UTHM
Universiti Tun Hussein Onn Malaysia

FM-SERVQUAL: A NEW APPROACH OF SERVICE QUALITY MEASUREMENT FRAMEWORK IN LOCAL AUTHORITIES

WAN ZAHARI WAN YUSOFF
MAZIAH ISMAIL

16

[illegible] Scan 10/4/08

5.0 FM-SERVQUAL: A NEW APPROACH OF SERVICE QUALITY MEASUREMENT FRAMEWORK IN LOCAL AUTHORITIES

Wan Zahari Wan Yusoff and **Maziah Ismail**
Faculty of Technology Management,
Tun Hussein Onn University, Malaysia.

E-mail: {zahari, maziah}@uthm.edu.my

Abstract

The issue of efficient delivery system in Local Authorities (LAs) becomes the main focus for the Malaysian government. This involves the Facility Management that coordinates the management of human capital, premises, technology and working processes in LAs. The role of LAs in providing various services in the rapid changes of environment, contributes to the complexities of the LAs functions. At the same time, the society demands a set of high quality services, thus making the functions of LAs becomes more challenging. The purpose of this paper is to measure Service Quality in local authorities through development of instrument of FM-SERVQUAL. Basically, Service Quality is an abstract and elusive phenomenon due to its characteristics; intangibility, heterogeneity and inseparability between process and output. These characteristics causes Service Quality standard difficult to measure and evaluate. In evaluating service quality, FM-SERVQUAL instrument has been developed based on Integrated Facility Management Framework which involves the measurement of 40 elements of components of human capital, premises management, technology and ICT and working processes. This study involves Johor Bahru City Council as a case study. Two phases of data collection is carried out. In the first phase, 100 respondents were involved while in the second phase, 191 respondents were involved. From the analysis, it showed that, five (5) elements in management of technology and ICT and six (6) elements of property management were below the Service Quality level. Meanwhile, most of the elements of other services were at minimum quality level. Therefore, the FM-SERVQUAL instrument under the Integrated Facility Management Framework, which was developed through an empirical basis, is able to measure Service Quality in such complexities LAs environment. Besides as an effective diagnostic tool in identifying a lacking quality element of services, FM-SERVQUAL also serves as an essential gauge in policy formulation and future planning of an organization.

Keywords: *facilities management, local authority, service quality.*

INTRODUCTION

Local Authorities (LAs) are the biggest public property and facility holders. The property and facility management is a critical matter in LAs providing Service Quality in delivery system to a community. Currently, LAs are facing difficulties in providing quality services in fast changing environment (Bracketz and Kenley, 2002). To evaluate Service Quality is a difficult matter due to its characteristics i.e. intangible; heterogeneous and inseparable between process and output (Seiler, 2004).

The difficulty in evaluating quality services leads to the use of various methods of improvement of services in delivery system. Donelly et al. (1995) criticized that the common customer survey which is widely used traditionally by most organization is more focused on performance of services i.e. what the customer solely thought about current services provided by organisation. These customer surveys seldom give opportunity to clients in providing their expectation upon the level of Service Quality that they desire in the clear manner. The clients' expectation which is the critical component in Service Quality model, is not taken into account in the above said common customer surveys traditionally. The client expectation is also as an important feedback to service managers for their policy formulation in improving their delivery system at any point of time. Without sufficient information, for both customers' perception and expectation the instrument measurement become less valuable.

This paper aims to measure Service Quality of LAs through development of instrument of FM-SERVQUAL measurement based on Integrated Facility Management framework. FM-SERVQUAL was developed based on original SERVQUAL of Parasuraman, Zeithaml and Berry (1988) i.e. through mechanism of comparison between customers' perception upon services provided by LAs compared to expectation of services desired by customers. Several modifications have been done in developing FM-SERVQUAL new version. It includes the use of Integrated Facilities Management Framework, combination of perception statement and expectation, using of positive wording solely to avoid the confusion besides the development of measurement element according to appropriateness of rule and function services of LAs to the community.

The study is focusing on measurement of the quality on service delivery system in Johor Bahru City Council (JBCC) only. JBCC acts as the service provider organisation whereby the community lives in JBCC area serve as service receiver. As a resident living in JBCC area and receive the services and at the same time paying the tax, thus JBCC community is the most suitable respondent for this study in evaluating the JBCC Service Quality level.

JBCC is one of the biggest cities in Malaysia with population of approximately 500,000. Its strategic location at the southern part of the peninsula becomes the entry point for the business activities from Singapore which is most modern country in this region. This scenario contributed to the fast development for JBCC and the spearedness of business activities leads to rapid development for properties and services sectors in JBCC area. The rapid development of the properties and services sectors contributes to the difficulties to JBCC to cater the needs of communities and the tasks of JBCC as a service provider. Therefore there is a need to find an appropriate measurement tool for measuring service quality in JBCC. The tool is called FM-SERVQUAL, it also acts as diagnostic tools for identifying elements of services which is under Service Quality level.

The study showed that, five (5) elements in technology and ICT and six (6) elements of property were below the Service Quality level. Meanwhile, 29 of the elements of other services were achieved with minimum quality level. FM-SERVQUAL instrument is under the Integrated Facility Management Framework is able to measure Service Quality local authority delivery system. FM-SERVQUAL can also serves as an essential gauge in policy formulation and future planning of an organization.

This paper is organised as follows: the following section describes the problem definition or conceptual background of Service Quality and Facilities Management framework in LAs. Section three, discuss on related works of Service Quality in LAs. While section four introduces research methodology and development process of FM-SERVQUAL in LAs. The performance of FM-SERVQUAL is evaluated next in section five and the paper concludes in section six.

