



## Identifying and Prioritizing Effective Factors on Assessing Service Quality of E-Government

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**Abstract.** This research is conducted with the aim of identifying and prioritizing effective factors on assessing service quality of E-Government. First, we deal with assessing and comparing service quality presented in Electronic Offices of two organizations: Social Welfare Insurance and Health Insurance, then benefited from managers viewpoints to identify and prioritize effective factors causing difference between these two organizations and finally reached to defined goals through analyzing statistical results. This research is true- experiment objectively and descriptive-survey by approach two Questionnaires are used for assessing service quality and effective factors affecting it. Statistical population of this research were insured population of these two organizations and office managers of electronic service offices in Tehran. In so doing a piloting sample of 260 users and 200 managers of both organizations were chosen. Cronbach's alpha were 0.875 and 0.84 for SERVQUAL and effective factors on service quality questionnaires respectively and reliabilities of both were in acceptable range. Kolmogorov-Smirnov test was used for data normalization and confirmatory factor analysis and T-test were used for testing Hypotheses. Based on the confirmatory factor analysis results, service quality delivered by social welfare was higher than Health Insurance from Insured viewpoint, also responsibility aspect was the most important aspect of its service quality advantage in Social Welfare Insurance. Based on the factor analysis results of effective factors from managers viewpoint, all the five factors in conceptual model had positive effect and being manager-based was the first effective factor in its advantage. Finally, some recommendations were suggested for Insurance Organizations Service Quality improvement.

**Keywords:** Electronic Service Quality, SERVQUAL Scale, Research, Total Quality Service Model, Health Insurance Offices, Social Welfare Insurance branches

### 1. INTRODUCTION

In recent years governments' attention to presenting well-quality services to people is more observable than the past. Governments are willing to deliver services to improve people and citizen satisfaction and enhance their participatory level in the social activities, so that attract their confidence and increase social capital. (Dilmaqani,1392). Generally, today's competent market forces every service or product company to try to maintain and promote its place among other rivals so that to survive and gain more benefits. Customers level of knowledge enhancement and accordingly increase in expectation level and their requests of service organizations face them with service challenges.

On the other hand, nowadays, quality is a crucial factor in organization's success or defeat. Thus, especially service organizations should seek their service quality enhancement because quality is viewed as a major factor that can bring a powerful competency advantage for them.(Safarnia et al,1389).

Today's, service industries play an important role in countries economical growth and development and Insurance as a productive and supportive industry for the other industries has an important place. From other hand, Insurance world is rapidly changing and moving towards

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competency and for promotion, survival and remaining in the scene it is required to know customer's needs correctly and seek their satisfaction. Higher quality of services is known as one of key aspects in drawing customer's satisfaction. Service quality in the insurance industry to a great extent depends on staff performance. Therefore, it can be bravely said that in this industry, interior service quality is considered as a strategic axis in drawing customer's satisfaction.(Shahin & Ablohassani,1389).

Insurance companies existence and growth to play a better role in the country's economical scene, to a great extent depends on the customers desire to contact with insurance companies. Hence, presenting high quality services is a crucial concern especially in today competent world.(Monavvarian & Amiri, 1384).

Thus We will attempt in this research to discuss and inspect quality of Electronic Services delivered by Social Welfare Insurance and Health Insurance from customer's point of view factors affecting service quality from manager point of view, with an analogous and comparing view.

## **2. REVIEW OF LITERATURE**

### **2.1 Total Quality Service Model (Model of Factors Affecting Service Quality)**

In the Saravanan & Pao(2006) Model, Total Quality Service Model is an approach in which key management factors effecting on the promotion of service quality are selected and applied so that customer's satisfaction are met through service quality enhancement. These researcher classified different aspects of service quality management in five groups: management-oriented, customer-oriented, staff oriented, organization-oriented and technology-oriented.

### **2.2 SERVQUAL Scale (Service Quality Measurement Model)**

Parasuraman et al(1991) demonstrated through interview that despite of service and customer type, customers use a common five aspect criteria: tangibles, reliability, responsibility, assurance and empathy to assess service quality.

## **3. METHODOLOGY**

### **3.1 Conceptual Model and Variables**

Basic conceptual model of factors affecting e-government service quality is depicted in figure 1. Five factors affecting service quality assessment are considered as dependent variables and a proposed six-pack model is considered as independent variables.

