

Analysis of Customer Expectations of Services Compensation Strategy Using Fuzzy Hierarchical Analysis Approach (AHP) (Case Study: Customers of Health Insurance Organization in Tehran - Iran)

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Abstract

Background and objective: This study aimed to identify constitutes anthropomorphism in health insurance organization in Tehran, Iran. Service failure is inevitable and serves as an important factor in the loss of customers. Its inevitability requires that companies offering such services seek to identify the expectations and demands of the customers for the occurred failure in order for appropriate measures to be taken so as to prevent the loss of customers.

Methods: The present study has purposeful application and is a descriptive analytical survey in the nature and method conducted in 2015. A simple random sampling method was used. Data collection was performed using 394 questionnaires. Content validity and reliability of the questionnaires was approved by professionals (using Cronbach's alpha 0.85). In the current study, AHP was adopted by a fuzzy approach and data analysis was performed using Expert Choice software.

Results: According to the statistical results, among the six service strategies, empowerment, communication, explanations, feedback, atonement and tangibles, were placed from the first to the sixth priorities, respectively.

Conclusion: According to the importance of service compensation and emphasis of theoretical principles on this case, and also taking into account the findings of this study and similar studies aforementioned, the following can be effective in improving the performance of insurance organizations' service compensation.

Keywords: Customer expectations; Services compensation strategy; Fuzzy hierarchical analysis approach

Introduction

Today, customer retention and satisfaction are the criteria of a successful business. A good company always strives to increase the level of customer satisfaction in every way possible [1]. In the competitive environment of today's world, most companies focus on customer retention as the key to success. In marketing, the most important strategy is the retention of current customers and attraction of new ones. As a result, most companies are trying to provide first class services to their customers, because when high quality services are delivered to the customer, it most likely enhances the satisfaction of the customer. However tendencies of failures, errors, mistakes and reluctances may occur in the process of service delivery [2]. One of the requirements of customer-orientation is the attempt to avoid "losing customers". Failure of services is one of the reasons responsible for the loss of customers. In general, it is almost impossible to have a system without error in service industries, because of the openness of the system and the uncertainty of the process of service delivery. Service failures usually occur in critical occasions; it may happen in moments of interaction between the customer and the organization, which results in a negative reaction by the customer [3].

Customers who have experienced service failure may transfer their dissatisfaction with the particular service provider to others, through negative oral propaganda and negative feelings, and this can affect the profits level and even reputation of the company. When encountering service failure, the majority of customer sure of the belief that this failure will be rectified in the near future. Through compensation strategies, service provider scan appease unhappy customers and increase their customer retention rate and even create long-term relationship with dissatisfied customers, and ultimately convert them to loyal customers [4]. Iranian organizations must gradually understand the necessity

of attention given to customers and try to identify and satisfy them, thereby making them more loyal [5].

In recent years, insurance companies, as one of the pillars of the economy, sought the effectiveness of their marketing activities. Due to the emergence of competitive markets of insurance services and private insurance, because of the need for survival at that time [6].

The attention to performance indicators in the private insurance processes is an important condition for success in the current compact competitive space, hence when it comes to marketing activities, strategies to attract new customers, recover abandoned and in fact complainant customers, and ultimately increase customer share and loyalty of current customers, arise. Assessment of the performance-oriented look and attention to the cost of attracting new customers in which between 78-100% is the retention of the current customer in the Iranian insurance system, attracted much attention to the current customers and then to the abandoned and sometimes complainant customers, where accordingly, analysis of customers' expectations of service compensation may be the best framework and model to compensate defects in the processes and management of complaints.

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Therefore, with a glimpse of the strategic documents of the Health Insurance Organization in Iran, such as vision and mission of the organization, that always underlines providing the best services to clients, and also a consideration of the Code of Ethics agreed upon by the staff of Iranian health insurance which places the customer orientation and his tribute at its priorities, it can be stated that the scientific attention to the present issue is the main purpose of the study. The study aimed to know: the customers' expectations after the failure of the Iranian health insurance organization, which compensation strategy is more important for them after the failure of services, and the strategy that the leaders of Iranian health insurance should pay attention to.

Theoretical Framework

Service failure refers to situations in which the service provided was lower than the customer's expectations level [7]. In most companies, at least one out of ten customers is not satisfied with the services rendered. Service failure has been defined as "a flawed result which reflects the loss of reliability". Studies show that, if the customers are satisfied with the way their complaints are being attended to, this can reduce frustration and increase the likelihood of their re-purchase. The survival of a business usually depends on the purchase customers, and when service companies become more specialized (expert) in providing service to their existing customers, the benefits will increase significantly [8]. Service failure can occur for all types of responses, lack of access to service in the time provided, delay in the delivery of services, failure in the services results or irresponsibility of employees [9]. Failure of services creates an opportunity for the service provider to enhance customer satisfaction by solving the problem. Customers may accept service failure, but they will not forgive the organizations attempting to fix the failure [10]. Although it is very unlikely that organizations can completely eliminate service failure, they can learn how to deal with failure in order to effectively maintain and improve customer satisfaction [11].