CONCEPTUAL BACKGROUND

Service Quality is an important element in business and services (Seiler, 2004). It's also important in private sector and public sector as well (Seiler, 2004). Measurement or evaluation of Service Quality recognizable significantly contributed to various service sectors such as health-care (Blancard and Galloway, 2004, marketing (Reidenbach and Sandifer-smallwood, 1990), finance (Zeithaml, 2000), property (Nelson and Nelson, 1995), hospitality (Douglas and Connor 2003) and local authorities (Scott and Shieff, 1993). Service organizations attempt to satisfy their clients for the reason that they will continue to use their service organization and use as referral for their friends through disseminated a 'positive words of mouth'(Seiler, 2004). Service Quality is quite important for the success and survivality of organizations (Chen, Gupta and Rom, 1994). It also contributes to return of investment and higher profits (Koska, 1990).
Service Quality is defines as to what extent a service provided achieved or exceed customer expectation (Parasuraman, Zeithaml and Berry, 1985). In other word Service Quality is evaluated by comparison between customer perception and expectation (SQ = P-E).

However, to understand the concept of product quality is easier to compare in order to understand the concept of Service Quality. The difficulties in understanding Service Quality concept arise due to the nature of Service Quality is an abstract and illusion characteristics i.e. intangibility, inseparability, heterogeneity (Parasuraman, Zeithaml and Berry, 1985) and Perishability (Kasper and Lemmink, 1989).

In this context of the study, the tasks and functions of LAs in providing various services in physical and non-physical form becomes the LAs delivery system relatively complex and difficult to measure and evaluate the level of Service Quality.

Efficient and effective delivery system becomes the main focus of the government due to insistence and hopes from society for LAs giving their services up to the quality standard as expected by the tax payers.

Consequently, there is a strong need to create a mechanism for measurement and evaluation that covers a framework which consists of all aspects of services including physical and non-physical. Therefore, the purpose of this paper is to measure service quality in LAs through the development of an instrument known as FM-SERVQUAL

RELATED WORKS

A literature reviews on service quality based on spectrum of issues for the period of 22 years shows that Service Quality is very important in various service sectors and Table 1 below summarize this.

Table 1: The summary of literature reviews upon Service Quality (SQ) in various service sectors.

Field	Researchers	Year	Subject	Findings
Generic	Parasuraman, Zeithaml and Berry	1985 1988 1991 1994	Developed SQ model. To study SQ Gap between service provider and service receiver, to identified SQ dimension and developed SERVQUAL instrument.	To identify 5 SQ gap, 5 generic dimension and measurement instrument of SERVQUAL based on SQ = P – E.
	Cronin and Taylor	1992 1994	SERVPERF Measurement of SQ based on performance of services only.	Claims that SERVPERF more accurate compared to SERVQUAL. The number of question less 50%.
	Franceschini, Cignetti and Caldara	1998	Comparing instrument measurement of SQ; SERVQUAL vs. QUALITOMETRO	Giving guideline in choosing instrument.
	Robinson	1999	Discussed 6 important items: - The purpose of measurement instrument. - SQ definition - SQ measurement model - SQ Dimension - Expectation issue - Instrument format	No consensus among researchers on number of dimensions and measurement format; SQ is derived from customer satisfaction; the different between customer perception and expectation; performance of services; the number of dimension based on the context of services.
	Coye	2004	Managing customer expectation	Most of literature have consensus SQ = P-E, however they do not discussed on customer desire which should be

				focused.
Hospitality	Douglas and Connor	2003	Behaviour on Service Quality – expectation gap.	There is a gap between manager perception and customer expectation.
Telecommunication	Gi-Du Kang and Jeffrey James	2004	SQ dimension issues, 3 dimension; technical, functional and image.	Gronroos Model (European model)more appropriate compared to USA Model – focus only on *functional quality*
Health-care	Vandamme and Leunis	1993	Using SERVQUAL on health services	SERVQUAL instrument can be applied in health services but should be modified.
	Beach and Burns	1995	*Service Quality Improvement Strategy*	QIS Logic –*Quality improvement strategy*
Banking	Le Blanc and Nguyen	1988	Customer perception in banking institution	Customer satisfaction is the most important factor in describing SQ in banking institution
	Blanchard and Galloway	1994	Customer and staff perception upon SQ in retail banking.	3 dimensions • *Process / outcome* • *Subjective / objective* • *Soft / hard*
Tourism	Seiler and Seiler	2001	How good quality tourism affected customer satisfaction in Japan.	LISREL (Linear Structural Relations)
Supplier office material	Kasper and Lemmink	1989	Perception on quality services after sales	Perception on quality services after sales between organisation manager and customer are different.
Hotel	Rust *et al.*	1995	ROQ (Return on Quality) Study on relationship on effort for quality improvement and effect to profit.	Effort on SQ improvement:- • Increase perception on SQ • customer satisfaction • customer retention • cost reduction • *positive word of mouth* • increase on share value • increase profits
Dentist clinics, centre for Business School, tyre store and emergency ward	Carman	1990	To test SERVQUAL and 5 generic SQ dimension and 5 Generic SQ into 4 alternative service sector. SQ = P| E	Agreed with Parasuraman *et. al* basic skeleton SERVQUAL ,but items and dimensions should be modified according to service sector, it also taking into accounts element "Importance" of services.
Higher Learning Institutions	Cuthbert	1996	To test SERVQUAL in Higher learning institutions	Suggest that basic SERVQUAL must be modified for appropriateness of higher learning institutions SQ.
	Shilling and Sirmans	1988	Influence of licences on property agents	Applied minimum standard for property agent practising and improvement on quality will

Universiti Tun Hussein Onn Malaysia

Property				decrease customer complaints
	Johnson, Dotson and Dunlop	1988	Determinant SQ and effectiveness in real estate brokerage industry	Determinant SQ in real estate same as 5 generic dimensions except in terms of priority.
	Sirman and Sirman	1992	To evaluate the involvement of land owner in property management and it influence on SQ.	Appointment of professional members such as *Accredited Resident Manager*, *Certified Apartment Manager* and *Certified Property Manager*, giving positive impact to rental management.
	McDaniel and Louargand	1994	Survey on SQ using SERVQUAL instrument on house buyers and real estate agents	Real estate agents did not apply quality delivery system as expected by the clients.
	Nelson and Nelson	1995	SQ in real estate	RESERV (Real Estate Service Quality) had created for evaluating SQ on real estate agents
	Seiler	2004	To identify the best measurement method for SQ	The best method for SQ measurement is P|E , i.e. perception asked with respect to expectation
	Dabholkar and Overby	2005	To examine relationship between service process and service outcome with SQ and customer satisfaction	Service process is near to SQ, and Service outcome is near to customer satisfaction
Local Authority	Scott dan Shieff	1993	To identify criteria and SQ component in local authority	Has identified 6 dimensions in evaluating SQ in local authority.
	Donelly *et al.*	1995	Replicate SERVQUAL Parasuraman on SQ in local authority	Stressed and supported on Parasuraman *et al.* (1988). Without sufficient information about perception and expectation on services desired- leads to measuring SQ is not accurate