-Extracted from comprehensive model of service quality (Saravanan & Pao,2006) and five dimension index of SERVQUAL (PARASURAMAN,1991)



Figure 1. Research Conceptual Model

### 3.2 Sample

Insurance service offices and branches:

Two office from Health Insurance Electronic Service and two branches of Social Welfare Organization were selected randomly from Tehran North, South, West and East districts.

$$50\left(\frac{\text{Number of Questions}}{\text{Number of Factors}}\right)^2 - 450\left(\frac{\text{Number of Questions}}{\text{Number of Factors}}\right) + 1100$$

-Sample workload and sampling approach of both Insurance organization office's visitors: using above formula and daily workload of ten Health Insurance and Social Welfare Insurance Offices. Based on specified sample's workload, each office and branch share according to its visitors were determined and sampling was done randomly during working days in different hours of day from visitors.130 visitors were selected as sample from each organization.

-Sample size and sampling approach of both organization's office managers:

The total number of both organization managers is 362, from which 217 are social welfare managers and 145 are Health Insurance managers. Considering sample size and using above formula the least required sample is 200(100 from each organization.)

### 3.3 Measuring Approaches, Tools and Scales

This research process is done based on a causal-analogous to determine factors. It means that with understanding of difference between service quality presented in two governmental insurance organizations, analyzing and comparing and affecting factors in proposed model were done. Reviewing related literature and conducted researches, factors for measuring service quality and factor effecting on it were determined. These indices were ended and localized according to advisors and consultant professors and some insurance experts. In so doing, 22

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item questionnaire was compiled to assess service quality of each organization. Another 20 item questionnaire also was compiled to measure factors effecting on two organizations offices and branches service quality.

### A) Insurance service affecting factors questionnaire

Saravanan and Pao (2006) comprehensive model of service quality dimensions was used to determine factors effecting on E-SQ assessment.

### B) Insurance electronic service Questionnaire

Parasuraman et al(1991) servqual revised indices dimensions was used to assess service quality and organization policy was added to it.

$\alpha$ -Cronbach coefficient was used for final reliability test.  $\alpha$ -Cronbach in this research was 0.875 for servqual questionnaire and 0.84 for factors effecting on service questionnaire and both were estimated acceptable.

After making sure of reliability and validity of questionnaire as the main tool of data gathering, these two questionnaires were distributed in piloting sample and raw data gathered for initial process, analysis and research Hypothesis accept or reject.

### 3.4 Validity determination

Factors extracted from literature were classified and edited to evaluate questionnaire content validity. Next, were delivered to insurance experts in the form of a questionnaire. After considering experts, proposals and viewpoints, required changes in initial form were done them final questionnaire were prepared.

### 3.5 Analysis

To describe two insurance organizations service agent's visitors demographic variables and for indices validation, frequency table and factor analysis were used respectively, then Kolmogrov-Smirnov test and confirmatory factor analysis were used for data normalization inspection and two organizations service quality evaluation accordingly. Research variables were evaluated using a five-item Likert scale package. Descriptive statistical approaches like frequency table, frequency percent cumulative percentage and mean were used for participants general characteristics description and inspection. It should be noted that analyzing resulted data was done using AMOS statistical software.

## 4. RESULTS

### 4.1 Confirmatory Factor Analysis Result of SERVQUAL Variables

**Table 1.** Confirmatory factor analysis result of SERVQUAL variables

Health Insurance	Social Welfare	Intervening variables	Item No.	Dimensions
.24	.24	Good appearance of staff	1	Tangibles
.30	.23	Novelty of facilities	2	
.66	.28	Beauty & attractiveness of equipment	3	
.42	.36	Office cleanness	4	
.39	.53	Honestly interest to solve customers' problems	1	Reliability
0.28	.72	On-time service	2	
0.15	.38	Duty service	3	
0.37	.48	Properly service	4	
0.13	.35	Without expectation service	5	
0.31	.63	Great desire to help visitors	1	Responsibility
0.26	.38	Service time-to-need declaration	2	
0.66	.42	Quick service delivery	3	
0.45	.64	Doing another job when doing service	4	assurance
0.55	0.69	Staff enough knowledge to response	1	
0.36	0.49	Staff politeness	2	Empathy
0.13	0.65	Safety & confidence feel by customer	3	
0.52	0.65	Staff enough attention to every visitor	1	
0.18	0.57	Less effort to understand visitor's need	2	Policy
0.43	0.40	Fairly service delivery	3	
0.27	0.30	Enough parking space per visitors	1	Policy
0.36	0.25	being suitable of place for visitors	2	
0.58	0.75	being suitable of office working hours for visitors	3	

