

# Service Quality and Consumer Behavior on Metered Taxi Services

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**Abstract**—The purposes of this research are to make comparisons in respect of the behaviors on the use of the services of metered taxi classified by the demographic factor and to study the influence of the recognition on service quality having the effect on usage behaviors of metered taxi services of consumers in Bangkok Metropolitan Areas. The samples used in this research were 400 metered taxi service users in Bangkok Metropolitan Areas and questionnaire was used as the tool for collecting the data. Analysis statistics are mean and multiple regression analysis.

Results of the research revealed that the consumers recognize the overall quality of services in each aspect include tangible aspects of the service, responses to customers, assurance on the confidence, understanding and knowing of customers which is rated at the moderate level except the aspect of the assurance on the confidence and trustworthiness which are rated at a high level. For the result of hypothetical test, it is found that the quality in providing the services on the aspect of the assurance given to the customers has the effect on the usage behaviors of metered taxi services and the aspect of the frequency on the use of the services per month which in this connection. Such variable can forecast at one point nine percent (1.9%). In addition, quality in providing the services and the aspect of the responses to customers have the effect on the behaviors on the use of metered taxi services on the aspect of the expenses on the use of services per month which in this connection, such variable can forecast at two point one percent (2.1%).

**Keywords**—Consumer behavior, metered taxi, satisfaction, service quality.

## I. INTRODUCTION

**S**ERVICE industry is developing quality of services in accordance with the extremely changing and competitive market environment. Service industry must focus on its clients to meet the needs of customers and make them to be satisfied by the quality of service. By managing the gap between customer expectations and perceptions of received five levels service and assessment quality of service in terms of tangible, confidence and trust, customer response, ensuring customers, knowing and understanding customers.

Currently, the service has an important role in the economy of the information age. The advanced technology causes new service concepts that consumers can access to communication services, do the inquiry, search the information where they want to buy and sell products over the Internet. Marketers have to try to communicate the benefits of new products and services, to educate customers on the use of technology and to provide quality service to customers to be more competitive in the industry. Marketers have introduced the concept of

marketing in the creation of quality of service equal to or more than the expectation of the customers. When customers receive the service, they rather compare the quality of service they receive and the quality of expected service, if the results show that the quality of received service is less than the expectation. The customer will not be satisfied and do not use that service again. On the contrary, if the quality of received service is equal to or greater than the expectation, the customers will be satisfied and come back for using the service [1]. There was a study on the quality of services through the marketing focus on the customer perspective in the dimension of quality of service [2], [3].

In 1985, Parasuraman, Zeithaml, and Berry [3] have developed service model concerning factors in determining the quality of services and gaps or obstacles that make the service does not meet the expectation of the customer. For perceived service and expected service, service quality varies with the size and direction of the gap caused by the service that the customers expect to receive as a result of word of mouth, individual needs and past experiences which were related to services usage of the customers. In comparison of received service to expectation, if the customers receive service better than or equal to the expectations this service will be considered as a quality service and it can lead to repurchase that service. If the service is perceived as inferior to the expectation, the customers would mention about poor service, and poor quality, resulting in a decision not to repurchase the service in the future. Therefore, many businesses focused on quality of service that offer their clients in order to meet the demands of them which lead to customer satisfaction and increase the loyalty of their clients to a product or service. This allows customers repurchase the service [4]. Change in the society resulting in changes in quality of life causing the demand for services that make life better. Economical change causes the demand for rapid communication services for making decision. Businesses are able to use service quality as a tool to enhance productivity for organizations by relying on loyal customers who do the viral publicity to the others to convince them to use that service. Businesses executive can also use the quality of service as a strategy to compete with rivals in a highly competitive market such as the service industry. Since there are more competitors in the market and the customer has the need to require high quality services provided from the entrepreneurs, then quality of service is an important factor to make the business successful, which corresponds to the statement of [5] that

“the leaders of service industry, government agencies and non-profit organizations should inform about the

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quality of services and application of services quality to the organization members in order to enable organizations to survive and grow further.”

