

DEVELOPMENT OF A CUSTOMER SATISFACTION ASSESSMENT MODEL FOR THE IMMIGRATION AND EMIGRATION SERVICE IN SRI LANKA

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ABSTRACT

Immigration and Emigration Service (IES) is among the most vital set of state services of a country. In Sri Lanka it has played a great role with the augmented rates of immigrants and emigrants during past few years. The efficiency of this service relies on its customers' satisfaction. Thus the focus of the research was to identify the level of satisfaction of customers regarding the quality of services, and to suggest appropriate further improvement strategies to maximize its efficiency.

Quantitative approach was used for the effective fulfilment of desired objectives. During the first phase of data collection, two preliminary surveys were carried out to filter and specifically identify the factors to be included in the satisfaction assessment. Subsequently, the customer satisfaction assessment was completed focusing on 125 customers. In the second phase, semi-structured interviews were carried out with 4 experts, aiming to identify possible improvement strategies for further enhancements in the service quality.

Twenty eight factors were established to appraise the immigration and emigration service quality. The service quality assessment using IPA matrix revealed that the customers were satisfied with 15 factors and dissatisfied with 13 factors. Thus, several improvement strategies were proposed to improve the current service quality.

Keywords: Customer Satisfaction; Customer Service; Satisfaction Assessment; Service Quality.

1. INTRODUCTION

Customers are the most valuable assets in an organisation (Besterfield *et al.*, 2004). Accordingly, many researchers conceptualised customer satisfaction in different dimensions. In one of the most common definition, customer satisfaction is expressed as an individual's sensation of pleasure or displeasure resulting from comparing a product's or service's apparent performance in relation to customer's expectations. Furthermore, Pollack (2009) highlighted that customer satisfaction is deemed to be listed at the top in attaining stated organisational goals and objectives. Therefore, organisations tend to measure the level of customer satisfaction and re-engineer their processes accordingly to improve the level of satisfaction of customers (Yasin *et al.*, 2004; Rodie and Martin, 2001; Tan *et al.*, 2010). In addition, Karatepe *et al.* (2005) revealed that organisations consider customers' perceptions to determine their strengths and weaknesses to improve customer satisfaction strategies.

Several researches on customer satisfaction in service providing organisations; both in government and private sector have been studied to identify satisfaction measurement criteria (Mwita, 2000; Yusoff *et al.*, 2008; Yeon *et al.*, 2006). Adapting customer satisfaction tools for these organisations in Sri Lanka has become essential with the rapid developments in the country, especially after ending the country's 30 years long civil war. Consequently, a significant improvement in the quality of services in tourism sector has been identified with the increased rates of immigrants and emigrants during past few years (Ministry of Economic Development, 2014). Thus, the Immigration and Emigration Service (IES) in Sri Lanka is considered as a major government customer service that requires a high attention regarding the satisfaction of customers since it provides services for more than 2500 local and foreign customers daily.

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2. CUSTOMER SATISFACTION ASSESSMENT DIMENSIONS AND FACTORS

A large number of studies have been conducted to identify satisfaction dimensions for service quality measurement to assess the customer satisfaction. Among those, the most widely used and most practical method is the SERVQUAL model (Zeithaml *et al.*, 2006). In the formation of this model, Parasuraman *et al.* (1988) initially presented 97 factors under 10 major dimensions (Zeithaml *et al.*, 1996). Later many authors identified that some of those dimensions were inter-related and hence SERVQUAL factors are restructured as 22 service quality measurement factors (Zeithaml *et al.*, 2006). They are grouped under following five dimensions.

- Reliability
- Responsiveness
- Assurance
- Empathy
- Tangibles

Furthermore, 5 factors by Yusoff *et al.* (2008), 1 factor by Bailey (1996), 2 factors by Brysland and Curry (2001), 1 factor by Kang and James (2004), 3 factors by Mersha and Adlakha (1992) and 1 factor by Rust and Oliver (1994) have been identified, other than in SERVQUAL model. Thus, these all factors can be summarised into 35 factors under five satisfaction dimensions (Table 1).

