Customer Expectations and its Relationship towards Public Transport in Klang Valley

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Abstract

This study investigates users' expectations towards the services provided by public transportations and its relationships to customer satisfaction, loyalty and environmental factors. Additionally, it also attempts to determine the most preferred mode of public transport. The data was then analyzed using descriptive statistics and structural equation modeling (SEM). The most preferred mode of public transportation was LRT (35.8%), and monorail (28.1%). More importantly, customers' expectations on PT services were based generally on the account of safety. Findings also indicated positive significant relationships between customer satisfactions, environment and loyalty, as well as a positive significant relationship between environmental concern and loyalty.

Keywords: services; customer; expectations; satisfaction; loyalty.

1.0 Introduction

Public transportation has undoubtedly play a vital role in commuting passengers to work or to places that they desire, and more importantly, to reduce traffic congestion. The public transport company in Malaysia was first introduced by the British, in 1935 by setting up a company called the General Transport Company. However, public transport was not the trend back then, since walking and cycling were mostly favored by the people (Klang Valley Regional Planning and Development Study, 1973).

Eventually, within the period of 1960 to 1990, mini bus services were the most popular mode of public transportation. Apparently, unlike most other Asian cities, the use of PT is low as only 16 percent of the population use public transportation in Kuala Lumpur (*The Star*, October 13, 2006). By the end of 2012, the government is targeting 600,000 or 25 percent of the Klang Valley's population to use public transport under the National Key Results Areas (NKRA) initiatives (*Bernama*, 2009). Ultimately, through the 10th Malaysia Plan (2011-2015), the government aims to improve the use of public transport from 12 percent in 2009 to 30 percent by 2015 (*Bernama*, 2010).

At present, PT in the Klang Valley, in particular, extends from public bus services to railway services, light rail transit (LRT) and monorail. There are several bus operators linking the city centre within the suburbs in the Klang Valley and the main operator is the government-owned company, the Rapid KL. On the other hand, Kuala Lumpur's rail based transit system consists of two Light Rail Transit lines, a monorail line, two commuter rail systems consisting of four lines, and an airport rail link. Consequently, these PT services are held by private companies, as well as the government, resulting in poor integration and coordination (Edvardson, 1998), in ensuring safety, convenience and accessibility of all passengers, specifically, in the Klang Valley areas (Halim and Othman, 2003).

The establishment of this study is as follows: Firstly, the concept of customer expectations is defined, followed by the research hypotheses and conceptual framework. Next, the methodology used is further explained, and lastly, the results of the research, as well as its managerial implications are further discussed.

2.0 Literature Review

Expectations can be defined as "predictions made by customers on what probably will occur during an imminent transaction" (Parasuraman, Zeithaml and Berry, 1988). Tyron (1994) argued expectations as "anticipation of future consequences based on prior experience, current circumstances, or other sources of information."On the other hand, Lavesque and McDougall (1996) defined customer satisfaction as an overall customer attitude towards a service provider which has different levels of specificity in various studies. Satisfaction may be associated with product attribute (Bettman, 1974), a salesperson (Swan and Oliver, 1985), and consumption experience (Bearden and Teel, 1983; Oliver, 1980, 1981). According to Yi (1990), product-level customer satisfaction can be generally defined as the customer's response to the

product or services. Therefore, customer satisfaction has become a key intermediary objective in service operations as it indicates organizational performance (Ranaweera and Prabhu, 2003). Consequently, in order for business to be successful and profitable, it must satisfy customers (Shin and Elliot, 2001).

Customer loyalty, conversely, is a combination of the customer's likelihood to repurchase from the same supplier in the future. Apparently, customer loyalty has been recognized as the dominant factor in determining a business organization's success. In the study by Lam and Burton (2006), they found that loyal customers are more likely to involve in repeat purchases from a supplier or increase their "share" of purchases from a particular supplier. They may also provide recommendations or engage in word of mouth promotion. Eventually, customer loyalty can lower costs and increase profitability, as well as generating better profit (Reichheld and Sasser, 1990).

