



The relationship between various aspects of the electricity distribution company's performance and customers' satisfaction as well as their perceived justice

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ABSTRACT

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This study investigates different dimensions of perceived justice and its relationship with customer satisfaction in Electricity Distribution Company in Ardabil, Iran. Since the electricity distribution company rarely has a face-to-face contact with customers, it is difficult to examine customers' satisfaction through the conventional techniques. Therefore, based on the literature, a questionnaire was developed and distributed among 2395 individuals of diverse groups. By exploratory factor analysis, six different factors of the electricity distribution company's performance which are effective in satisfaction were detected. Finally, these factors' relation to the different dimensions of justice and customer satisfaction was studied. The results indicated that the factors which were the most effective in customers' satisfaction and their perceived justice were the ones related to communication. Regarding some differences in perceived procedural and distributive justice, the announcing factor indicated the highest correlation with customer satisfaction. Accordingly, it may be claimed that a good face-to-face contact has no substitution so far, and one-way communication can only serve its role partially.

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Introduction

Customer satisfaction, for a long time, has been an important construct in retailing literature because it is an important prerequisite for positive outcomes such as purchase behavior and

loyalty (Gustafsson, Johnson, & Ross, 2005). Nowadays, satisfaction is gaining more attention because of the intense competition in the business world.

However, in companies that do not work in fully competitive markets and their performance quality differs from other enterprises this issue may be different. Electricity distribution companies which have different market and service quality are examples of these corporations. In these companies, electricity is produced or purchased and then it is delivered to the customers who are seldom in a face-to-face contact with the companies. In most cases, it is impossible to scrutinize customers' opinions and to establish a direct relation between electricity distribution organization operation and customers' satisfaction. The satisfaction issue in these corporations and its relation to the quality of service is not measurable through conventional models such as Servqual because some critical aspects like empathy and politeness are considered intangible for the majority of customers. Oliver (1980) identified that these types of moods can be studied by using classic expectancy disconfirmation models, and the effect of direct contact or its lack may be generally judged by examining the general feelings of respondents.

Oliver and Swan (1989a, 1989b) considered the joint influence of disconfirmation and perceived justice on customer satisfaction, but they only addressed one aspect of perceived justice, namely the distributive aspect. Recent studies have examined the influence of all three types of perceived justice on customer satisfaction and behavioral intentions after service failure and recovery encounters (Tax, Brown, & Chandranshenkaran, 1998).

Social exchange theorists have identified three dimensions of perceived justice that influence how people evaluate exchanges, namely distributive justice, which involves resource allocation and the perceived outcome of exchange (Deutsch, 1975), procedural justice, which involves the means by which decisions are made and conflicts are resolved (Leventhal, 1980; Linda & Tyler, 1988), and interactional justice, which involves the manner in which information is exchanged and outcomes are communicated (Bies & Shapiro, 1987)

Therefore, we expect that customer satisfaction with no or low direct contact with encounters will be influenced by customers' perceptions of all three dimensions of justice—distributive, procedural, and interactional—after controlling over the effects of disconfirmation that arise from the service encounter.

The study specifically aimed to answer the following questions:

1. Do customer satisfaction determinants have positive impact on perceptions of distributive justice in service no or low direct contact with encounters?

2. Do customer satisfaction determinants have positive impact on perceptions of procedural justice in service no or low direct contact with encounters?
3. Do customer satisfaction determinants have positive impact on perceptions of interactional justice in service no or low direct contact with encounters?

Method

In order to conduct this research, the researcher selected 2033 individuals of diverse groups of customers. The participants were customers of the Electricity Distribution Company. The instrument in this study was a questionnaire including three parts, i.e., demographic qualities of the respondents, customer satisfaction, and perceived justice. It measured respondents' frequency of using six different factors which are effective in customer satisfaction by means of a five-point Likert scale, namely (Strongly disagree, Disagree, Neutral, Agree, Strongly agree). Having administered and collected the data, it yielded a response rate of 84%.

The first part of the questionnaire which inquired into demographic qualities of the respondents is displayed in Table 1. The second part of the questionnaire was allocated to the variables effective in customer satisfaction. For determining the important factors among 30 qualities, factor analysis with the Varimax rotation and Kaiser Normalization was conducted. Only the factors with values higher than Kaiser (1957, 1987) and the variables whose loading factors were greater than 0.5 were selected. The third part of the questionnaire consisted of questions about perceived justice which comprised of distributive justice, procedural justice, and interactional justice. Likert Scale spectrum for distributive justice which is adapted from Oliver and Swan model (1989a, b), consisted of (Strongly agree, Strongly disagree).

Table1
Demographic Features of the Respondents

Demographic Items (N=2033)	Valid Percent	Overall Satisfaction	Valid Percent
Education		Strongly agree	9.8
High School Graduate or Less	73.7	Agree	54.3
University	15.9	Neutral	18.6
Postgraduate Degree	10.4	Disagree	8.8
The Number of In-person Contacts		Strongly disagree	5.1
No Referring	50.1	Missing	3.4
Once	27.8		
Twice	15		
Three Times and More	7.1		

Likert scale spectrum for distributive justice, which is adapted from Oliver and Swan's model (1989a, b), consists of (Strongly agree/ strongly disagree) endpoints, while this

spectrum changed to seven-point scale anchored at middle and endpoints (Strongly Disagree/ Neutral/ Strongly Agree) for procedural justice and international justice (Tax, 1993).