### 4.2 Confirmatory Factor of All Affecting on Service Quality

**Table 2.** Confirmatory factor analysis of all affecting variables

Health Insurance	Social Welfare	Intervening variables	Item No.	Dimensions
0.19	0.60	Obligation to service plans	1	Management-O
0.23	0.41	Standardization of services process	2	
0.26	0.43	Requirement of analysis of presented service-q	3	
0.41	0.58	Determination goals of q-s improvement	4	
0.44	0.64	Customer attention & maintaining techniques	1	Customer-O
0.48	0.52	Complains for receiving feedback of insured	2	
0.18	0.71	Understanding of insured expectations	3	
0.14	0.31	Gaining satisfaction with better service	4	
0.40	0.28	Staff training	1	Staff-O
0.25	0.45	Less effort to employ deserving recruits	2	
0.30	0.34	Personal and vocational staff empowerment	3	
0.35	0.44	Staff satisfaction provision	4	
0.26	0.70	Sympathy, responsibility service delivery	1	Organization-O
0.29	0.60	Performance factors to service improvement	2	
0.15	0.52	Ongoing service improvement	3	
0.14	0.48	Access to appropriate technology	1	Technology-O
0.12	0.80	Hardware infrastructure development	2	
0.45	0.36	software infrastructure development	3	
0.39	0.42	Process management significance for service	4	
0.26	0.25	Access to data processing systems	5	

### 4.3 Results and Descriptions of Hypothesis

Description and confirmation of test research Hypothesis

- H<sub>1</sub>: management-oriented
  - H<sub>2</sub>: customer-oriented
  - H<sub>3</sub>: organization-oriented
  - H<sub>4</sub>: technology-oriented
  - H<sub>5</sub>: staff-oriented
- } Has impact on service quality at both of organizations

**Table 3.** T-test and significance level (Social Welfare).

Orientations	Non-standard estimation	Standard error	Critical T-test	ratio	Significance coefficient	Standard coefficient	Multivariate coefficient
Management-O	.314	.040	7.928		***	.397	
Customer-O	.147	.044	3.359		***	.183	
Staff-O	.131	.029	4.545		***	.160	.907
Organization-O	.186	.034	5.513		***	.248	
Technology-O	.209	.037	5.683		***	.235	

**Table 4.** T-test and significance level (Health Insurance)

Orientations	Non-standard estimation	Standard error	Critical T-test	ratio	Significance coefficient	Standard coefficient	Multivariate coefficient
Management-O	.097	.033	2.930		.003	.128	
Customer-O	.300	.032	9.327		***	.445	
Staff-O	.150	.026	5.826		***	.247	.846
Organization-O	.178	.032	5.485		***	.253	
Technology-O	.222	.033	6.724		***	.308	

### 4.4 Prioritizing Service Quality Aspects and Affecting Factors

**Table 5.** Prioritizing Service Quality Aspects

<i>service quality aspects priority</i>	<i>Social welfare branches</i>	<i>Health Insurance Offices</i>
1	Responsibility	Assurance
2	Reliability	Sympathy
3	Sympathy	Reliability
4	Policy	Policy
5	Tangibles	Responsibility

**Table 6.** Affecting Factors on Service

<i>Affecting factors priority</i>	<i>Social welfare branches</i>	<i>Health Insurance Offices</i>
1	Management-O	Customer-O
2	Organization-O	Technology-O
3	Technology-O	Organization-O
4	Customer-O	Staff-O
5	Staff-O	Management-O

### 4.5 Data Analysis Results

Data analysis results in first part of research indicates that Social Welfare Offices service quality was totally higher than Health Insurance and customer's satisfaction was also higher Social Welfare. Impact factor were higher in all aspects of service quality measurement. With a

closer look at aspects prioritizing measurement, we can see that the most important aspect in this organization service quality advantage is responsibility. In the second part, results show that all the five factors are effecting in service quality and then we can observe that in the Social Welfare Insurance Organization management-oriented variable has a higher impact on electronic servqual than other factors. And staff-oriented variable has the least impact. Considering multi-variant coefficient it is demonstrated that independent variables determine very high level of dependent variable that is electronic servqual.