Quality of service is an important strategy which everyone in the organization should absorb and adopt this concept to make customer satisfaction and creating loyalty of the customer to the products and services which can increase productivity, reduce costs and bring more profits to the organization.

Presently, there are registered 100,000 taxis in Bangkok, but only 80,000 vehicles to be in service and the data of registered taxi at January 31, 2012 found that the total number of taxis of 99,375 which are 23,757 personal taxis and 75,618 corporate taxis. There are over two million trips of taxi's service each day, shows the popularity of the taxi service that will increase day by day. However, some taxi drivers do not have public driving license when the crime problems happen with these vehicles make it difficult to control and affect the trust of the passengers. Thus, Department of Land Transport has set the rule for all taxi drivers must have public driving licenses and they will be inspected seriously by the inspectors of the Department of Land Transport at the point of services from June 1, 2015 onwards to reassure service users.

At present, the journey by taxi is an alternative for Bangkok people who prefer the comfort and the convenience. Problems encountered in the use of metered taxis service today, including the lack of consumer confidence in the safety of the service, especially the ladies, the attitude and manner of taxi drivers and unwillingness to provide services. In addition, taxi drivers deny passengers while running metered taxi service, provide the service for some specific routes, take the detour of destination, driving in a reckless manner, incorrect use of car accessories, such as cheated fare meter and very dark film, choose to provide the service for foreign passengers only. Currently, organizations or agencies that regulate the metered taxi services lack of attention to solve the problems seriously. Also, the service users have not been informed of accurate and adequate information. Hence, involved organizations such as the Association of Taxi Owner, the Cooperative of Taxi and taxi drivers should be aware of the quality of services to meet passenger demand and passenger satisfaction with services such as safe driving, willingness to serve the passenger, courtesy of the taxi drivers including taking into account about the value of the services that the passenger should get. In marketing, improving the quality of service is not easy especially in the metered taxis business because there are many taxis and the quality of the service must be clearly changed, to clearly see. That means improving the quality of services of metered taxis must have a continuous long time plan with many steps conducting periodically to meet with service usage behavior of passengers. For the problems encountered in the use of metered taxis service, the researcher has the idea that involved organizations, metered taxi business operators including metered taxi drivers should be aware of the importance of improving the quality of service including improving a bad image of the service to encourage the passengers to use the service and have the satisfaction upon

receiving the service. Researchers are therefore interested to study the perception of service quality, customer satisfaction and service usage behavior of consumers in using metered taxis in Bangkok. Research results will be the guidelines guide for the development of the metered taxi business and will be helpful to related organizations or government agencies to do the campaign for supporting the use of public transportation as metered taxi in Bangkok.

The importance of this research was to know the level of perception on quality of service and the satisfaction of consumers in Bangkok. In addition, to know the influence of the perception on quality of service and the satisfaction on the service usage behavior of consumers using metered taxi service in Bangkok. The results will be used to guide the development for metered taxi service provider. In addition, it will be useful for involved organizations or state agencies in order to take the information into account to be used to guide the improvement of the quality of service provided by metered taxis drivers in education, planning and management of metered taxis business efficiently. The objectives of this research were to compare service usage behavior of consumers in using metered taxi in Bangkok classified by demographic factors including gender, age, education, occupation, and monthly income, and to study the effect of perceived service quality, customer satisfaction affecting metered taxi service usage behavior of consumers in Bangkok.

## II. THE CONCEPTUAL FRAMEWORK AND HYPOTHESES

From related theories and research works, the researcher used them to define the concept and conduct questionnaire design. The researcher used the concepts and theories of [2], [3] as criteria for assessing service quality. In the framework of service usage behavior of consumers in using metered taxi in Bangkok, the theory of consumer behavior by [6] was used which refer to the actions of individuals associated with searching and using the products included in the decision-making process prior to the action. There must be a cause, drive or motive as a result of external factors and internal factors of the individual for the occurrence of the behavior. From reviewing the literature and related research, the relationship among the variables can be seen in a research framework which is shown in Fig. 1.