Source: Own analysis (2007)

The literature surveys on service quality has been identified and being widely carry out in various service sectors, including banking, hospitality, health-care, telecommunication, hotel, tourism, higher learning institutions and property sectors. However, there is a lack of studies on Service Quality in LAs. Only two studies have been identified i.e. Scott and Shieff (1993) and (Donelly *et al.* 1995). Both of them are not taking into account the Service Quality in the framework of Integrated Facility Management in LAs. Based on the gap analysis, therefore this study is to measure Service Quality in LAs through the development of FM-SERVQUAL measurement instrument.

METHODOLOGY

The design of the study is through a structured survey. The survey instrument is developed through empirical process and is called FM-SERVQUAL instrument. FM-SERVQUAL is a tool for measuring Service Quality in LAs through the mechanism of comparison between customer perception and expectation on quality services provided by JBCC. The structured survey in such design is suitable for collecting data in big sample size for evaluating quality services in LAs.

Analysis unit of the study is the number of household's lives in MBJB administration area which has a population size of approximately 120,000 families. The rationale for the using of this analysis unit based on one family representative's one tax payer (rates) which is commonly paid by the head of family.

Two phases of data collection has been done in this study; in the first phase it involved 100 respondents and in the second phase it involved 191 respondents. The surveys are distributed to the customers randomly which come and received various services from 10 internal services department of JBCC within the period of 3 months i.e. early November 2006 to the end of January 2007.

The study involves development of FM-SERVQUAL instrument. The process of constructing FM-SERVQUAL comprises of 10 steps, it starts with defining Service Quality through the formula of SQ = P|E. The measurement variation P|E where the perception of Service Quality received is asked with respect to the customer's expectation of what was actually received. Secondly, creating 90 items that will characterize the concept of Service Quality based on Integrated Facility Management Framework. Thirdly, is to collect expectations and perceptions data survey in phase 1. The analysis technique used in this study is Factor Analysis. Fourthly, scale purification process was performed; coefficient alphas were computed. Then item-to-total correlations were computed. Items with low item-to-total correlations were deleted. These deletion will increase the coefficient alpha by dropping out the redundant elements. Any redundant item which measure the same things was dropout. Fifth; identifications of 40 new items after purification implemented. Sixth; data collections for survey phase 2 using FM-SERVQUAL 40 items. Seventh; purification of 40 item scale. Eight; identification of Service Quality dimension. Ninth; evaluation of reliability of FM-SERVQUAL, and lastly evaluation of validity of FM-SERVQUAL. Both aspects of reliability and validity of instrument FM-SERVQUAL after passing 10 steps are at higher level and appropriate to use as measurement instrument for quality services in LAs.

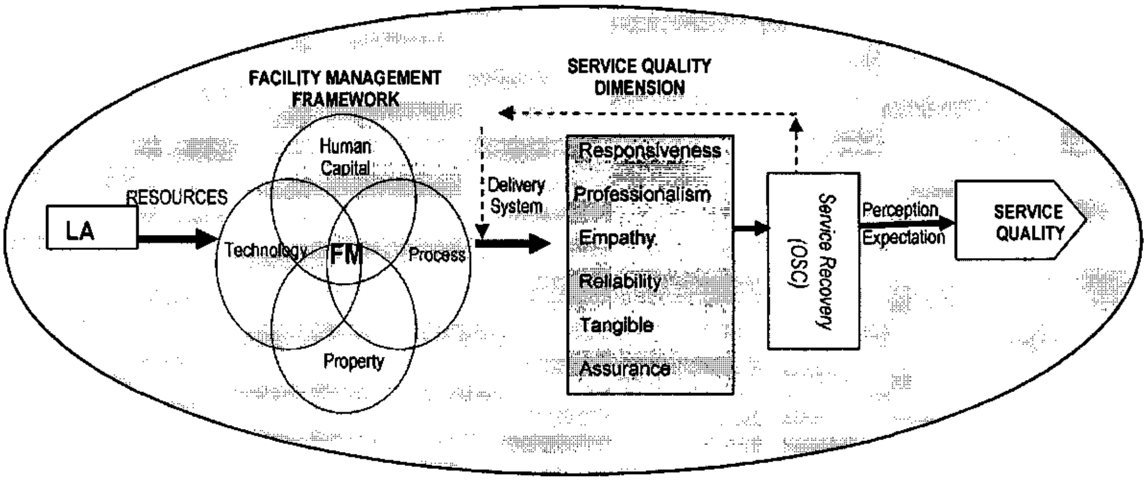
Theoretical Framework

Theoretical framework of this study was illustrated by Figure 1 below. The framework is based on the Facility Management concept as a hybrid management discipline that covers management skills for human capital, working process, property and technology. As mentioned by *International Facility Management Association* (IFMA, 2005); Facility Management is a profession that covers multi discipline to ensure the working environment could function effectively through integration of management on human capital, properties, processes and technologies. The IFMA definition used as a basis in establishing the Facility Management Framework theory which covers scope and parameter in this study.

Facility Management also serves as management discipline that combines technical skilled and management skilled in managing resources. Consequently, facility management should relate to strategic management theory to make an effective organization in achieving the core business. As mentioned by Alexander (1994), Facility Management should be positioned as an activity that across multi-discipline that enable application of generic skills benefits for organization. In measuring Service Quality, foundation theory has been created by Parasuraman, Zeithaml and Berry (1988) who suggested five (5) dimensions of Service Quality i.e. reliability, responsiveness, assurance, empathy and tangible as important factors in Service Quality.