Results

To examine the fitness of factor analysis, Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's test of sphericity were run on the data obtains. The obtained KMO measure was 0.85 which was more than 0.5. Bartlett's test of sphericity was 14576.4 (significance level = 0). Both statistical results confirmed employing factor analysis.

Totally, six factors were obtained in nine rotations that explain 57.9% of the whole variance. Table 2 shows the results obtained through factor analysis. Eigen values and variance percentages that each factor indicated, as well as Cronbach's alpha index are presented.

Table 2
Results of the Factor Analysis (N = 2033)

	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6
The time of electricity-meter readers reference to customers' homes	.61					
The way of electricity-meter readers reference to customers houses	.67					
The neat and modest appearance of electricity-meter readers	.77					
The manner of electricity-meter readers in responding to common questions	.71					
Announcing outages		.70				
The way of announcing the new services		.83				
Announcing customers' rights		.84				
Providing customers with information on the estimation way of electricity costs within the peak load and low load hours		.53				
The appropriate response of staff to correspondence or phone contacts			.68			
The length of customers' waiting for agents to fix the problem			.67			
The variety of offered services based on customers' needs			.59			
Help and empathy with customers when a problem occurs			.54			
To easily establish indirect contact with units heads			.55			
The precision of electricity-meter readers in reading dial and recording it				.56		
The reliability of electricity meter readers				.67		
The way of bills distribution among customers				.76		
Time of bills' distribution in each month				.51		
The cost of consumed electricity					.71	
Electricity oscillations and voltage decrease					.77	
The number and length of outages without prior announcing					.57	
Offering specialized services for people with peculiar state						.61
Servicing in due time						.61
Servicing in off days/holidays						.64
The number of errors in the bills						.54
The legibility and preciseness of the bills						.75
Eigen value	3.22	2.85	2.25	2.36	2.07	1.96
% of Variance explained	727/11	907/10	9/54	8/87	802/8	867/7
Cronbach's Alpha coefficient	0.75	0.77	0.64	0.69	0.67	0.61
The Kaiser- Meyer- Olkin measure of sampling adequacy	Extraction Method: Principal Component Analysis. Rotation					
0.85	Method: Varimax with Kaiser Normalization					
The Bartlett's test of sphericity (significance level)	0.00					

Cronbach's alpha was used for evaluating the reliability of the criteria and stabilizing: the variables composing each factor, and only the group of variables with correlations greater than 0.5 were chosen which seems to be an appropriate confirmer for the construct reliability. The Cronbach's alpha designed for the internal consistency of each factor's variables was more than 0.5 which accorded with Nunnally's criterion (Nunnally, 1978) and was greater than the minimum value, i.e., 0.5 presented as the reliability index of Nunnally's study (Nunnay, 1967).

The factor analysis' results indicated a distinct factor structure with relatively high loading on each factor. Most of the variables were placed in one factor with high loading, which represents a very low overlap among the factors, and the factors' independent structures. In addition, high loadings showed that there was a high correlation between the variables and the factors containing them.

Subsequently, for investigating each factor's effect on various aspects of customer satisfaction, the test of correlation between the factors and customer satisfaction was examined. The results are shown in Table 3.

Table 3
Correlation between Performance Factors and Justice Variables

Performance Factors	Factor1	Factor2	Factor 3	Factor 4	Factor 5	Factor 6
Perceived Justice						
Distributive	.22	.41	.76	.13	.11	.78
Procedural	.19	.67	.82	.09	.17	.55
Interactional	.13	.59	.89	.15	.23	.65
Customer Satisfaction	.35	.62	.71	.42	.37	.69

Discussion

The present study investigated different dimensions of the electricity distribution company's performance. For its performance quality, the electricity distribution company rarely has a direct contact with the users of service, as a consequence, study of its customers' satisfaction may not be based on the conventional models (Sattari, Daryani, Molaie, Rasooli, & Kheiravar, 2012) By running exploratory factor analysis, the company's different performances, in terms of effectiveness in customer satisfaction were identified. Then, these factors' relation to the variables determining satisfaction, such as procedural justice, interactional justice, and distributive justice, were explored. Based on the results obtained, all of the factors indicated a significant relationship with the aspects of justice. Among the factors, the sixth, third, and second factors showed stronger relation with various aspects of

justice, which may be because of the communicative nature underlying the concept of justice; in the case of making a direct contact, the customers will directly perceive the lack of justice or the reverse. The sixth factor, which had a particular service quality, seems to justify the above-mentioned point. Furthermore, the third factor which concerned the establishment of contact and the staff's responsiveness was directly related to the customers' perceived justice and in some way, supported the effectiveness of establishing direct contact with the customers (Sattari et al., 2012) even in industries like electricity distribution. High correlation between the third factor and customer satisfaction also confirms this result.

On the other hand, the difference between various aspects of justice and the second factor (announcing), demonstrated diversity in individuals' outlooks or the electricity distribution company's performance quality in this field. Procedural justice had the highest correlation with this factor whereas distributive justice indicated a lower correlation.

Therefore, it stands to logic to conclude that the electricity distribution company's correct performance concerning announcing depends on individuals with distinctions. However, the performance of this factor itself, with the perception of the other two types of justice, can lead to a higher satisfaction, and to some extent may be able to close the perceived gap pertaining to the customers' lack of face-to-face contact with the company. However, in brief, it is imperative to mention that nothing can take the role of two-way communication completely.

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