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EFFECT OF UNFAIRNESS ON CUSTOMER SATISFACTION: NEW INSIGHTS INTO CUSTOMER RETENTION

Takuro Yoda*, Toshikazu Kumakura**

Abstract

Purpose: This article aims to develop a customer satisfaction model based on the Expectancy Disconfirmation model and to examine the negative effects of unfairness on customer satisfaction in medical care services. **Methodology/approach:** A subjective comparison of ratio of one's input to outcome with that of another person can generate a perception of disparity that prescribes a feeling of unfairness. Customer unfairness is determined by the three antecedents – distributive justice, procedural justice and advantageous inequity. The hypotheses are built along the conceptual model. To test our hypotheses, we used a questionnaire survey for medical services. **Findings:** The results of the investigation revealed that unfairness impacts customer satisfaction. Unfairness in the case of medical services has the same impact as the overall service performance on customer satisfaction. **Research limitations:** There are limitations to generalizing the findings of this empirical study because the subject of the investigation was medical care. Hence, the introduced propositions should be further specified and tested in a large-scale quantitative study on different services. **Practical implications:** Several strategic implications arise from the results of the study. Management has to ensure that programme- and relationship-related negative effects are avoided. Programmes to increase customer satisfaction could translate into preferential treatment that benefits privileged customers and generates a feeling of unfairness among the remaining customers. This necessitates action towards handling dissatisfaction by reducing the feeling of unfairness. **Originality/value:** This paper provides new insights into the antecedents of customer dissatisfaction. The first-time application of the unfairness construct to the analysis of customer satisfaction is also an innovation. This contribution is of high value for researchers in the field of customer satisfaction and loyalty.

Key words: service, satisfaction, fairness, justice.

Introduction

Many firms in recent years have been showing an interest in customer retention. It is recognised that there is a positive correlation between the frequency of credit card usage and the number of years the card has been possessed (Reichheld and Sassar, 1990). A long customer relationship raises the chance of other products being purchased (cross-selling), or a switch to higher grade products (up-selling). Moreover, a lengthy customer relationship translates into reduced business activity costs and customer acquisition outlay. This reduced cost results from factors such as increased efficiency in communication and acquired knowledge pertaining to more efficient sales methods that match customers' needs and purchase patterns.

These merits of customer retention are particularly striking where acquisition costs are high. Under mature market conditions, corporations deploy multifarious marketing management techniques in order to retain current customers. For instance, switch prevention is applied through frequent-shopper programmes or continuous discount schemes. Preferential customer service programmes are implemented when attempting to raise buyer satisfaction (Fornell, 1992).

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However, poorly implemented preferential customer services could impair such benefits from customer retention. For instance, those strategies which segregate only some of the customers may cause retaliation from the remaining customers. It has already been pointed out that, in the case where consumers collectively harbour an 'all customers are equal' sentiment there is difficulty in successfully executing such exclusive strategies (Gregory, 2001). Likewise, Fournier, Dobscha and Mick (1998) have shown that despite the fact that many corporations are increasingly attending to customer affinity and loyalty, customer relationship management (CRM) is often inadequately implemented. They have also warned that whilst many corporations render special treatment towards their so-called best customers, the other customers often feel neglected and perceive unfairness. There is no guarantee that those customers that felt inequitable attention will consciously continue business with the same corporation. If unfairness is a factor that has an influence on customer retention, then modifying the service level for *each* customer may not necessarily be a good idea; and may therefore require some thoughtful management.

There are several articles on CRM and research in related fields. However, such work focuses exclusively on *methods* to embrace the best customers, whereas there are few discussions on *ways to interact* with the remaining customer base. In this article, we seek to clarify the impact on customer satisfaction from their perception of unfairness at being discriminated. We then attempt to suggest strategies which the firm can adopt to manage customers' feelings of unfairness.

Theoretical Background

Previous Research on Fairness

At the outset, one might ask: 'why do people perceive unfairness, or why do they get frustrated as a consequence of it'? In the field of human relations, social exchange theory (Homans, 1961) focuses on such feelings and emotions. According to Homans (*ibid*), human social transactions are similar to those dealings found in business. Homans (*ibid*) formulised a behaviour that seeks the generation of profit (satisfaction) as a result of deducting the loss (cost) from profits (rewards), in contrast to incurring liabilities (dissatisfaction). However, he does not believe that humans simply try and expand their own benefit to the maximum. Adams (1965) conceived that humans not only take their own benefit and cost into account but also compare those of others to estimate whether there is equity and value in the transaction.