Hinamen, Nijkamp and Padjen (1992) suggested that transport policy can improve environmental quality/sustainability if it decreases VMT, auto production and ownership, and increases the use of technological measures for cleaning exhaust gases. The finding is supported by a research, A Community Strategy for Sustainable Mobility, Commission of the European Communities (1992) that the overall impact of transport for "sustainable mobility," which should enable transport to fulfil its economic and social role while containing its harmful effects on the environment. The report identifies critical issues relating to pollution and noise standards, truck size and weight, speed limits, energy consumption, land use, congestion, and the risks inherent in transporting dangerous goods, and measures that could take better account of the external costs of transportation. The goals are to encourage and improve the more environmentally friendly modes (especially rail passenger system, intermodal) to make efficient use of existing capacity
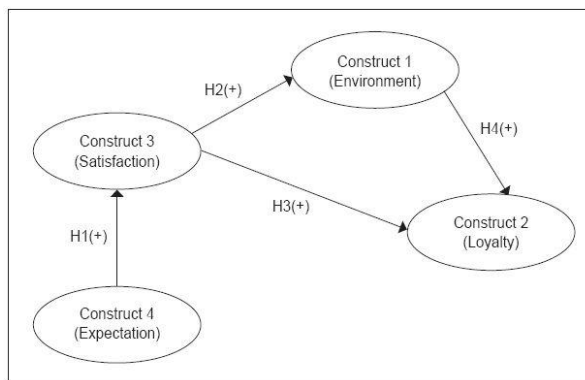

Figure 1: The Conceptual Framework

In view of the above research context, we strongly believe that the proposed

hypothesized model is novel as it attempts to explain the effect of customer expectations and in turn, its subsequent effect on satisfaction, loyalty and environment. The hypothesized model is depicted in Figure 1.

The hypotheses model is as follows:

H1: Expectation has a positive effect on satisfaction
H2: Satisfaction has a positive effect on environment
H3: Satisfaction has a positive effect on loyalty
H4: Environmental factors has a positive effect on loyalty

3.0 Methodology

A structured questionnaire was used based on the attributes derived from previous research. The survey was pre-tested with 63 PT users for content validity before the survey was carried out. Consequently, the final survey was conducted at various public transport of bus and train stations around the areas of Klang Valley, which cover Klang, Shah Alam, Subang Jaya, Petaling Jaya, Kuala Lumpur, Gombak, and Ampang for two weeks during the weekdays. A five-point scale was used to describe the items listed in the dimensions ranging from "very strongly disagree" to "very strongly agree" for all the questions involved in the study. Five hundred questionnaires were distributed; however, 467 were collected, giving a response rate of 93.4%. 57% of the respondents were female and 54.8% were Malays. The age of the overall majority of respondents was between 26-35 years old (55.9%). Most of them were highly educated (92%) and worked in the private sectors (69%), as well as were common users of public transport (82%), although some of them owned private vehicles (40.7%).

4.0 Results and Discussions

Respondents were asked to rank the preferred mode of public transport from 1 (the 1st choice) to 4 (the last choice) and it was found that most of them preferred to ride on the LRT, followed by the monorail, bus and train as illustrated in Figure 2.

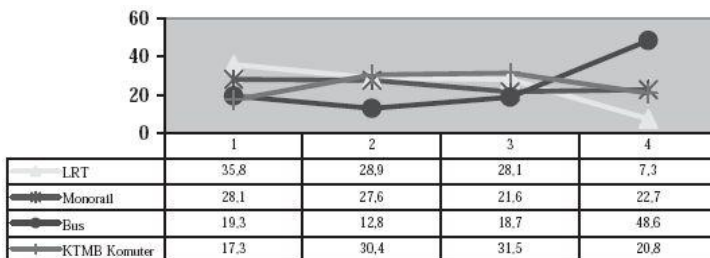|	1	2	3	4
LRT	35,8	28,9	28,1	7,3
Monorail	28,1	27,6	21,6	22,7
Bus	19,3	12,8	18,7	48,6
KTMB Komuter	17,3	30,4	31,5	20,8

Figure 2: Preferred Mode of Public Transport

In addition, the main important elements that influence customer satisfaction with public transportations are safety (34.3%) followed by accessibility, reliability, fares, communication and experience, as illustrated in Table 1.