## 5. DISCUSSION AND CONCLUSION

With comparison and investigation of results and achieved prioritizations in both sections of research, it can be concluded that:

Social welfare Organization approach towards management-oriented aspect has caused that staff responsibility aspect take first priority. It means that focus on management leads to responsibility promotion and accordingly to better delivery of service quality.

Organization-oriented aspect of social welfare organization is the second effecting factor causing advantage and this indicates its importance in electronic services is higher than customer-oriented and technology- oriented aspects. And about Health Insurance We can see that organization first strategy is focused on customer-oriented aspect and caused assurance aspect to promote in the organization. It's next focusing aspect is on the technology-oriented aspect, so we can infer if an organization get to develop in two aspects of customer-oriented and technology-oriented without simultaneous promotion of management-oriented and organization-oriented aspects, it would receive no result in its servqual improvement.

Also in descriptive statistics analysis below results are significant:

Both organizations manager's graduation certificates indicate that there in no desire to benefit experiences of managers with Ph.D certification and high population of managers with B.A educational level.

The only observed relative advantage of Social Welfare Organization is deployment of managers with M.A certificates.

Distribution of managers with more experience is observed in Social Welfare Organization. It can be concluded that academic and more managerial background are two affecting factors in Social Welfare Organization success than Health Insurance.

## 6. RECOMMENDATIONS

- SERVQUAL scale and effecting factor prioritizing in the organization could be a criteria for primacy of plans in Health Insurance Organization and the managers and planners of that organization can use resources more efficiently focusing on aspects with more priority.
- Considering that responsibility aspect from insured viewpoint and management-oriented and organization-oriented factors from managers viewpoint have the higher priority among other aspects, it is recommended that organization managers and decision makers expectations and gaining their satisfaction through electronic quality improvement.
- Respondent determination: regarding responsibility factor significance(responsiveness)

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As the first priority in research results, service quality could be promoted by careful determination of area of responsiveness; to the sense that agencies heads and managers investigate this enhancement and report that regularly and through written and attended reports and responsiveness for lower levels of organization delivered qualities also should be carefully determined and take reports regularly.

- Responsiveness for lower levels of organization delivered qualities also should be carefully determined and take report regularly.
- Organization staff training to understand insured significance:
- Health insurance organization managers should deliver required training to their staff so that they could understand insured better and try to meet their needs and requests. one of these significant training is communication skill training that enjoys special importance and the most important communication skill for staff is the effective listening ability to insured requests to meet their needs.
- Appearance aspect: considering less importance of appearance aspect from insured point of view, it is suggested that less expenses are spent in this area.
- Management-oriented aspect: (standardization item importance)

To improve branches servqual; insurance servqual standards are performed through constant examination of servqual improvement results.

- Payment mechanism change: remuneration distribution in units has no significant relationship with workload and quality at the moment even remuneration distribution has no relationship with units income so it is better, every remuneration payment is done based on real income, workload and quality by changing payment mechanism. This change should also include unit head and manager incomes.
- Financial management change: it means that a part of financial management of units is granted to the heads of units. At the moment, the heads have no interference in the financial and income processes if this responsibility is granted to them, they will plan for their income enhancement necessarily.
- Assignment: out of main approaches of servqual delivery enhancement is use of assignment tool. It can be done by assignment to both own personnel and private sector.
- Support services implementation: this department has the responsibility of final investigation of documents and files, and gives feedback for problems and failures along with removing likely problems. The staff will receive a percent of servqual promotion as extra payment for work out of working hours.
- Interactivity with contractors: in many cases service quality could be promoted in a considerable amount through establishing interaction with contractor's delegates and making harmony with them, for example , insurance delegates could be used as personnel training courses teachers held for servqual promotion.
- Establishing powerful internet suggestion answering system:
- Department personnel are the most expert individuals for giving solution for department promotion. By establishing a system for making use of their suggestions and rewarding contractive suggestions, good results will be attained.
- Forming service quality improvement committee:
- This committee will have the responsibility of investigation, report and making solutions for service quality promotion at the level of department. Committee members will be selected by department head.
- Benefiting from social security organization previous successful managers experiences: current heads and managers of health insurance departments could benefit from other departments experiences for SERVQUAL promotion. SERVQUAL comparison increase managers and personnel motivation.



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