According to Adams' (*ibid*) equity theory, humans seek a balance between the input that they employ at work, and the outcome of these inputs. The perception of fairness towards one's reward is the feeling generated out of the comparison between one's own ratio of inputs to outcomes and that of someone who can be used as a referent. When the ratios are equal, there is perceived fairness. When either ratio is considered to be high, then unfairness is experienced. For instance, in the case of employees' satisfaction, one such grievance takes the following form: "I work overtime every day (input) but only get a very low salary (outcome). He doesn't work much (input), but gets an outrageously high salary (outcome). Isn't this situation unfair? I am dissatisfied". People may experience frustration if their input-outcome ratios are different from those of others – they might feel guilty if they receive too much or might feel anger if they do not receive enough.

Equity theory has developed into grounded theory to explain a large scope of social relations – from distribution of wages to love relationships (Walster, Berscheid and Walster, 1976).

Fairness in the Customer Satisfaction Model

A question arises regarding the emotion of satisfaction with respect to individual customers. To-date, research on customer satisfaction has focused on specifying the leading primary factors of satisfaction, and theorizing the causal relationship between those factors and customer satisfaction. Several models, such as the Expectancy Disconfirmation model (Oliver, 1980), the Performance Model (Johnson and Fornel, 1992) and SERVQUAL (Parasuraman, Berry and Zeithaml, 1988), have received extensive support. The Performance Model and SERVQUAL explore service quality as the primary factor of customer satisfaction, while the Expectancy Disconfirmation model

interrogates factors such as the responsibilities of consequences and fairness. In order to address unfairness, which is the focus of this research, it is insufficient to consider only the quality of service. Fairness or unfairness is related to an attitudinal mutation that is generated in each customer resulting from a specific transaction. This study follows the Expectancy Disconfirmation model framework in order to analyse fairness/unfairness.

The Expectancy Disconfirmation model selects the attributes of products or services and compares the expectation level towards these attributes prior to purchase with the attributes' performance level acknowledged after purchase. When the expectation level is lower than the performance level (positive disconfirmation), the customer recognizes the benefits greater than anticipated and feels satisfied. Conversely, when the level of expectation is higher than the performance (negative disconfirmation), the customer recognizes the benefits as worse than anticipated and feels dissatisfied.

The Relationship between Unfairness and Satisfaction

As previously discussed, in equity theory, the perception of fairness/unfairness is determined by distributive justice (Folger and Konovsky, 1989). Distributive justice measures the difference between the ratios of outcome to input when compared with that of another person. For instance, let us consider the case of frequent customers to a supermarket. "Both she and I shop here almost everyday (input). She is given the special treatment (outcome) by the store but I am not (outcome). Isn't that unfair?" The same input generates different outcomes, i.e. the subjective comparison of the ratio of one's input to outcome with that of another person, generates a perception of disparity that prescribes the feeling of unfairness. When people perceive distributive justice they feel fair, whereas when they perceive the ratio of outcome to input is smaller than compared with that of another person, they feel it is unfair. The perception of such conditions leads people to sense an emotion of unfairness. *The person* in this case refers to another customer¹. Whilst *input* refers to the sum of invested elements perceived by the customer: such as purchase price, time and effort involved in obtaining a service; whereas *outcome* refers to the benefits perceived through the service procurement processes, i.e. service experience at a hotel, food taste at a restaurant. Meanwhile, as discussed above, unfair conditions contrastingly occur not only when one's outcome is small (or input is large) but also when the outcome is large (or input is small). The latter case is referred to as *advantageous inequity*. Advantageous inequity occurs in the case with distributive justice when a comparison indicates that one's own ratio is advantageous. Regarding advantageous inequity, the equity theory assumes that excessive benefits generate a sense of guilt. Thus, even though the unfair conditions are advantageous, it is hypothesised that it can also generate a sense of unfairness in the beneficiary's mind.