Table 1: Satisfaction Dimensions and Factors

No	Factors to Measure the Service Quality
Reliability	
1	Acts according to the promises
2	Sincere interest in solving problems
3	Performs the services right at the first time
4	Provides services at the time promised
5	Insists on error free records
6	Non disclosure of information to non entitled parties
7	Keeping records of past transactions
8	Coordination across departments
9	Works according to predefined schedules
Responsiveness	
10	Informs the exact time the services will be provided
11	Provides adequate explanations for delays
12	Employees' willingness to explain alternative solutions for issues/ concerns.
13	Provides prompt service
14	employees willingness to help
15	Attractive and up to date web site
16	Convenience of online services
17	Usage of latest technology
18	Responds to service requests quickly
19	Staff attentiveness to customer requests
Assurance	
20	Employee behaviour instils confidence
21	Security of transactions
22	Consistently courteous employees
23	Ability to provide accurate information.
24	Employees' knowledge to answer the questions

No	Factors to Measure the Service Quality
Empathy	
25	Kindness of employees
26	Provides individual attention for employees
27	Customers treated with dignity and respect
28	Convenience in operating hours and days
29	Understanding customer needs quickly and effectively
30	Friendliness and politeness of employees
Tangibles	
31	Visually appealing office equipments
32	Visually appealing physical facilities
33	Professional appearance of employees
34	Visually appealing building structure and materials
35	Presentation of associated materials

3. CUSTOMER SATISFACTION ASSESSMENT TOOLS

Various methods and models were developed by number of researchers to measure the level of customer satisfaction. Among those, the QIS model (Beach and Burns, 1995), Kano's model (Cheng and Chuang, 2008), American Customer Satisfaction Index (American Customer Satisfaction Index, 2014) and Importance Performance Analysis (IPA) matrix (Martilla and James, 1977) can be highlighted. In this research, IPA matrix was adapted to achieve the desired objectives due to its two dimensional nature which can be best fit to represent the level of satisfaction and the degree of their importance in providing IES.

3.1. THE IPA MATRIX

IPA was initially introduced by Martilla and James (1977). The matrix specifically identifies the low service quality areas that an organisation should primarily consider to enhance the level of customer satisfaction (Hung *et al.*, 2003). The two dimensional matrix can be constructed by using the results from service quality measurement surveys and customer satisfaction assessment surveys. The perceptions should be obtained under two criteria namely: the level of importance and the level of performance. The level of importance is depicted in the "X" axis while the level of performance is depicted in the "Y" axis. Obtained mean values for the level of importance and performance, for each factor categorises the matrix in to four major quadrants.

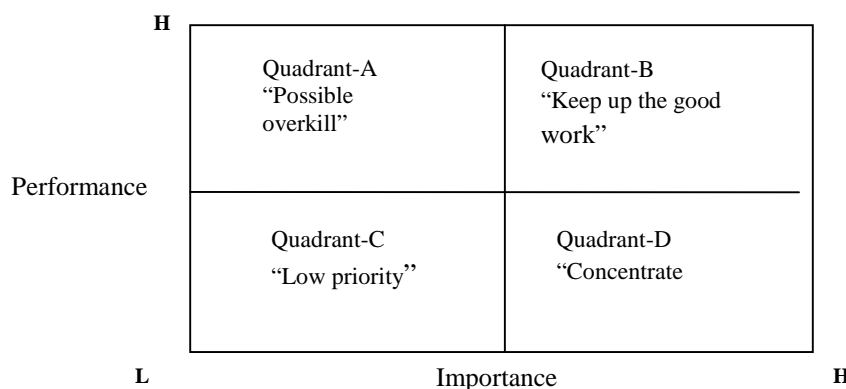


Figure 1: The IPA Matrix
Source: Martilla and James (1977)

The dimensions fallen under these four quadrants of the IPA matrix can be defined as follows;

Quadrant “A” - factors are considered as over performance areas in an organisation due to excessive resources utilization. Thus excessive resources can be utilised somewhere else to avoid possible overkills.

Quadrant B - factors are considered as major strengths of an organisation. Thus, these factors can be used to gain the competitive advantage to keep up the good work.

Quadrant C - factors in quadrant “C” are identified as minor weaknesses of the organisation. These factors can be identified as low priority areas and a significant concern is not required regarding the factors in this quadrant.