From conceptual research framework, the researcher set research hypothesizes as follows:

- Hypothesis 1: Consumers with different demographic characteristics have different service usage behavior in using metered taxi service.
- Hypothesis 2: The perception of service quality and satisfaction affect service usage behavior of consumers using metered taxi service in Bangkok.

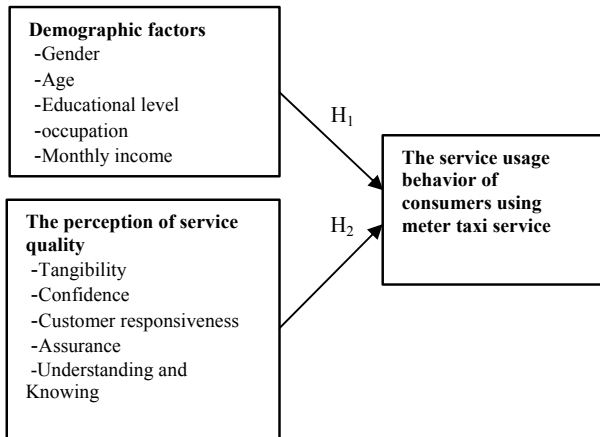


Fig. 1 Research Framework

### III. RESEARCH METHODOLOGY

The target population of this research was the consumer who used metered taxi in Bangkok. The total number of population is unknown. The sample used in this research was 400 consumers who have ever used metered taxi in Bangkok. The sampling method was conducted by using simple random sampling from five groups of districts in Bangkok and selected two districts from each group make the total of 10 districts. Then, the quota sampling was used by setting 40 people from each district of 10 districts in Bangkok and the convenience sampling was used in the community of each district. The data was collected only from those who cooperated in completing the questionnaire.

In prior of conducting the main study, a pilot test was done by launching the questionnaire for 40 pilot samples in order to find the reliability of the questionnaire by use of the Cronbach's Alpha coefficient analysis. The coefficient value of all items was displayed in Table I.

TABLE I  
TEST OF RELIABILITY OF QUESTIONNAIRE

| Perception of service quality | Cronbach's Alpha Coefficient |
|-------------------------------|------------------------------|
| Tangibility                   | .817                         |
| Confidence                    | .785                         |
| Customer responsiveness       | .853                         |
| Assurance                     | .802                         |
| Understanding and knowing     | .744                         |

The statistics used for data analysis are descriptive statistics to describe the characteristics of the sample, include frequency, percentage, mean and standard deviation. The inferential statistics were used to test the hypothesis of this study which are as follows: (1) Analysis of independent sample t-test which compare the independence of two groups of samples. (2) Analysis of the F-test and ANOVA (One-Way Analysis of variance) which compare the mean value of the samples over the two groups. If the test is the statistically significant difference, testing the pair has to be done to see if there are some different pairs using Fisher's Least Significant Difference (LSD). (3) Multiple regression analysis to predict

the perception of service quality and satisfaction affect service usage behavior of consumers using metered taxi service in Bangkok.

### IV. RESULTS

The study found that most of the respondents were female, aged between 19-28 years. Most of them were students at the undergraduate level and have a monthly income of less than 10,000 baht. For service usage behavior of the consumers, the frequency of service usage three times per month on the average. The average spending of the service per month is 350.26 baht mainly time used during 05:01 am. -9:00 pm. The major reason for service using was comfort.

The summary of descriptive analysis was shown in Table II. The results showed that consumers have recognized the overall quality of services and each aspect include tangibility, customer responsiveness, assurance to customers, and empathy were at a moderate level except the reliability is at a high level.