Parasuraman *et al.,* (1988) suggested the five (5) dimensions above are generic dimensions which are appropriate to apply in measuring Service Quality for all services sector.

However, Taylor and Baker (1994) described that the relationship of Service Quality is different from industry to another industry of services as mentioned by Carman (1990). New factors should be added and taken into account based on generic dimensions and appropriateness of services sectors.


FACILITY MANAGEMENT FRAMEWORK
SERVICE QUALITY DIMENSION
RESOURCES
LA
Human Capital
Technology
FM
Process
Property
Delivery System
Responsiveness
Professionalism
Empathy
Reliability
Tangible
Assurance
Service Recovery (OSC)
Perception
Expectation
SERVICE QUALITY

Source: Wan Zahari and Maziah Ismail (2006)

Figure 1: Integrated Facility Management Framework

In Figure 1, LAs have the resources i.e. human capital, properties, technology and working process, with these resources LAs provide the services to the community. The LAs delivery system should have generic dimensions as discussed above for service quality. A feedback system is needed and is called 'Service Recovery System' need to be established to overcome the problems of customer's dissatisfaction. This system can also be used as *One Stop Centre (OSC)* to speed-up customer problems solving.

Customers will evaluate each element of **services by providing** through comparison between perceptions and expectations. Through this comparison, then it can be decided whether those elements of services have achieved the desired quality level or vice versa. Consequently, this research aims to evaluate Service Quality in LAs based on FM-SERVQUAL model which is developed.

FM-SERVQUAL is a new version of SERVQUAL which has been developed based on Facilities Management theoretical framework for evaluating Service Quality in LAs. The original version of SERVQUAL was created by Parasuraman, Zeithaml and Berry (1988) which constructed SERVQUAL for measuring Service Quality in retail banking sector, credit-card, security brokerage and repair and maintenance product. In this study, FM-SERVQUAL is constructed and is different version from SERVQUAL because it is considered the element of Integrated Facility Management Framework by making several modification to SERVQUAL of Parasuraman, Zeithaml and Berry (1988).

Conceptual Framework

The relationship between independent variables and dependent variable used in this study acted as the conceptual framework illustrated is in Figure 2.

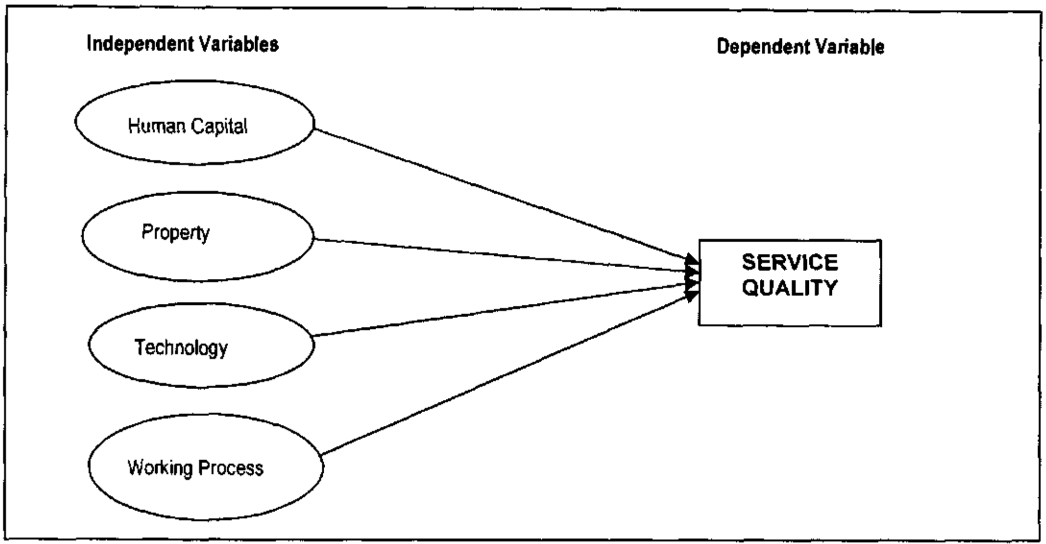


Figure 2: The conceptual framework

RESULT AND DISCUSSION

This study is to measure Service Quality in JBCC through development of FM-SERVQUAL instrument. To ensure this instrument has credibility for evaluating Service Quality in MBJB, then sample adequacy test is needed, validity test and reliability test is implemented.

Sample Adequacy Test

The amount of 350 survey forms were distributed to the respondent through 10 services MBJB counter. Of that amount, 191 feedbacks were received. To test the data adequacy, Kaser- Meyer-Olkin test (KMO) and Bartlett's test were implemented. KMO test shows the value of 0.941, bigger then 0.5. This shows that the sample size that has been used in this study 191 is sufficient (Coakes and Steed, 2001). The following Bartlett's test showed, it is significant when it give value 0.000 which is smaller than 0.05. Therefore, both of the test shows that the sample size used in this study is appropriate for further analysis using Factor Analysis.

Instrument Validity

Face and content validity were used for measuring validity of FM-SERVQUAL instrument. Face validity refers to what extent the measurement can be used to reflect the actual value that need measuring (Chua, 2006a). While content validity refers to what extent the measurement contains the meaning in the items which construct upon the meaning that we want to study (Babbie, 2004).

In this study, face and content validity have been certified by three (3) authorised and experienced people in LAs and three (3) experienced researchers which able to evaluate the validity of the research instrument. Discussion has been held with the above expert group members individually. They are given draft of instrument for their comments, critiques and reliable opinions. Those comments then, were taken into account in conducting the improvement process of the instrument before pilot study being implemented. The instrument is considered having face and content validity after going through the above said process and getting approval from study committee before actual survey is implemented.

Reliability Analysis

Reliability in this research refers to its ability to cope and manage the same value when measurement is replicated in another situation. According to Bruner and Hensel, (1994) 'Alfa-Cronbach' is a standard method for measuring reliability of the study.

In this study, the test of internal consistency is to carry out for determining the level of reliability of the instrument used. Firstly, internal consistency is carried out for overall items of instruments, then the test is carry out according to components as shown in Table 2 and 3.