Table 1: The Important Element of Public Transport Services

Characteristic	Category	Frequency	Percentage
	1. Safety	160	34.3
Important element	2. Accessibility	92	19.7
of public transport	3. Reliability	80	17.3
services	4. Fares	81	17.1
	5. Communication	16	3.4
	6. Trip experience	15	3.2

The sequence of analysis took the following order: firstly, exploratory factor analysis (EFA) was performed on each measurement model to assess unidimensionality in terms of the parameter estimates, the statistical significance of the parameter estimates and overall fit. Upon inspecting the results, at this point the researcher then decided whether to retain or delete any ill-fitting items. Secondly, CFA was performed on those measurement models that comprised of purified measures derived from the first step. Finally, all pertinent results on the measurement models were reported in Table 2.

Table 2: Confirmatory Factor Analysis with Factor Loadings, Variance Extracted and Construct Reliability

Label	Construct	Loadings	Cronbach alpha	Variance Extracted (VE)	Construct Reliability (CR)
S1	Reliability	0.766	0.802	0.51	0.80
S2	Safety	0.725			
S3	Fares	0.595			
S4	Trip experience	0.747			
X1	Reliability	0.920	0.880	0.80	0.89
X2	Safety	0.863			
E3	Reduce pollution	0.644	0.874	0.54	0.82
E4	Save energy consumption (fuel)	0.774			
E5	Reduce congestion	0.761			
E6	Reduce accident	0.750			
L1	I will to continue using public transport.	0.837	0.837	0.72	0.84
L2	I will recommend other people to use public transport	0.860			

Results of the standardized parameter estimates of the proposed model were depicted in Figure 3 respectively. The results showed that RMSEA = 0.074, IFI = 0.965, CFI = 0.964, GFI = 0.954 and AGFI = 0.917, indicating a good fit between the data and the proposed model. The

statistical significance of the structural parameters was examined and it was found that all the hypotheses were supported except for the relationships between customer expectations and satisfaction as shown in Table 3.
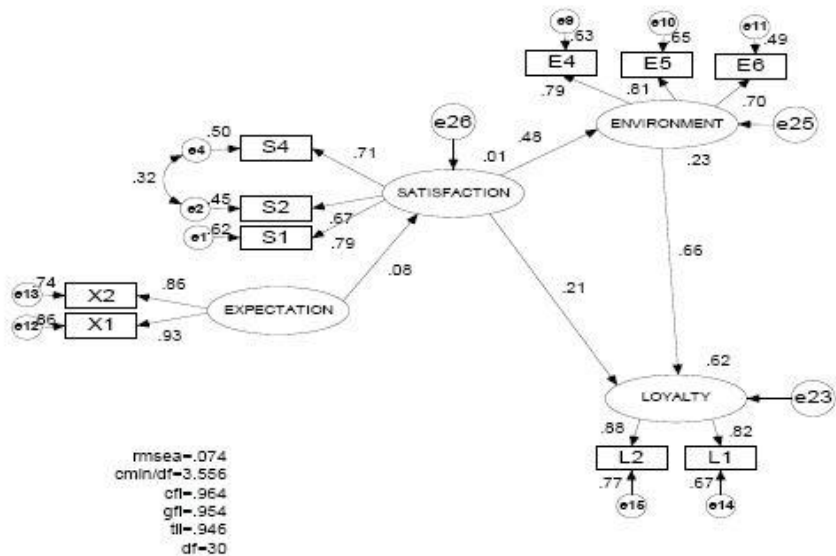