Quadrant D - factors in quadrant “D” are considered as low performing factors. Thus they are the major weaknesses and the organisation should concentrate more on those factors and should take immediate attempts to enhance the performance of these areas.

Therefore, based on the location in the IPA matrix, required improvement priorities of the satisfaction factors can be determined (Lambert and Sharma, 1990).

4. RESEARCH METHODOLOGY

The data collection was conducted into three phases. Further, the customer satisfaction was analysed by using the modified IPA matrix (refer section 4.2).

4.1. PHASE- I

Two preliminary surveys (preliminary survey I and II) were conducted focusing experts and customers of the IES.

Preliminary survey I - Thirty five factors under 5 dimensions (refer Table 1), were presented for the preliminary survey I to five experts to seek expert opinion on the suitability of each factor to be used in the customer satisfaction assessment of immigration and emigration service sector. A five point likert scale was used to obtain the level of suitability of each factor. Further, the respondents were requested to recommend any other suitable factors that are required to assess the customer satisfaction in IES.

Preliminary survey II - Customers’ views also was seek to finalize the satisfaction dimensions. Customers were selected based on non-probability haphazard sampling method for better accuracy. Thus, the sample size was not predetermined. Customers were inquired individually, one after the other until the desired requirement is fulfilled. During this survey, each individual was given a list of factors identified by previous respondents and was asked to indicate the additional requirements and satisfaction factors other than the factors which were mentioned in the given list.

4.2. PHASE- II

The level of customer satisfaction was assessed through a questionnaire survey. Final questionnaire was developed with the findings of literature review, preliminary survey I and preliminary survey II. The questionnaire was consisted with 5 major dimensions and 31 factors. Customers were requested to state the level of “Expectation” and “Satisfaction” according to the given five point likert scale for each factor. Questionnaires were prepared in both “Sinhala” and “English” languages to effectively communicate with customers. Accordingly, 125 questionnaires were distributed among the customers.

Customer responds were analysed using the modified IPA matrix where some studies have customised and altered IPA to suit perfectly for the research purposes. However, the fundamental structure has remained as the same (Sampson and Showalter, 1999). Accordingly, Deng (2007) highlighted that the matrix can be further divided into more quadrants as required to specifically identify the strengths and weaknesses. Hence, with reference to the findings of the author, “D” quadrant was further divided into 4 quadrants (see Figure 2). As described in the section 3.1, “D” quadrant contains under performance areas. Hence this categorisation enables the effective identification of critical factors. This modified IPA matrix was adapted to analyse the findings of customer satisfaction assessment survey.

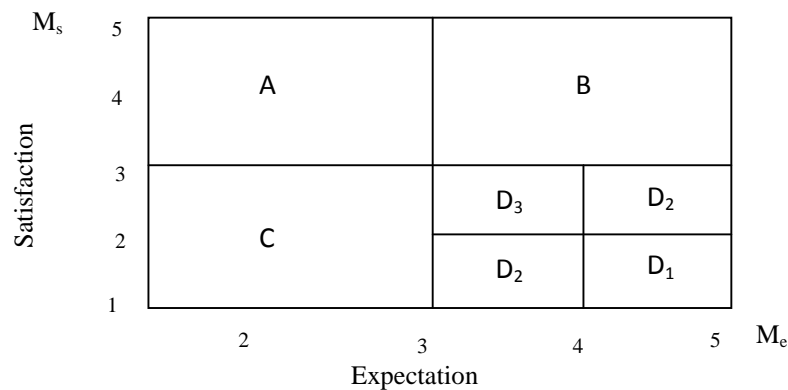


Figure 2: Modified IPA Matrix

M_e - Mean value of “Expectation” ratings, M_s - Mean value of “Satisfaction” ratings

- A -quadrant- the mean value of “Expectation” rating is less than 3 and the mean value of “Satisfaction” rating is higher than 3.
 $M_e < 3 \quad M_s > 3$
- B- quadrant- The mean value of “Expectation” rating is higher than 3 and the mean value of “Satisfaction” rating is higher than 3.
 $M_e > 3 \quad M_s > 3$
- C -quadrant- The mean value of “Expectation” rating is less than 3 and the mean value of “Satisfaction” rating is less than 3.
 $M_e < 3 \quad M_s < 3$
- D- quadrant- The mean value of “Expectation” rating is higher than 3 and the mean value of “Satisfaction” rating is less than 3.
 $M_e > 3 \quad M_s < 3$