Distributive justice and advantageous inequity generate a sense of unfairness. However, it is not enough to consider distributive justice and advantageous inequity as the antecedents of unfairness. This is because equity theory solely focuses on the ratio of input to outcome, and places excessive emphasis on the sense of unfairness based on the results. Let us illustrate the issue with an example from a visit to Disneyland. Person A bought an advance ticket with a discount. Person B was not aware of the availability of advance tickets and bought a normal ticket at the regular price at the entrance. In the case of A, the purchase of a ticket at a discount price is justified because A intentionally bought an advance ticket regardless the risk that she may not be able to visit. It can be considered that the ratio of input to outcome would be approximately equal for A and B if B purchased a ticket for the day, although she was aware of the discount for the advance ticket; in that

¹ Authors such as Oliver and Swan (1989) have thus far assumed that 'the other' does not refer to another customer but to the corporation in the context of customer satisfaction. In other words, the comparison is set on the couple corporation *versus* the customer. For example, "with regard to the transaction for this car, there was a considerable difference when comparing that car dealer's input and outcome and mine. This transaction was unfair to me". In this case, the assumption is that the customer compares him/herself with the corporation (i.e. the transaction counterpart) to judge between fairness and unfairness. However, in this article, 'distributive justice among customers' is approached from the viewpoint of customers *versus* customers. For instance, corporate distinction between customers has generated a class of privileged customers opposed to the other customers.

case, B will not feel unfairness. This is because distributive justice has been perceived in this situation. However, if B had not been informed about the availability of advance discount tickets, insufficient delivery of the information on the services would have generated a feeling of unfairness. In other words, a feeling of unfairness can be generated by justice of procedure.

Leventhal (1980) focused on this issue when he proposed the concept of procedural justice with regard to 'unfairness in processes' concerned with the knowledge and evaluation of the series of events that precede results. Based on the assumption that all groups, organizations or societies determine the distribution of rewards through multiple processes, Leventhal (1980) defined procedural justice as the 'individual perception toward the appropriateness of procedural components of social systems that determine decision processes of rewards'.

A major characteristic of services is in the importance of processes (Lovelock and Wright, 1999). Service delivery is generally accompanied with a process. This service delivery process may generate customer satisfaction or dissatisfaction. In the case of services delivery, based on the procedural justice advocated by social psychology, the perception of equity of the service processes has an impact on sense of unfairness. In the same way, Folger (1986) also referred to procedural justice when pointing out that reward equity is influenced by procedural elements such as the existence of *feedback opportunities* (opportunities to discuss the basis and fairness of performance evaluation) or *planning* (whether the organization provides means, help or objectives to improve performance)¹. Referring to Leventhal's (1980) definition, this research defines procedural justice as a level of justness perceived by customers regarding each element that structures processes in the course of service procurement. In the example of Disneyland, sufficient information regarding advanced discount tickets generates a feeling of fairness.

Customers' sense of unfairness is therefore determined by the three determinants discussed above: distributive justice, procedural justice and advantageous inequity. It gives rise to feeling of unfairness that the results of service procurement processes, evaluated on the basis of subjective standards, are associated with facts regarding partiality, favouritism, discrimination or mere inappropriateness.

Conceptual Framework

How can the feeling of unfairness be apprehended within the Expectancy Disconfirmation model? In typical information processing, when people perceive (cognition) a phenomenon, they experience an emotion towards it based on their assessment of that perception. This emotion then triggers (conation) behaviour. The process flow is as follows: cognition → affection → conation → behaviour (Engel, Blackwell and Miniard, 1992). The feeling of unfairness is an attitudinal mutation that stems from recognition related to distributive justice, procedural justice and advantageous inequity².

Scherer (1984) has explained the process of attitudinal transition: 'it is unfair; therefore, I am not satisfied' using the components process model from the perspective of temporal mutation of emotions. He elaborates on five dimensions of a stimulative phenomenon – novelty, pleasantness, importance of an objective, adaptability and conformity with standards – stating that these are perceived and valued in a certain sequence; and as the recognition of conditions develops further, the initial emotion gets fragmented or shifts to another type of emotion. For instance, the simple *sur-*

¹ According to Folger (1986), procedural justice comprises a total of four components inclusive of 'Recourse', as for instance whether one should make an appeal regarding a pay hike and 'Observation', for instance, whether one was sufficiently observed in professional action.