TABLE II  
DESCRIPTIVE ANALYSIS OF CONSUMER'S PERCEPTION OF SERVICE QUALITY

| Perception of service quality | Mean | S.D. | Meaning |
|-------------------------------|------|------|---------|
| Tangibility                   | 3.29 | .52  | Average |
| Reliability                   | 3.41 | .59  | high    |
| Responsiveness                | 3.23 | .59  | Average |
| Assurance                     | 2.77 | .78  | Average |
| Empathy                       | 3.04 | .72  | Average |

TABLE III  
RESULTS OF THE ANALYSIS OF INDEPENDENT SAMPLE T-TEST OF SERVICE USAGE BEHAVIOR OF METERED TAXI CLASSIFIED BY SEX

| Service usage behavior of metered taxi | Sex    | t-test for Equality of Means |        |       |                 |      |
|--|--------|------------------------------|--------|-------|-----------------|------|
|  |        | $\bar{x}$                    | S.D.   | t     | Sig. (2-tailed) |      |
| frequency of service using per month   | Male   | 3.27                         | 2.40   | -3.88 | 374*            | .000 |
|  | Female | 4.40                         | 3.03   |       |                 |      |
| spending of the service per month      | Male   | 317.96                       | 245.10 | -3.46 | 374*            | .001 |
|  | Female | 419.15                       | 301.30 |       |                 |      |

\*Statistical significant at 0.05 level

TABLE IV  
RESULTS OF THE ANALYSIS OF VARIANCE OF SERVICE USAGE BEHAVIOR OF METERED TAXI CLASSIFIED BY EDUCATION

| Service usage behavior of metered taxi | Source of variance | df  | MS        | F-ratio | Sig. (2-tailed) |
|--|--------------------|-----|-----------|---------|-----------------|
| frequency of service using per month   | Between group      | 3   | 65.71     | 9.848*  | .000            |
|  | Within group       | 372 | 6.67      |         |                 |
|  | Total              | 375 |           |         |                 |
| spending of the service per month      | Between group      | 3   | 445349.21 | 6.466*  | .000            |
|  | Within group       | 372 | 68879.22  |         |                 |
|  | Total              | 375 |           |         |                 |

\*Statistical significant at 0.05 level

Results from the hypothesis testing showed that consumers who had different sex had different service usage behavior of metered taxi in the aspect of the frequency of service using per month, and the spending of the service per month had statistically difference at significant level 0.05 as shown in

Table III. By using the analysis of variance, the hypothesis testing showed that consumers who had different education and monthly income had different service usage behavior of metered taxi in the aspect of the frequency of service using per month, and the spending of the service per month had statistically difference at significant level 0.05 as shown in Tables IV and V.

TABLE V  
RESULTS OF THE ANALYSIS OF VARIANCE OF SERVICE USAGE BEHAVIOR OF METERED TAXI CLASSIFIED BY MONTHLY INCOME

| Service usage behavior of metered taxi | Source of variance | df  | MS        | F-ratio | Sig. (2-tailed) |
|--|--------------------|-----|-----------|---------|-----------------|
| frequency of service using per month   | Between group      | 3   | 41.11     | 5.984*  | .001            |
|  | Within group       | 372 | 6.87      |         |                 |
|  | Total              | 375 |           |         |                 |
| spending of the service per month      | Between group      | 3   | 368565.62 | 5.303*  | .001            |
|  | Within group       | 372 | 69498.44  |         |                 |
|  | Total              | 375 |           |         |                 |

\*Statistical significant at 0.05 level

In addition, with using regression analysis, it was found that quality of services in the aspect of assurance to customers affecting the frequency of using metered taxi service per month. This variable can be predicted by 1.9 percent and service quality on the customer responsiveness affecting service usage behavior of metered taxi in the aspect of the spending of the service per month. This variable can be predicted by 2.1 percent as shown in Tables VI and VII.