D1- Most critical factors (Mean value of ”Expectation” rating is higher than 4 and the mean value of “Satisfaction” rating is less than 2)

$$M_e > 4 \quad M_s < 2$$

D2- Moderately critical factors (Mean value of ”Expectation” rating is between 3 and 4 and the mean value of “Satisfaction” rating is less than 2 or mean value of ”Expectation” rating is higher than 4 and the mean value of “Satisfaction” rating is between 2 and 3)

$$(3 < M_e < 4 \quad M_s < 2) \quad (M_e > 4 \quad 2 < M_s < 3)$$

D3- less critical factors (Mean value of ”Expectation” rating is between 3 and 4 and the mean value of “Satisfaction” rating is between 2 and 3)

$$3 < M_e < 4 \quad 2 < M_s < 3$$

4.3. PHASE-III

Consisted with a semi structured interview round which was used to interpret the results of customer satisfaction assessment survey and to determine possible improvement priorities. Four experts were interviewed during this phase.

5. RESEARCH ANALYSIS AND FINDINGS

5.1. SUITABLE SATISFACTION FACTORS

Nine factors from the above identified 35 factors were removed and another new 8 factors were added (Table 2) through the preliminary surveys I and II.

Table 2: Deleted and Added Factors

Satisfaction Dimensions	Deleted Factors from the Initially Identified List	Newly Added Factors
1.Reliability	1. Acts according to the promises 2.Insists on error free records 3.Non disclosure of information to non entitled parties 4.Works according to pre-defined schedules	
2.Responsiveness	5.Attractive and up to date web site 6.Convenience of online services 7.Responds to service requests quickly	1.Minimum waiting time to obtain services 2.5.Language translation services are provided when required 3.Proper sequencing and numbering of counters 4.Support and assistance provided at the inquiries table
3.Assurance	8.Employees knowledge to answer the questions related to the service procedures	5.Clarity of information provided in forms and other documents 6.Documents and forms can be easily understood and filled
4.Emathy		7. Priority is given for Elders, Disabled people, and Pregnant Mothers.
5.Tangibles	9.Visually appealing physical facilities	8.Providing a leaflet of information regarding the offered services

However, (1) Keeping of past transaction records of the customers, (2) Coordination across the service and (3) Priority given for elders, differently able people, and pregnant mothers, factors were significantly less in respond rates (less than 25 responses) and thus only 28 factors were used for the analysis.

5.2. SATISFACTION OF IES

Table 3 indicates the mean weighted ratings of expectations (M_e and M_s) and the standard deviations (SD_e and SD_s) of these factors.

Table 3: Level of Customer Satisfaction for Service Quality

Satisfaction Factors for Service Quality		Quadrant	M_e	SD_e	M_s	SD_s
Reliability						
R1	Employees are sincerely interested in solving problems	D-2	4.32	0.66	2.71	0.55
R2	Services performed right at the first time	B	4.13	0.68	3.76	0.60
R3	Services provided at the time promised	D-1	4.87	0.34	1.97	0.53
Responsiveness						
RE1	Informs the exact time the services will be provided	B	4.22	0.68	3.93	0.67
RE2	Minimum waiting time to obtain services	D-1	4.88	0.31	1.83	0.50
RE3	Sequence in counters and operations	B	4.53	0.59	4.43	0.60
RE4	Adequate explanations provided for delays	D-2	4.14	0.74	2.92	0.65