² In this article, among the antecedents of satisfaction in the Expectancy Disconfirmation model, questions pertaining to expectations and performances were not included due to length of questionnaire constraints. The main purpose of this article is to question whether 'a customer's feeling of unfairness impacts customer satisfaction'. For this, it was estimated that a 'discrepancy between expectations and performances', that is the concept of Disconfirmation, could be used as a substitute. With regard to the construction of the conceptual model, works such as those by Oliver and Swan (1989) as well as Patterson, Johnson and Spreng (1997) were used as references.

prise born out of a novelty evaluation may turn into *discomfort* and further into *sadness* when understood (inevitable through adaptability evaluation). Ortony, Clore and Collins, (1988) proposed a comprehensive model regarding this matter. They identified three objects that capture attention upon the occurrence of an event – the result, the performer (the subject causing the phenomenon) and the substance (the target included in the phenomenon). Various emotions are produced and built into a hierarchy on the basis of the objects. In effect, it is possible to assume that interactions between satisfaction and fairness/unfairness lead one's attention to focus on the phenomenon results, and according to the results' desirability, feelings of unfairness or satisfaction may occur towards the subject that induced the phenomenon.

Based on the above perspective, this paper establishes a conceptual model of customer's feelings of unfairness (Figure 1) wherein recognition of distributive justice, procedural justice and advantageous inequity generates an attitudinal mutation of emotion, i.e. the feeling of fairness/unfairness that impacts satisfaction¹. The following hypotheses are built along this conceptual model.

Hypothesis 1: *Feelings of unfairness impact customer satisfaction. The greater the feeling of unfairness, the lower is the level of satisfaction. The lower the feeling of unfairness, the higher is the level of satisfaction.*

Hypothesis 2: *The feeling of unfairness is determined by distributive justice, procedural justice and advantageous inequity.*

Hypothesis 2-1: *The level of distributive justice has a negative effect on the feeling of unfairness.*

Hypothesis 2-2: *The level of procedural justice has a negative effect on the feeling of unfairness.*

Hypothesis 2-3: *The level of advantageous inequity has a positive effect on the feeling of unfairness.*

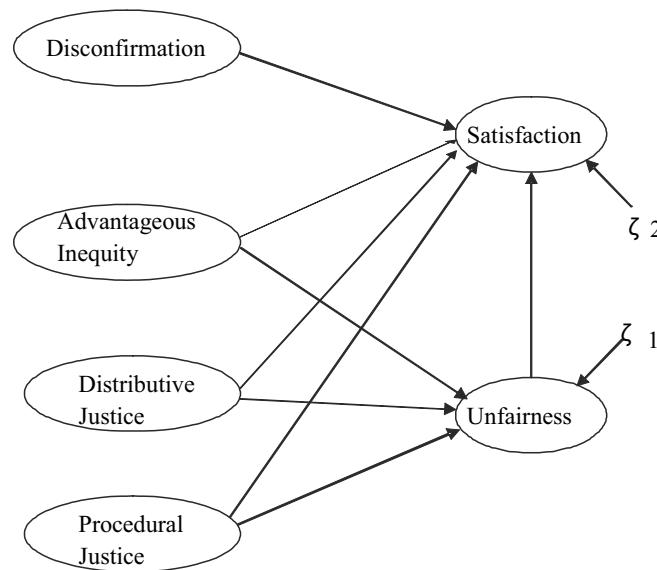


Fig. 1. The Conceptual Model

¹ The conceptual model illustrated in Figure 1 also incorporates the paths of direct effects towards satisfaction from each concept, namely distributive justice, procedural justice and advantageous inequity.

Method

Research Design and Measurements

To test our hypotheses, we conducted a questionnaire survey on medical services (mostly hospitals or clinics) where there exists a *high level of interaction with customers* (discussed later). The survey was conducted in October 2003, targeting male and female adults; and yielded a sample of 162 valid responses.