Figure 3: Result of the Path Model Relationship

Table 3: Overall Standardized Parameter Estimates for the Structural Model

Hypo-theses	Path relationships	Significance level	Parameter Estimates	-values (<0.05	Significance (yes/no)
H1	Expectation – satisfaction	0.05	0.084	0.177	No
H2	Satisfaction –environment	0.05	0.484	0.000	Yes
H3	Satisfaction – loyalty	0.05	0.213	0.000	Yes
H4	Environment – loyalty	0.05	0.663	0.000	Yes

5.0 Discussion

This study aimed to answer questions on needs of family members with a relative admitted to the ICU; priorities of the needs and who met the needs of the family members.

5.1 Needs and priorities of family members in ICU

In Malaysia the relative is usually blood related or by marriage and includes spouse, parents, siblin% or child. The demo%raphic profile of participants in the studµ identified that 6S% of the participants were female with 50% being a parent and 30 % spouse. As majority of the participants were parents and spouse, the needs relating to knowing the outcome of the patient ranked most important among the CCFNI questions and it is from the assurance subscale, with 100% participants ranking this as important. Studies (Lee & Lay, 2003; Leske, 2002; Rose, 1995) have shown that family members with a relative in ICU experienced crisis with anxiety and feeling of uncertainty of the survival rate of the relative. This is compounded by the fact that all family members of patients admitted to the ICU in Malaysia would be notified that the patient is considered critical and listed in the verµ ill list. Therefore family members need to know the possible outcome of the patient to be mentally and physically prepared for the worse. Also this allows planning for other alternative and complementary medicine currently practiced in the country.

The next important need was to be called at home about changes in patient's condition, which is from the proximity subscale. Although 73% of the participants agreed this as the second most important need, and the fact that communication technology has been well established in the country with almost every individual owned a cellular phone, the concept of informing relatives at home about changes in the patient's conditions by nurses has not been a practice in this hospital and the public hospitals in the country. Family members would be contacted at home when the patient's condition is critically ill and if there were no family members in the hospital at that time. The process of connecting to the family members by the nurses is stringent as each telephone call need to be connected through the operator and details of the patient be given. Experience has shown that there was no need to inform family members at home of changes in the patient's status, as family members were always available outside the ICU. Parents and spouse almost never leave the ICU perimeter when a family member is admitted to the unit.

The next two needs were from the assurance subscale that is to have questions answered honestly and to feel there is hope with 67%. Although 'honestly' may be interpreted differently by different individual, the fact that majoritµ participants identified this as an important need, it can be %enerallµ accepted that the word has similar meanings to the participants. Family members relied on the nurses and doctors for information on the progress of the patients as patients were not conscious to be told of their conditions. When nurses or doctors answered questions asked with explanations, relatives perceived this as being honest. This related very much to feeling of hope which also has similar number of responses. These two needs involved communication by nurses and doctors to communicate information to the family members. Family members felt they were advocators for the patient and any perceived hope they received from the nurses or doctors would eased any fear and made it easier for them when they visited the patient.

The fifth need of seein% the patient frequentlµ was from the proximitµ subscale. This need

has been identified as one of the important need in studies by (Azoulay, 2001; Davidson, 2009). In another study (Faridah, 2--7), the relatives interviewed identified the need to visit as frequentlµ as possible even for short periods of time to ensure the patient is alright. The hospital's visiting hours for the ICU were similar to the visiting hours of the other units in the hospital that is from 1200hrs to 1400 hours for the afternoon and 1700 hours to 1900 hours for the evening. At any time only two family members were allowed to visit. Family members were not allowed to come in between visiting hours and as parents and spouse, this caused a great deal of anxiety. The ICU stated its own reason for not allowing in between visits as the ICU has 18 beds and 100% occupancy. Unscheduled visits by family members caused disruptions when procedures or doctors rounds were in progress.