Satisfaction Factors for Service Quality		Quadrant	M _e	SD _e	M _s	SD _s
RE5	Employees' willingness to explain alternative solutions for issues/ concerns.	B	3.97	0.72	3.04	0.64
RE6	Language translation services are provided when required	C	2.98	0.85	2.91	0.74
RE7	Employees willingness to help customers to clarify their issues	D-1	4.06	0.67	1.92	0.53
RE8	Support provided at the front desk and inquiries table	B	4.74	0.46	3.12	0.67
RE9	Latest technology is used for the operations of department	B	3.78	0.50	3.22	0.59
RE10	Staff attentiveness to customer requests	B	4.94	0.23	3.22	0.67
Assurance						
A1	Confidential behaviour of employees	B	3.44	0.55	3.26	0.48
A2	Security of transactions	C	2.84	0.74	2.9	0.62
A3	Employees are consistently courteous	D-2	4.22	0.70	2.43	0.62
A4	Accurate information are provided at the department.	B	4.14	0.56	3.58	0.62
A5	Clarity of information provided in forms and other documents	B	4.66	0.51	4.17	0.53
A6	Documents and forms can be easily understood and filled	B	4.68	0.53	4.3	0.65
Empathy						
E1	Individual attention is provided for customers	B	3.26	0.61	3.47	0.65
E2	Customers treated with dignity and respect	D-2	3.58	0.66	1.78	0.52
E3	Kindness of employees	B	3.14	0.58	3.26	0.68
E4	Customer needs are understood quickly and effectively	D-2	4.54	0.65	2.92	0.63
E5	Friendliness and politeness of employees	D-3	3.34	0.63	2.89	0.56
Tangibles						
T1	Visually appealing office equipment	C	2.46	0.54	2.81	0.64
T2	Associated materials are provided by the department (information leaflets, stationary,	C	2.74	0.62	1.68	0.64
T3	Professional appearance of employees	B	3.16	0.76	3.32	0.56
T4	Visually appealing building structure and materials	B	3.75	0.59	4.08	0.53