The processing of each factor in the conceptual model was conducted in the following manner. First, concepts such as distributive justice, advantageous inequity or disconfirmation were assumed to be evaluated with respect to dimensions of service. Regarding dimensions of service, this paper refers to the early research of Yoda (2001) in order to evaluate medical services with respect to the following eight dimensions: (improvement of symptoms, physician's competence, physician-patient interaction, nurse's competence and interaction with patients, waiting time, comfort and equipment)¹. The input related to medical services ranged from matters such as the cost of the treatment, duration of the treatment and knowledge required to cure the disease. The outcomes were the medical service evaluation dimensions – physician's and nurse's interaction, waiting time, etc. However, dimensions of medical services, such as comfort or equipment were generally perceived equal among all patients. Those dimensions any patient perceives equal do not qualify as evaluative dimensions for distributive justice. Consequently, the concept of distributive justice with respect to the medical services was examined in terms of five evaluative dimensions (improvement of symptoms, physician's competence, physician-patient interaction, nurse's competence and interaction with patients and waiting time). For instance, the dimension for nurse competence and interaction is dealt with affirmations such as "The nurses were more caring and attentive towards other patients than towards me"². The advantageous inequity concept was also examined in the same manner. For instance, the dimension of physician's interaction was operationalized as the question: "Compared with other patients, is the physician's interaction towards you more caring?"

In the next step, procedural justice was examined in terms of five dimensions (request, observation, plan, consistency and feedback) in reference to the previous research in the field of social psychology³. For instance, the feedback was analysed with the question 'Physicians and nurses paid attention to the privacy of patients', each dimension is operationalized as one-two questions and thus, procedural justice is examined with 8 questions in total. Additionally, the feeling of unfairness, which is determined by distributive justice, procedural justice and advantageous inequity, was analysed with two questions – 'unfair treatment at hospital' and 'unfair treatment from physicians or nurses' in reference to the general question sets of an early research conducted by Oliver and Swan (1989). When inquiring from the perspective of disconfirmation, an affirmation is graded based on the improvement of symptoms dimension reads something like this: "Treatment has improved my condition beyond my expectations". Each dimension is catered for one or two questions that constituted a 10-item questionnaire. Finally, satisfaction generated by determination factors such as disconfirmation or feeling of unfairness was analysed using two questions, including one on 'overall satisfaction with the hospital or clinic services'.

¹ For instance, Yoda (2001) derives eight dimensions – improvement of symptoms, a physician's competence, a physician's interaction, a nurse's competence and interaction, administrative interaction and management, comfort, waiting time, medical equipment and devices. The evaluative dimension contributed by Fujimura (1995) was also referred to.

² Activation of the fairness concept in customer satisfaction surveys has thus far meant that words such as 'fairness' and 'justice' should be directly used in questions such as, 'The results I obtained were fair' (Mattila, 2001). Questions are therefore highly abstract and do not fit the specific circumstances. The problem of activation exists not only with Mattila (2001), but also with Oliver and Swan (1989) or Kumar, Scheer and Steenkamp (1995) and will be the subject of further studies.

³ The works of Folger and Konovsky (1989), Tyler and Lind (1992) as well as Kumar, Scheer and Steenkamp (1995) were referred to for the activation of 'procedural justice'.

Results

In this research, the recognition level concepts (disconfirmation, distributive justice, procedural justice and advantageous inequity) were the objects of a confirmatory factor analysis conducted by using varimax rotation on twenty-nine items prior to the conceptual validation of the model; we extracted eight factors¹. The factor analysis results are shown in Table 1. These results enable the interpretation of factors in the following manner: 1. Distributive justice, 2. Procedural justice, 3. Performance regarding improvement of symptoms and a physician's competence and interaction, 4. Advantageous inequity related to a physician's competence and interaction, 5. Performance regarding waiting time, 6. Performance regarding equipment, 7. Advantageous inequity related to nurses' competence and interaction with the patients, and 8. Performance, as measured by nurses' competences and their interactions with patients. In effect, four dimensions related to performance were confirmed within factors regulating customer satisfaction with medical services. Advantageous inequity is structured by the two dimensions: 'Physicians' competence/interaction' and 'Nurses' competence/interaction', while distributive and procedural justice is structured by a single dimension.