TABLE VI  
RESULTS OF THE ANALYSIS OF SERVICE USAGE BEHAVIOR OF METERED TAXIS ON FREQUENCY OF SERVICE PER MONTH BY STEPWISE MULTIPLE REGRESSION ANALYSIS

| Variable                                 | B     | SE   | t      | Sig. (2-tailed) |
|--|-------|------|--------|-----------------|
| Constant                                 | 2.247 | .500 | 4.494* | .000            |
| Quality of Service- Confidence ( $X_4$ ) | .502  | .174 | 2.880* | .004            |

$r=.147$ , Adjusted  $R^2=.019$ ,  $R^2=.022$ ,  $SE=2.647$

\*Statistical significant at 0.05 level

TABLE VII  
RESULTS OF THE ANALYSIS OF SERVICE USAGE BEHAVIOR OF METERED TAXIS ON FREQUENCY OF SERVICE PER MONTH BY STEPWISE MULTIPLE REGRESSION ANALYSIS

| Variable   | B       | SE     | t      | Sig. (2-tailed) |
|--|---------|--------|--------|-----------------|
| Constant   | 127.849 | 75.721 | 1.688  | .092            |
| Quality service –Customer responsiveness ( $X_3$ ) | 69.073  | 23.130 | 2.986* | .003            |

$r=.153$ , Adjusted  $R^2=.021$ ,  $R^2=.023$ ,  $SE=265.33819$

\*Statistical significant at 0.05 level

## V. DISCUSSION

The study found that consumers who had different sex, education and monthly income have different service usage behaviour of metered taxi in the aspect of the spending of the service per month is statistically significant at the .05 level. This was consistent with [7] that conducted the research on the attitudes and behaviour of working people in Bangkok in using metered taxi. That research found that customers who had different sex, education, and average monthly income had

different service usage behaviour regarding the metered taxi fares per trip. Additionally, consumers with different education, and monthly income had different service usage behaviour on the frequency of use per month was statistically significant at the .05 level. This was consistent with [7] that conducted the research on the attitudes and behavior of working people in Bangkok in using metered taxi. The research found that customers who had different educational level had different level of service usage behavior per month and also in line with the concept of [8]. Kotler [8] mentioned about the nature of the decision maker as consumer who was a high educated person in higher social class was open to the idea of other people easily, or the one who had the self-confidence was an important factor in decision making of consumer. This may come from consumers who have a Bachelor's degree or higher degree and have their own income enough to use every month. As a result, the average frequency in using service of metered taxi and the approximate spending of a taxi fares in Bangkok were more than consumers with lower levels of education and was also consistent with the concept and theory of demography which noted that revenue was a factor influencing the attitudes and behaviour of individuals supported by many reports that had been proved that the social and economic status influence attitudes and behaviour of people.

The results found that quality of service provided reassurance to customers affecting the service usage behaviour of metered taxi in the aspect of the frequency of service per month. This was consistent with the quality of service model, developed by [9], concerning factors in determining the quality of services. If the customers receive service better than or equal to the expectations, this service will be considered as a quality service and can lead to repurchase that service. The study found that quality of service providing confidence to the passengers was the factor that determined the service usage behaviour for the frequency of using the service three times a month. In addition, the quality of service in the aspect of the customer responsiveness affecting the service usage behaviour of metered taxi on the spending of the service per month. The study found that service quality on the customer responsiveness affecting the service usage behaviour for the spending of the service at a time.

## VI. RECOMMENDATIONS

This research suggested as follows:

1. Quality of service on providing reassurance to customers affected the service usage behaviour of the metered taxi on the frequency of service using per month. This variable could be predicted by 1.9 per cent, which was not much higher weight. Therefore, relevant organizations or public agencies should provide the training to enhance service knowledge and driving skills subject with regard to the service users feeling of confidence and safe from taxi driver service. Should make the passengers feel safe and have sense of security of life and property throughout the trip. Also, receiving the appropriate assistance from the taxi drivers that will lead to consumer perception of

service quality and providing confidence to customers. It will enable consumers to use a metered taxi service more frequently.

2. Quality of service on the customer responsiveness affected the service usage behaviour of metered taxi in the aspect of monthly spending of the service. This variable could be predicted by 2.1 percent, which was not very high. Therefore, involved organizations or state agencies should arrange the meeting among the cooperative of taxi operators to increase the measurement of controlling taxi fares to meet the law. Confirming of not cheat the meter, metered taxis should ensure that all vehicles under a cooperative taxi. To prevent cheating fare meter of taxi, should provide a receipt to the customers which enabling customers to gain more trust in the quality of service.

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