The NMI questions identified five most important needs from the proximity, information, assurance and comfort needs. Information   needs of having % specific person called at the hospital when unable to   visit and to know the types of staff members taking % care of the patient ranked first and third with 96% and 9S% respectivelµ. Althou%h the relatives identified havin% a specific person called at the hospital in case theµ were unable to visit as most important, it is unlikely that this need would ever happened as there were always relatives around to receive any information of the patient. It has not been the practice to have a specific person &nurse) to be called when family members could not visit as nurse patient assignment and shift dutµ chan%es, thus when a request for a specific person be called is made, nurses always ask family members to call the ICU and someone will respond to their queries. The high ranking for this need indicated a change in the needs trend of family members, where personalize care is expected in the ICU and communication given importance particularly in answering questions of the patient's condition. It could be possible this was ranked first as relatives wish to indicate that theµ would like this considered when in extreme circumstances they were not able to visit.

Information on patient's condition was mostly given by the attending doctors. Nurses usually reemphasize information given by doctors. Relatives preferred doctors to provide information on the medical aspect as the information given were comprehensive as opposed to information given by nurses which were mostly basic information based on observations and conscious level of the patient (Faridah, 2007). Nurses were not willing to divulge any information pertaining to the general condition of the patient as this violated the hospital policy that only doctors were allowed to give detailed information of the patients. As the question did not specify the relatives' preferred choice of healthcare givers, it can be concluded that doctors would be the most preferred choice of health personnel to provide comprehensive information to the families, but basic information pertaining to the condition of the patient were met by nurses.

Another need identified was to %ive information about the patient at least once a day. Family members' of critical patients would cling to even the slightest chance of hope given by doctors and nurses on the patient's condition, and they welcomed any information given to them. Knowing the busy situation in the ICU as well as the heavy work schedule of doctors and

nurses, family members would be grateful if doctors or nurses update them on the patient's condition at least once a day. Although this NMI ranked fourth, the high percentage 90% indicated its importance by relatives. It is not a practice for nurses to divulge any information of the patient to family members voluntarily (Faridah, 2007) but even if it was just to inform them the patient's general condition means a lot to these relatives. Each communication activity by nurses established rapport. Equally important was the fact that it would be alright for family members to leave the hospital for a short time, to attend to other family or personal matters knowing that should anything happen during the absence, the nurses would inform them. All the family members owned a cell phone in the study.

5.2 Staff who met needs of family members

The family members agreed that nurses were the most important and appropriate staff who met their needs as nurses were there at all times. Relatives believed that nurses were more compassionate to them during crisis as opposed to other health professionals. Consistently nurses were identified as the keμ health personnel who met familμ needs of " have specific person to call at the hospital when unable to visit; have questions answered honestly; to know the types of staff members taking care of the patient; to feel accepted to the hospital staff and to have explanation given that are understandable". This findin%s was consistent with earlier studies (Chui & Chan, 2007; Molter, 1979; Warren, 1993). As nurses can only divulge very basic information, they usually do so without the medical jargons and this has great implications to nursing, as majority family members feel comfortable communicating to nurses. A nurse respected by family members would be able to provide emotional support and assist them to accept inevitable situations should the need arises, this findin% con%ruent with (Chui & Chan, 2007).

6.0 Conclusion

The customer expectations concern on PT services was safety (34.3%) followed by accessibility, reliability, fares, communication and trip experience. In addition, the relationship shows a positive significant relationship between satisfaction and environment, satisfaction and loyalty, as well as environmental factors and loyalty. However, it is found that there is no significant relationship between customer expectations and satisfaction, which supports the findings of Wu and Ding (2007). Indeed, when a customer is satisfied with the product or services, the customer will hold a commitment to re-buy or re-patronize a preferred product or service consistently in the future (Oliver, 1999). The positive significant relationship between satisfaction and environment will relate that the public will assist in the move toward a sustainable transport system by changing mode of transport to save the environment.

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