Research Conceptual Model

To measure customer satisfaction with service compensation, Boshov (1999) was the first who introduced the RECOVSAT model. According to this model, compensation is made up of 6 dimensions:

- **Communication:** this is the extent to which employees clearly communicate with customers, ask customers questions to state the problem and the condition; employees understand the customer's problem and act to solve the problem honestly and reliably.
- **Empowerment:** this is the extent to which that the first employee who receives a complaint might be able to be responsive and solve the customer's problem (he does not ask another employee to help or does not assign the complaint to another employee).
- **Feedback:** Reflects the feedback to the customer about the progress in resolving problems and complaints in writing.
- **Atonement (Blood money):** Indicates whether the company has rendered apologies to customers for the financial damage; moreover, the company must ensure the customers that the financial loss will be compensated.
- **Explanation:** Indicates whether the company explained the error and the reason of the problem and if the explanation was satisfactory to the customer.

- **Tangibles:** Indicates whether the employees have been apparently arranged and decorated.

Boshov improved his model in 2005. The final model of RECOVSAT was tested by maintaining the 6 strategies mentioned, and exhibited high reliability and accuracy. According to the history mining carried out, it was found that most studies have actually considered the six strategies. In this study, the same model was used to prioritize customers' expectations [12].

Customer Relationship Management

In the literature of customer relationship management, a wide range of definitions have been proposed. In its simplest form, customer relationship management includes the obligation to ensure the satisfaction of customers with the interaction with business unit or certain organizations [13]. Customer relationship management is profitable in the process of identification, selection, acquisition, development and retention of customers. With long-term relationship with customers, organizations can respond to the needs and requirements, and also provide consent [14]. Leonard Berry defined the relationship by marketing, and pointed out that the authenticity of the demands and needs of customers is a key source of stability for the company's interests [15]. The purpose of customer relationship management is to collect data, needs, ideas and demands of customers and create an integrated system in order to provide better service and customer satisfaction [16].

Methods

The present study has purposeful application and is a descriptive analytical survey. Data collection tool used in this study was the researcher made questionnaire. The statistical population of the study (due to the spatial domain) included the clients of the Iranian health insurance in Tehran, Iran. Health insurance is made up of 22 branch offices, all situated in Tehran, Iran. The headquarters in Tehran was selected because of its strategic location and the number of customers.

Simple random sampling method was used and sample size was obtained by Cochran formula:

$$n = \frac{NZ^2 pq}{Nd^2 + Z^2 pq}$$

n: Sample size, N: number of members of the population, z=1.96, d=error value=0.05, reliability coefficient=95%, p=q=0.5

Since the number of population members in this formula was intended to be unlimited, the amount of n (number of sample members) was set equal to 394 and the same number of analyzable questionnaires were collected. After identifying the compensation strategy, the questionnaire was designed by the method of AHP. Compensation strategies, made up of six strategies, including communication, empowerment, feedback, atonement (blood money), explanations and tangibles, were developed in 15 levels for paired comparisons. AHP method with fuzzy approach was adopted in this study; and in order to determine the weight of criteria, Extent Analysis (EA) was used according to the Chinese scholar Chang Jung (1996).

Extent Analysis of Chang can be developed in four following steps:

Step 1: In the EA method, after the formation of criteria pair wise comparisons matrix to each other, for each row of the matrix of pair wise comparison, the fuzzy artificial development (Si) with respect to the I the goal is calculated by equation (1):

$$S_i = \sum_{j=1}^m M_{gi}^j \otimes \left[\sum_{i=1}^n \sum_{j=1}^m M_{gi}^j \right]^{-1} \quad (1)$$

In order to calculate $\sum_{j=1}^m M_{gi}^j$, operations of total fuzzy numbers for m, the analysis of the matrix is carried out according to equation (2):

$$\sum_{j=1}^m M_{gi}^j = \left(\sum_{j=1}^m l_i, \sum_{j=1}^m m_i, \sum_{j=1}^m u_i \right) \quad (2)$$

In order to calculate $\left[\sum_{i=1}^n \sum_{j=1}^m M_{gi}^j \right]^{-1}$, operations of total fuzzy numbers for $M_{gi}^j (j=1,2,\dots,m)$ is carried out according to equation (3):

$$\sum_{i=1}^n \sum_{j=1}^m M_{gi}^j = \left(\sum_{i=1}^n l_i, \sum_{i=1}^n m_i, \sum_{i=1}^n u_i \right) \quad (3)$$