Overall Test

The test of consistency for overall items gives the high value of Alpha Cronbach i.e. 0.959 as shown in Table 2. As mentioned by Chua (2006b) when Coefficient Alpha Cronbach produces the value 0.6 to 0.95 it shows that the level of instrument is good and suitable to use. While Alpha Cronbach too low at the value below than 0.6, it shows that the instrument is having low reliability and the instrument should be improved. When Alpha Coefficient is too high i.e. 0.96 and above, it shows that most of items are similar or redundant among themselves and the redundant items in the instrument is not required. Consequently, this study shows the high level of instrument reliability and it is suitable to apply in this study.

Table 2: Reliability statistics for overall item (N = 191)

Cronbach's Alpha	***Cronbach's Alpha Based on Standardized Items***	***N (Sampel)***
.959	.971	191

According to Components

The internal consistency tests on human capital, technology and ICT, premises and working process, gave Coefficient Alpha value of 0.938, 0.938, 0.904 and 0.804 respectively as such shown in Table 3.
Through internal consistency test for overall items and through component of items the coefficient Alpha is between 0.804 to 0.959. This of Coefficient Alpha shows the instrument have a high reliability level and suitable for use in this study.

Table 3: Reliability Statistics According to Components

Components	**α Value**
Human Capital	0.938
Technology and ICT	0.938
Property	0.909
Working process	0.804

The Measurement of MBJB Service Quality Based On FM-SERVQUAL Instrument

As discussed previously, Service Quality is defined through comparison between customers' perception and expectation on services provided (SQ= P|E). Quality index which is formed based on scale 1 to 5, i.e. based on FM-SERVQUAL
Instrument has the interpretation as follows:

- Scale Index 2.99 and below = The service is below than quality level.
  (Perception is lower than expectation)
- Scale Index 3.00 to 3.9 = The service achieved the minimum of quality level
  (Expectation is equivalent to perception)
- Scale Index 4.00 to 5.0 = The service is achieved good quality level
  (Perception is higher than expectation)

Measurement Services for Overall Items

Measurements on elements of services are measured through determination by 191 respondents which are from the community that received various services provided by JBCC that conducted through survey form of FM-SERVQUAL. Quality index on each elements of services are determined through statistics test i.e. min 191 sample that represented overall JBCC community.

Table 4 demonstrates results of measurement on JBCC Service Quality. The indicator shows that, the elements of below 3.0 means that the quality is below than expected quality level. While elements of 3.0 and above means that it has achieved the desired quality level by customers.

Table 4: Quality Index scale and Interpretation on JBCC delivery systems of services

FM COMPONENT		**Index**	**Interpretation**
HUMAN CAPITAL MANAGEMENT			
1	JBCC staff is polite when dealings with customers	3.6283	☺
2	JBCC staff is well dressed and appear neat	3.6283	☺
3	I'm comfortable when communicate with MBJB staff	3.5812	☺
4	JBCC staff is well understood the working procedure while dealings	3.5105	☺
5	I'm easy to meet JBCC staff	3.4869	☺
6	JBCC staff is professional in running their job	3.4628	☺
7	JBCC staff take response for any customer problems effectively and efficiently	3.4450	☺
8	The coordination among staff is good	3.4339	☺
9	JBCC officers always interact with the public	3.4309	☺
10	The coordination of JBCC with external department is good	3.4301	☺
TECHNOLOGY AND ICT			
11	JBCC have a good and attractive website	3.1989	☺
12	JBCC ICT systems secured my confidential documents when dealings with	3.1868	☺
13	JBCC owns latest technology for providing services to the customers	3.1852	☺
14	JBCC Physical facilities are looking attractive	3.1270	☺
15	JBCC physical facilities are manage in good manner	3.1038	☺
16	JBCC applied latest IT system that can speed-up working process	2.9476	☹
17	JBCC owns IT system that enable me to deal in flexible time	2.9319	☹
18	JBCC manage solid waste in good manner	2.9176	☹
19	JBCC manage toxic waste in good manner, assured and secured	2.9167	☹
20	JBCC own an up-to-date web-site	2.8901	☹
PROPERTY MANAGEMENT			
21	JBCC office are located in easily accessible location by the public	3.2618	☺
22	The landscape in JBCC area are attractive	3.2053	☺
23	Facilities provided by JBCC are customers friendly.	3.1323	☺
24	The counter lay-out is attractive	3.0995	☺
25	Public Premises are in good maintenance	2.9787	☹
26	Office space lay-out is attractive	2.9267	☹
27	Public toilets in MBJB area are clean	2.9105	☹
28	Business area own by MBJB is manage properly	2.8936	☹

29	Drainage system is in good maintenance	2.6878	☹
30	Parking lots provided are sufficient	2.2381	☹
WORKING PROCESS			
31	As a customer I felt secured in dealing with MBJB	3.5969	☺
32	JBCC display client charter	3.4811	☺
33	JBCC staff will explained the application procedure in good manner when requested	3.4188	☺
34	JBCC keep customer's record in good way	3.4053	☺
35	JBCC planned the development according to community needs	3.2162	☺
36	JBCC consult residents in development planning	3.2033	☺
37	JBCC implement the services as promise in Client Charter	3.1946	☺
38	JBCC acknowledge application status and stated the problems if related	3.1737	☺
39	JBCC enforce laws and procedure effectively	3.1693	☺
40	JBCC behave as facilitator to speed-up development process	3.1158	☺

Measuring Services According to Components

The performance of services by components resources are shown in Figure 3 to Figure 6. The Q line in the figure is representatives as a boundary line that separated the items which is identified whether it performance is below or above quality level.

Human Capital

Figure 3 shows, the overall items in the human capital components achieved the Service Quality level when all the items meet 3.0 quality index scales.