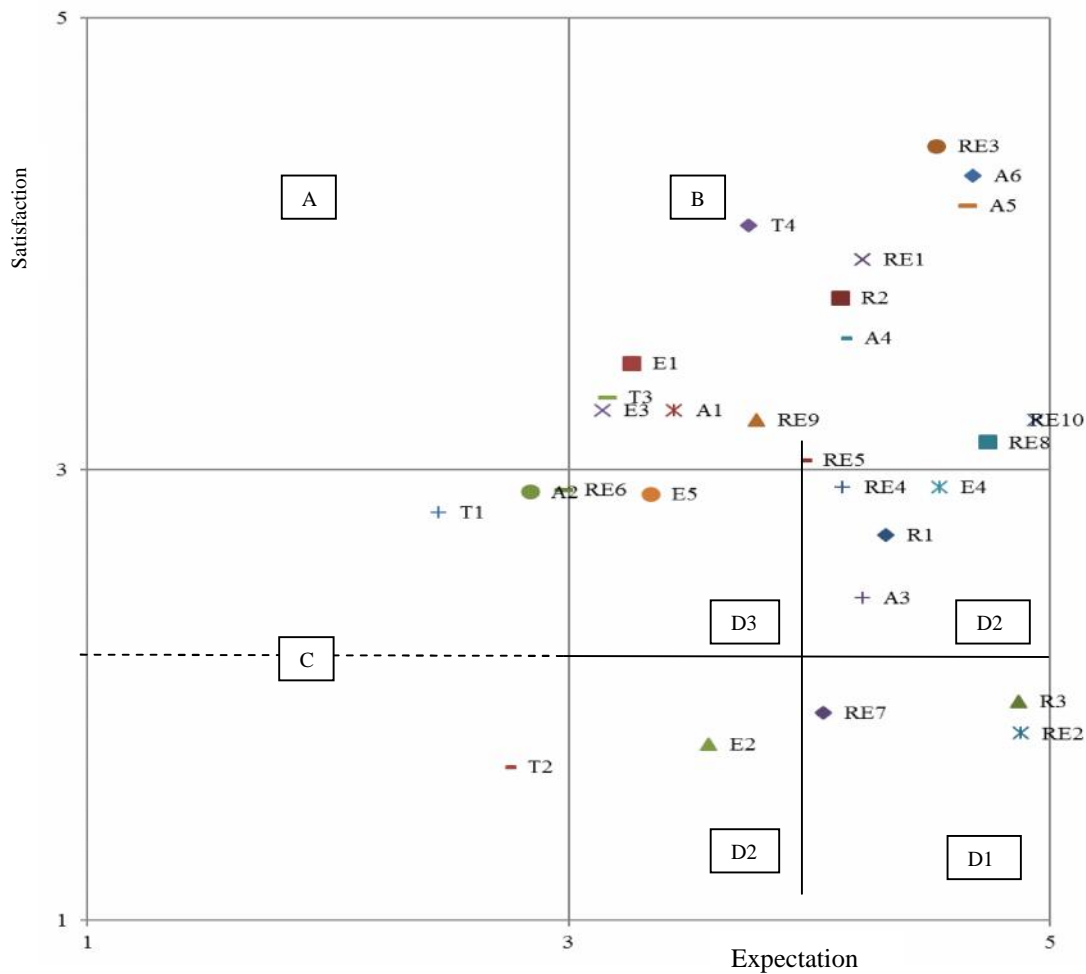


Figure 3: Results of the Customer Satisfaction Assessment Survey

Interestingly, none of the factors were identified under the quadrant “A” and thus IES has not over utilized its resources. The performances of those factors were up to a level that could satisfy the customers. Fifteen factors were fallen into the quadrant “B” which is rated as “Expected and Satisfied”. The quadrant “C”, that reveals the factors which have a lesser expectation level and lesser satisfaction level, has 4 factors. Immediate concern is not required to address these 4 factors since the level of expectation is less. However, they should be addressed in the long run. Quadrant “D” consists with less performance factors. As described in the “Research methodology” the highest critical quadrant in D is “D1” where the level of expectation is very high and the level of satisfaction is very low. Three factors were identified in “D1” and thus highest attention is required when identifying strategies to enhance the service quality. Similarly “D2” quadrant reveals moderately critical areas which include 5 factors. Further, “D3” quadrant was included with 1 factor which has a relatively low criticality than “D1” and “D2”.

5.3. IMPROVING THE SERVICE QUALITY

IES has taken several improvements (refer Table 5) and thus customers are satisfied with 15 satisfaction factors. However, several other improvements can be suggested to remove all inefficient factors fallen in quadrant “D” in the matrix. These further improvements are established by eliciting expert knowledge. According to the experts who engaged in this service suggested to conduct continuous training programs to improve knowledge of the staff and further out sourced employees should have an opportunity to participate these programmes. Additional self-guidance is required for customers with more clear information boards and other visual aids. Accessibility for differently able people was identified as another area to be improved. Further space utilization within the service area can be optimized for better

circulation and usage. For example, number of counters can be increased to enhance the convenience for customers.

Table 4: Improvement for Customer Satisfaction

Improvements Taken
<ul style="list-style-type: none">▪ ISO 9001 quality management system was taken▪ Public Relation officers were employed▪ A productivity improvement team has been established▪ Training and induction sessions for employees have been conducted▪ Information centre was initiated to assist customers in all 3 languages▪ Dining areas, Banking facilities, and other required support services have been provided within the service area▪ Priority has been given for clergy, disabled people and pregnant mothers▪ An incident investigation mechanism was established▪ Monthly progress meetings have been arranged

6. CONCLUSIONS

During the past 5 years, Sri Lanka has experienced a significant growth in tourism industry. Subsequently, assessing the current level of customer satisfaction was identified as a valuable baseline to determine improvement priorities for IES to cater for the increased requirements.

The well known SERVQUAL model was the most feasible framework to identify the factors of its service quality. Twenty eight satisfaction factors were established for customer satisfaction assessment. Further, the modified IPA matrix was adopted as the suitable analysis tool for assessment. Fifteen 15 factors were rated as satisfied by customers. Only, 4 factors were rated as unexpected and unsatisfied whereas none of the factors were identified as satisfied for unexpected attributes. Most prominently, 9 factors were classified as dissatisfied by the customers although they expected them to be well performed.

Most of the customer satisfaction assessment surveys were done by considering only the level of “satisfaction”. This study provides a comprehensive approach to develop the satisfaction assessment questionnaire and assess the customer satisfaction with relation to their expectations. Further, the practical applicability of the “modified IPA matrix” was highlighted during the research. Hence, this piece of work would be an elementary guide to the future researchers to determine suitable dimensions and a satisfaction assessment tool for their customer satisfaction assessment survey. The adoption of above concept in service sector will also enhance the quality of its services and especially, it will positively influence towards the good productivity.

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