Then reverse vector of equation (3) is calculated using equation (4):

$$\left[\sum_{i=1}^n \sum_{j=1}^m M_{gi}^j \right]^{-1} = \left(\frac{1}{\sum_{i=1}^n u_i}, \frac{1}{\sum_{i=1}^n m_i}, \frac{1}{\sum_{i=1}^n l_i} \right) \quad (4)$$

Step 2: After the the calculation of S_i , their magnitude (possibility) must be obtained. If \tilde{M}_1 and \tilde{M}_2 are two fuzzy triangular numbers, in such a way that $\tilde{M}_1 = (l_1, m_1, u_1)$ and $\tilde{M}_2 = (l_2, m_2, u_2)$, then the magnitude of \tilde{M}_2 on \tilde{M}_1 is defined as follows:

$$V(\tilde{M}_2 \geq \tilde{M}_1) = \text{Sup}[\min(\mu_{M_1}(x), \mu_{M_2}(y))] \quad (5)$$

This equation can be written as eq (6):

$$V(\tilde{M}_2 \geq \tilde{M}_1) = \text{hgt}(\tilde{M}_1 \cap \tilde{M}_2) = \mu_{M_2}(d) = \begin{cases} 1 & m_2 \geq m_1 \\ 0 & l_1 \geq u_2 \\ \frac{l_1 - u_2}{(m_2 - u_2) - (m_1 - l_1)} & \text{otherwise} \end{cases} \quad (6)$$

In order to compare μ_{M_1} and μ_{M_2} , both $V(\tilde{M}_1 \geq \tilde{M}_2)$ and $V(\tilde{M}_2 \geq \tilde{M}_1)$ are required.

Step 3: Magnitude of a convex triangular fuzzy number to k convex triangular fuzzy number is calculated by equation (7):

$$V(\tilde{M} \geq \tilde{M}_1, \tilde{M}_2, \dots, \tilde{M}_k) = V(\tilde{M} \geq \tilde{M}_1) \text{ and } V(\tilde{M} \geq \tilde{M}_2) \text{ and } \dots \text{ and } V(\tilde{M} \geq \tilde{M}_k) \\ = \min[V(\tilde{M} \geq \tilde{M}_i)] \dots, i=1,2,\dots,k \quad (7)$$

To calculate the weight of criteria in matrix of pair wise comparisons, the following calculation is carried out:

$$d'(A_i) = \min[V(\tilde{S}_i \geq \tilde{S}_k)] \dots, k=1,2,\dots,n, k \neq i \quad (8)$$

According to this vector, criteria weight will be as (9):

$$W' = (d'(A_1), d'(A_2), \dots, d'(A_n))^T \quad (9)$$

Step 4: Through normalization, the normalized weight vector is obtained based on (10):

$$W = (d(A_1), d(A_2), \dots, d(A_n))^T \quad (10)$$

In relation eq (10), W includes non-fuzzy numbers [17].

Research Conceptual Model

Service compensation strategies can be used as an important and

effective tool, in order to retain customers who are unhappy because of previous bad experience from poor service, so that, if properly implemented, the angry and frustrated customers can be converted to loyal ones by an increase in their satisfaction. In this study, identified compensation strategies are shown in the conceptual model below (Figure 1).

Findings

The results of the calculation on all the questionnaires which resulted in the determination of relative weight of each of the six criteria for service compensation are presented in Table 1. As can be seen, empowerment criterion with the relative weights of 0.247 had the greatest importance. Tangibles criterion measure with the relative weight of 0.115 was the least important.

Discussion

Calculation of the final weight and compensation strategy ranking demonstrated that empowerment obtained the first priority among the compensation strategies which can act as a reminder to officials of the education and serve as an update for the information of insurance staff. Communication was chosen as the second strategy by the customers. This choice suggested that customers demanded insurance staff to honestly solve the problem of the customer. It demonstrated that the way the staffs handled customers was very important. According to the results obtained, customer relationship management principles were of top priority for every insurance organization. The strategy of identification of the extent of problem solving progress and explanation of the cause of problems came in third place. Compensation obtained the fifth priority after communication. This indicated that if an error occurred due to the insurance organization, the clients would not pay compensation, but the insurance would be responsible for this failure occurred. The appearance was in the last place. In a study on banking industry in India, [18] used RECOVSAT tools which comprised strategies of communication, empowerment, feedback, atonement (blood money), tangibles and explanations, to measure customer satisfaction. The results showed that strategies of tangibles and atonement (blood money) were the most important factors among RECOVSAT dimensions in customers' view, and communication and empowerment strategies were in the next places. Explanations had no specified position with regard to the other strategy, and feedback was identified as the least important strategy. In this study, the atonement (blood money) strategy was selected as the fifth important strategy. In a study [17], among customers of companies providing broadband services, compensation strategies were prioritized by the company's customers. The results showed that among the six compensation strategies, empowerment had the top priority and atonement (blood money), explanations, communication, tangibles and feedback were at the next places of priorities. Chang et al. [19] conducted their study in the hospitality industry, with the aim of explaining the relationship between compensation and the justice perceived, and examining the

Row	Rank	Criteria	The relative weight
1	1	Communication	0.247191
2	3	Empowerment	0.154136
3	5	Feedback	0.142225
4	2	Atonement	0.197325
5	6	Explanation	0.115026
6	4	Tangibles	0.144097

Table 1: Calculation of the relative weight of the criteria for compensation.

