to evoke in its customers?”

As said earlier, 50% or sometimes over fifty percent of customer experience is about how a customer feels then simply question is what emotions is RTA considering to evoke in its customers. When experience provided is good, it will evoke positive emotions, and when the experience is not good, it will evoke negative emotions. Therefore, it is important for RTA to consider those emotions that it wishes to evoke in its customers, that requires strategic planning and market intelligence assessment for which extensive research and development is required.

Mr. Colin Shaw, in his book titled “*The DNA of customer experience*” [18] has proposed a hierarchy of emotional value. Just like Maslow’s Hierarch of Motivational Needs, Hierarchy of Emotional Value has following fours layers or stages of emotional cluster made up of twenty emotions in total;

1. Advocacy cluster (Happy, Pleased)
2. Recommendation cluster (Trusting, Focused, Valued, Cared For)
3. Attention cluster (Interesting, Exploratory, Energetic, Indulgent, Stimulated)
4. Destroying cluster (Irritated, Hurried, Neglected, Unhappy, Unsatisfied, Stressed, Disappointed, Frustrated)

The emotions listed in the Hierarchy of Emotional Value can create or destroy values in customer experience that may eventually lead to higher satisfaction among customers and revenue generation.

C. RTA may assess “if its customer experience is deliberate?”

The word deliberate is important as it means “*whatever experience a customer gets, is thought over by the company or organization in advance*”. This form of customer experience is a revolutionary approach towards creating excellent customer experience and is different from the traditional approach known as to be consequential customer experience. Consequential customer experience is unintended consequences of decisions taken previously by the type of people recruited, they type of training provided, the measurements, the systems and all those things conspired to deliver a not so high valued customer experience [18]. Therefore, RTA may consider devising a plan of actions to provide a more deliberate and positive customer experience.

VI. ACKNOWLEDGMENTS

The author of this paper is grateful to Mubeen Nisar, Dinesh Babu, Shiv Patel and Shruti Joshi, MBA students of Amity University Dubai for their efforts in collecting data from customers of RTA Dubai.

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