UTHM Universiti Tun Hussein Onn Malaysia

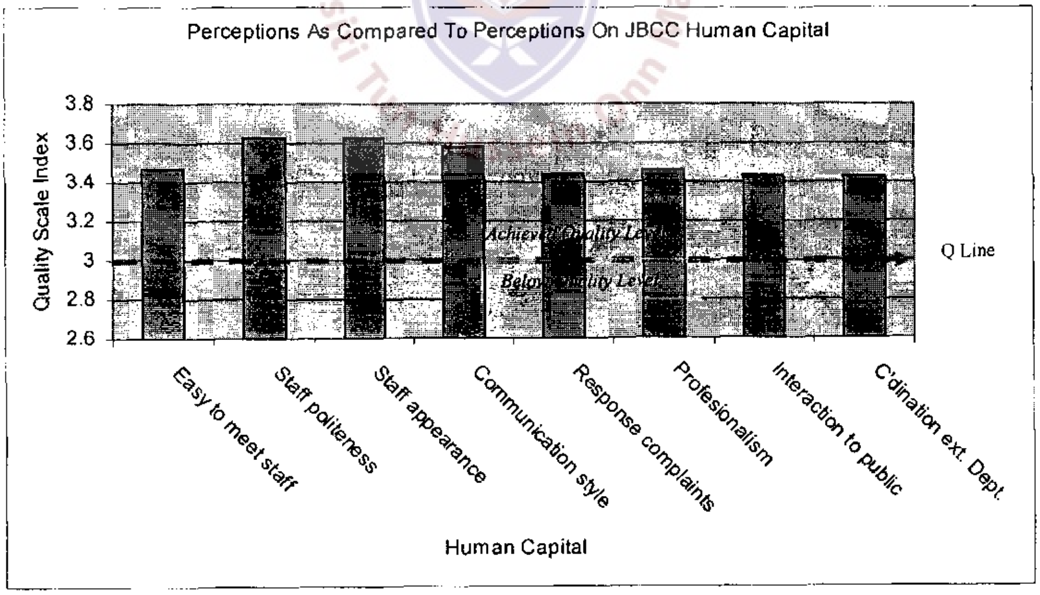


Figure 3: Quality Index for Human Capital Component

Technology and ICT

Measurement on technology and ICT component found that there are five (5) items are below than quality level. Those items are; latest IT system, manage solid waste management, manage waste toxic, latest web-site and IT system flexible (Figure 4). While the rest of items i.e. attractive web-site, ICT assure secret information, own latest technology, physical facility and facility maintenance had achieved service quality level.

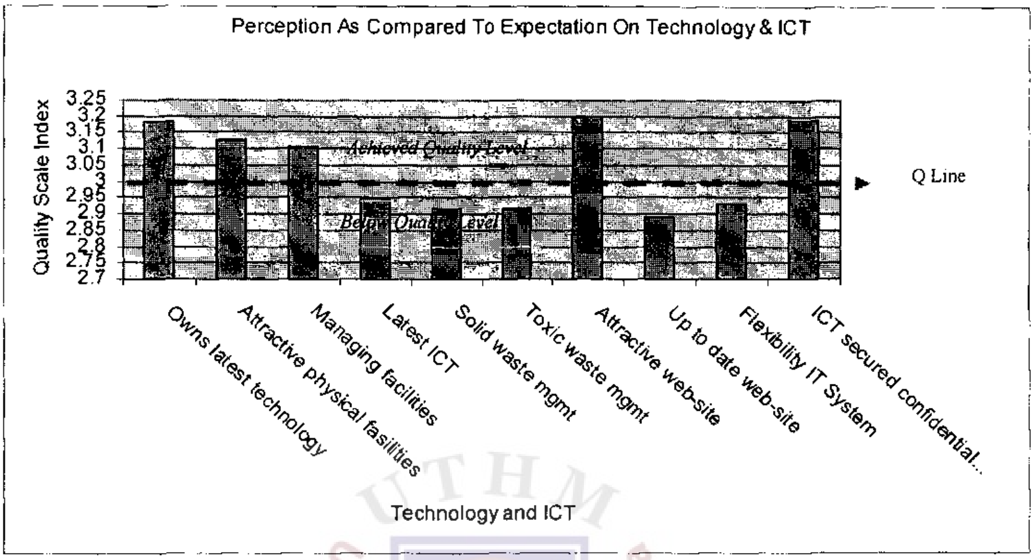


Figure 4: Quality Index on Technology and ICT Component

Property

Figure 6.6 shows the items of landscape, facilities are customer friendliness, and office location in premises management are evaluated as achieved quality level.
While the rest six (6) items are below service quality level.

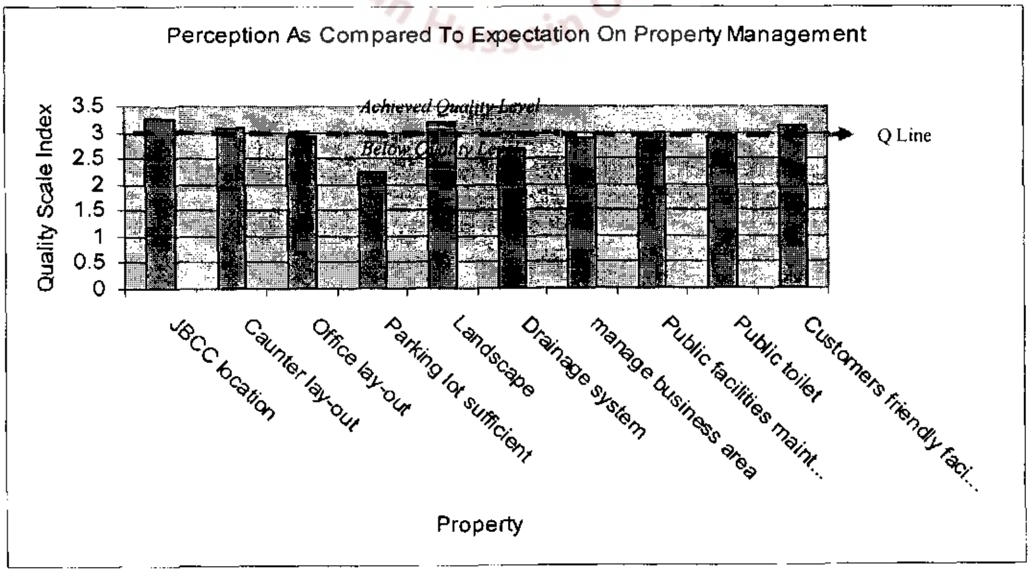


Figure 5: Index Quality on Property Management

Working Process Component

In working process component, all items measured had achieved Service Quality level as required when all items are on 3.0 indexes and above.