Compensation strategy that identified in the conceptual model

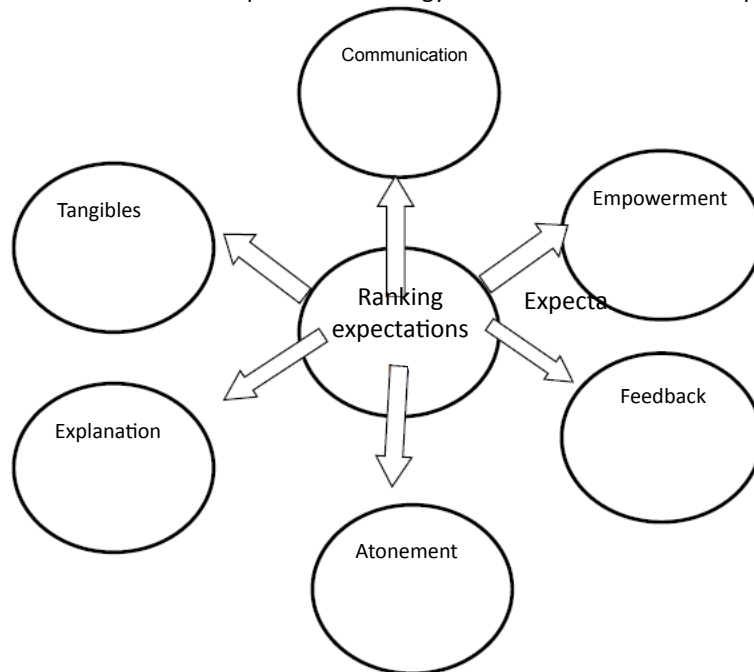


Figure 1: Conceptual Model Research (RECOVSAT).

adjusting effect of participation level and sub-culture. The results suggested that the high participation of the perceived justice level was mainly affected by the dimensions of atonement (blood money) and empowerment, while the dimensions of communication, feedback, explanations and tangibles influenced the justice perceived at low level of participation [20-25].

Akpan Moon conducted a study on hospitality industry. This study examined the effects of satisfaction with compensation on behavioral intentions of customers in 5 star hotels in North Cyprus [26]. The results showed that among the service compensation dimensions, atonement (blood money) and tangibles demonstrated no positive effects on customer satisfaction with compensation, while there was a positive relationship between the dimensions of feedback, empowerment, explanations and communication on compensation satisfaction [27-30].

Conclusion

According to the importance of service compensation and emphasis of theoretical principles on this case, and also taking into account the findings of this study and similar studies aforementioned, the following can be effective in improving the performance of insurance organizations' service compensation:

Recommendations:

- Since the individual and professional behavior of insurance employees is of great importance and in CRM model where the behavior dimension, at least in insurance system, enjoys higher status in two systematic and procedural dimensions, it is emphasized that the behavior of staff and the respect for the personality of customers, are of the most important attributable character of insurance staff. This requires the development of training courses, such as customer relationship management, in order to provide the scientific knowledge needed for customer-orientation and the respect for clients.

- Since the enrichment of the professional behavior of employees towards clients requires high professional and insurance information, it is proposed to develop and teach the needed training packages, while expanding the basket of insurance services, particularly in the field of IT, the electronic health records and legal trainings.
- In trying to provide services, the customer might be hurt, and this should be dealt with within the framework of codes of conduct if negligence is on the part of the staff, but sometimes "a lot of negative perceptions about services and insurance occur due to misperception. Therefore, it is suggested to predict promotional and donating packages apart from the establishment of mechanisms in order to keep track of the hurt done to any customer. This can be delivered to the customer in addition to the office tracking, which will have definitely "a very important role in changing attitudes and perceptions of the client."
- There should be the establishment of a system for the management of complaints and a database for criticisms and offers of customers and then an attempt to use this data to improve the quality of services and finally the consent of the customers.
- In order to model and reinforce desirable behaviors in line with customer-orientation, the feedback needed to identify the customer-focused employees in customers' view is obtained and they are appreciated by obtaining local festival, with a focus on promoting customer-oriented behavior of the employees.
- In order to improve the quality of electronic Iranian health records services, communication, social, psychological and any other information that increases the quality of communication between the employee and the customer must be provided

to insurance staff through the training courses and internal bulletins.

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