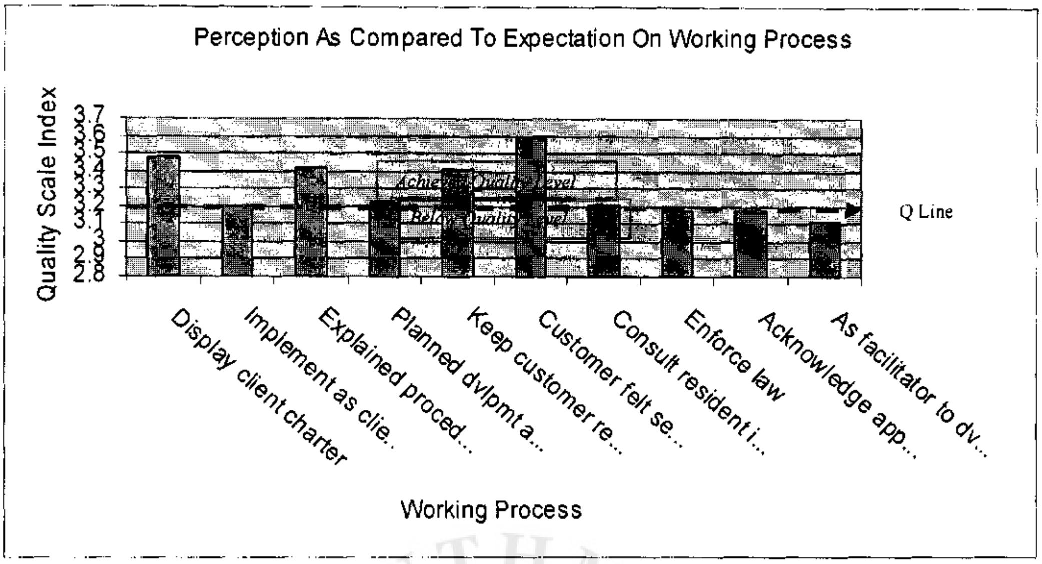


Figure 6: Quality Index on working process component

Elements of Services That Are Below Service Quality Level

There are five (5) elements in Technology and ICT Management component and six (6) elements in Premises Management component that are identified to be below Service Quality level as shown in Table 4.

Elements in Good Service Quality Level

Overall, there is no element of services which achieved index scale higher than 4.0 when perceptions are above customer's expectation. Most of the elements are slightly higher than 3.0 and this give the interpretation that most of the elements of services provided by MBJB are at satisfactory level when perception is equal to expectation. Even though there is no element achieved index scale at 4.0, however four (4) elements in human capital components and one(1) element in working process making the sum of five(5) elements in MBJB services which are at good Service Quality level when it is evaluated at index of more than 3.5 scale.

CONCLUSION

The study has evaluated Service Quality in LAs through development of FM-SERVQUAL as a measurement tool in measuring Service Quality level in LAs. FM-SERVQUAL is a new version of SERVQUAL which constructed based on Integrated Facility Management Framework which covers the management of human capital, premises, technology and working process. In measuring service quality, FM-SERVQUAL is constructed based on facilities management framework which involves 40 elements in human capital component, property, technology and ICT and working process. This study involves MBJB as a case study. The collection of data is in 2 phases; in the first phase, it involves 100 respondents and in second phase it involves 191 respondents. The findings show that there are six (6) elements in premises management and five (5) elements in technology and ICT management are identified below Service Quality level. Therefore FM-SERVQUAL instrument is contributing to

UTHM Universiti Tun Hussein Onn Malaysia

improvement of quality delivery system in LAs. The instrument is an effective diagnostic tool in identifying the element of lacking in quality services whether it is in physical or non-physical form. It also becomes an initial point to explore the underlying problems in more details. Customers' expectation component which is considered in development of FM-SERVQUAL is very important for organization for the formation of mission and vision of organization. Future research can be done through enhancement of Service Quality measurement study to other LAs in Malaysia.

References:

Alexander, K. (1994). "A Strategy for Facilities Management" *Facilities*, **Vol. 12** (No. 11). pp. 6-11

Babbie, E. (2004). "The Practice of Social Research". 10th ed. Belmont: Wadsworth Publishing Company. pp. 144-145.

Beach, L. and Burns, L. (1995). "The Service Quality Improvement Strategy". *International Journal of Service Industry Management*, **Vol 6.** (No.5), pp.5-15.

Blanchard, R. and Galloway, R. (1994). "Quality in Retail Banking". *International Journal of Service Industry Management.* **Vol. 5.** (No. 4). pp. 5-23.

Bracketz, N. and Kenley, R. (2002). "A Service Delivery Approach to Measuring Facility Performance in Local Government." *Facilities,* **Vol. 20.** (No. 3 / 4), pp.127-135.

Bruner, G. and P. Hensel (1994). "Marketing Scales Handbook: A Compilation of Multi-item Measures". Chicago Illinois: American Marketing Association

Carman, J. (1990). "Consumer Perceptions of Service Quality: An Assessment of the SERVQUAL Dimensions." *Journal of Retailing.* **Vol. 66**.(No.1). pp. 33-55.

Chen,. I. Gupta and Rom, W. (1994). "A Study of Price and Quality in Service Operations", *International Journal of Service Industry Management*, **Vol 5**.(No 2). pp 23-33.

Chua, Y. P. (2006a). " Kaedah Penyelidikan - Kaedah dan Statistik Penyelidikan- Buku 1". Kuala Lumpur: McGraw Hill Education. pp. 1-290.

Chua, Y. P. (2006b). "Asas statistik Penyelidikan- Kaedah dan Statistik Penyelidikan - Buku 2". Kuala Lumpur: Mc Graw Hill Education. pp. 1-201.

Coakes, S. and Steed, L. (2001). "SPSS: Analysis Without Anguish", Version 10.0 for Windows. Australia: John Wiley and Sons. pp. 155-166.

Coye, R. W. (2004)."Managing Customer Expectations in The Service Encounter". *International Journal Service Industry Management.* **Vol. 15.**(No.1).pp.54-71

Cronin, J. and Taylor. S. (1992). "Measuring Service Quality." A Reexamination and Extension". *Journal of Marketing.* **Vol. 6.**(July). pp. 55-68.

Cronin, J. and Taylor. S. (1994). "SERVPERF Versus SERVQUAL: Reconciling Performance-based and Perceptions-Minus-Expectations Measurement of Service Quality". *Journal of Marketing.* **Vol. 58**. (January). pp. 125-131.

Cuthbert, P. F. (1996) "Managing Service Quality in Higher Education: Is SERVQUAL The Answer? Part 2". *Managing Service Quality.* **Vol. 6**.(No.3) pp. 31-35

Dabholkar, P. A. and Overby, J. W. (2005). "Linking Process and Outcome to Service Quality and Customer Satisfaction Evaluations –An Investigation of Real Estate Agent

UTHM Universiti Tun Hussein Onn Malaysia

Service." *International Journal of Service Industry Management*. **Vol. 16.** (No.1). 2005. pp 10-27.

Donelly *et al.* (1995) "Measuring Service Quality in Local Government : The SERVQUAL Approach." *International Journal of Public Sector Management*. **Vol. 8.** (No. 7).pp. 15-20.

Douglas, L. and Connor, R. (2003). "Attitudes To Service Quality – The Expectation Gap". *Nutrition and Food Science*. **Vol. 33.**(No. 4), pp. 165-172.

Francheschini, Cignetti dan Caldara (1998). "Company Tools For Service Quality Evaluation". *International Journal of Quality Service*, **Vol. 3.**(No. 4), 1998 pp. 356-367.

Gi- Du Kang dan Jeffrey, J. (2004). "Service Quality Dimensions: An Examination of Groonroos's Service Quality Model". *Managing Service Quality*. **Vol. 14.**(No. 4). pp. 266-277.

Johnson, L and Dotson, J. M. (1988). " Service Quality Determinants and Effectiveness in the Real Estate Brokerage Industry". *The Journal of Real Estate Research*. **Vol. 3.**(No. 2) pp. 21-36.

Kasper, H. and Lemmink, J. (1989). "After Sales Service Quality: Views Between Industrial Customers and Service Managers." *Industrial Marketing Management*. **Vol. 18**. pp. 199 – 208.

Koska, M. (1990). "High Quality Care and Hospital Profits: Is There a Link?, *Hospital*, **Vol. 64**(March 5), pp. 62-63.

Le Blanc, G. and Nguyen. N. (1988). "Customers' Perceptions of Service Quality in Financial Institutions." *International journal of Bank Marketing*. **Vol.6**.(No.4). pp. 7-18.

McDaniel, J. and Louargand. M. (1994). " Real Estate Brokerage Service Quality: An Examination". *Journal of Real Estate Research*. **Vol. 9.**(No. 3). pp. 339-351

Nelson, S. and Nelson.T. (1995). "RESERV: An Instrument for Measuring Real Estate Brokerage Service Quality." *Journal of Real Estate Research*. **Vol.10**(No.1). pp. 99-113.

Parasuraman, A. V. Zeithaml and L. Berry (1985). "A Conceptual Model of Service Quality and its implications for Future Research." *Journal of Marketing*. **Vol. 49.**(Fall), pp. 41-50.

Parasuraman, A. V. Zeithaml and L. Berry. (1988). "SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality." *Journal of Retailing*. **Vol. 64**.(No.1), pp. 12-40.

Parasuraman, A., V. Zeithaml, and L. Berry. (1991). "Refinement And Reassessment Of The SERVQUAL Scale." *Journal Of Retailing*, **Vol. 67.**(No. 4), pp. 420-450.

Reidenbach, R. and Sandifer-Smallwood, B. (1990) "Exploring Perceptions of Hospital Operations by a Modified SERVQUAL Approach', *Journal of Health Care Marketing*, **Vol. 10** (No. 4) pp. 47-55.

Robinson, S. (1999). "Measuring Service Quality: Current Thinking and Future Requirements". Marketing Intelligence and Planning. 17/1 . pp. 21-32.

Rust, R. A. Zahorik, dan T. Keiningham. (1995), "Return on Quality (ROQ): Making Service Quality Financially Accountable." *Journal of Marketing*. **Vol. 59**. (April) pp. 58-70.

Scott,. D. and Shieff,. D. (1993). "Service Quality Components and Group Criteria in Local Government." *International Journal of Service Industry Management*. **Vol 4**. (No.4). pp. 42-53.

Seiler, V. L. (2004). "Examining Service Quality For Homebuyers in The Residential Real Estate Brokerage Industry". University of Western Sydney: Ph.D Thesis.

Seiler, V. Hsieh. S. and Seiler, M. (2001). "Linear Structural Relations (LISREL) Model in International Services: How Does Travel Attribute quality Affect Satisfaction in Japan". Working Paper.

Silling, J. and Sirmans C.F. (1988). "The Effects of Occupational Licencing on Complaints Againts Real Estate Agents." *Journal of Real Estate Research.* **Vol.3** (No. 2), pp. 1-9.

Sirmans, G. S. dan Sirmans, C.F. (1992). "Property Manager Designations and Apartment Rent." *Journal of Real Estate Research.* **Vol.7**.(No.1). pp. 91-98.

Taylor, S. and Baker, T. (1994). "An Assessment of the Relationship Between Service Quality and Customer Satisfaction in the Formation of Consumers' Purchase Intentions." *Journal of Retailing.* **Vol. 4**.(No. 2). pp 163-178.

Vandamme, R. dan J.Leunis. (1993). "Development of a Multiple-item Scale for Measuring Hospital Service Quality." *International Journal of Service Industry Management.* Vol. 4.(No. 3). pp. 30-49.

Zeithaml (2000). "Service Quality, Profitability, And The Economic Worth Of Customers: What We Know And What We Need To Learn." *Journal of the Academy of Marketing Science.* **Vol. 28**.(No.1). pp. 67-85.

UTHM
Universiti Tun Hussein Onn Malaysia