Table 1

Results of Factor Analysis on Determinants of Fairness/Unfairness

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Communality
Performance*									
Improvement of Symptoms	0.165	0.078	0.757	-0.048	0.129	0.040	0.049	0.026	0.630
Physician's competence	0.095	0.219	0.735	0.017	0.040	0.199	0.034	0.005	0.639
Physician's explanation	0.146	0.390	0.438	0.041	0.120	0.390	-0.098	0.465	0.759
Physician-Patient interaction	-0.066	0.343	0.533	0.031	0.212	0.166	0.155	0.305	0.597
Nurse's competence	0.133	0.057	0.432	0.023	0.338	0.452	0.042	0.340	0.644
Nurse- Patient interaction	0.117	0.046	0.270	-0.095	0.340	0.248	0.310	0.437	0.562
Waiting time	0.094	0.103	0.201	0.253	0.498	-0.123	0.214	-0.014	0.432
Consultation hours	-0.195	-0.072	0.125	-0.164	0.487	0.033	-0.140	0.173	0.373
Comfort	0.186	0.070	0.030	0.056	0.609	0.345	0.108	0.013	0.546
Equipments	-0.041	0.101	0.343	0.048	0.181	0.716	-0.050	0.039	0.681
Advantageous inequity									
Improvement of Symptoms	-0.333	-0.083	-0.005	0.167	-0.045	0.034	0.099	-0.439	0.352
Physician's competence	-0.143	0.034	-0.005	0.706	0.079	0.107	0.008	0.070	0.546
Physician's interaction	-0.477	-0.022	-0.084	0.573	-0.029	0.077	0.324	-0.135	0.686

¹ In this article, the validation of hypotheses is performed by using covariance structure analysis. However, this method has particularities such as the case involving an investigated model comprising many observational variables when the goodness of fit of the model tends to decrease. The goodness of fit expresses 'how well the assumed model fits'. Consequently, when considering models featuring many observational variables, it is not possible to determine whether the low goodness of fit is due to the high number of variables or the model's poor fit. To deal with this issue, it is possible to reduce the number of observational variables by using, for instance, the factor score of observational variables as new observational variables or by reducing the number of observational variables or constructs (Toyoda, 2000, p. 272). In the conceptual model of this article, variables at the cognitive level (29 items) are factor analysed in order to reduce the number of observational variables.

Tabel 1 (continuous)

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Communality
Nurse's competence and interaction	-0.577	-0.024	-0.002	0.382	0.104	-0.053	0.480	0.053	0.735
Waiting time	-0.255	-0.079	0.010	0.716	0.065	-0.118	0.064	-0.144	0.627
Consultation hours	-0.144	0.104	0.124	0.157	-0.015	-0.137	0.535	-0.031	0.378
Distributive justice									
Improvement of Symptoms	0.577	0.134	0.323	-0.069	0.072	-0.115	0.030	-0.019	0.479
Physician's competence	0.547	0.322	0.138	-0.154	-0.084	0.165	0.100	0.113	0.503
Physician's interaction	0.779	0.147	0.145	-0.128	-0.032	0.053	-0.062	-0.033	0.675
Nurse's competence and interaction	0.802	0.080	-0.013	-0.134	-0.029	-0.008	-0.020	0.244	0.729
Waiting time	0.586	0.086	-0.054	-0.301	0.140	-0.022	-0.085	0.020	0.472
Procedural justice									
Correspondence to request	0.201	0.778	0.186	-0.023	0.008	0.059	0.137	-0.055	0.706
Good consultation	0.177	0.774	0.207	-0.020	0.180	0.105	0.181	0.086	0.757
Consistency in explanation	0.303	0.590	0.119	0.004	-0.010	-0.040	0.052	0.155	0.783
Uneven reception	0.508	0.296	0.192	0.008	0.095	0.104	0.119	0.274	0.492
Correspondence to request	0.120	0.250	-0.025	0.059	0.161	0.064	0.338	-0.002	0.226
Notification of waiting time	-0.017	0.230	0.098	0.215	0.336	0.149	0.054	0.038	0.248
Observance of order	0.419	0.207	-0.013	0.213	0.299	0.257	0.090	-0.005	0.429
Consideration of the privacy	0.005	0.402	-0.028	-0.139	0.071	0.350	0.528	0.038	0.590
Eigenvalue	3.793	2.504	2.340	1.918	1.528	1.473	1.346	1.072	
Variance explained(%)	13.080	8.634	8.068	6.615	5.270	5.080	4.643	3.697	

Note: * The term performance mentioned above indicates the disconfirmation of prior expectation and performance.

The scores of the eight factors obtained through factor analysis and the four question blocks pertaining to concepts of the emotions (satisfaction and feeling of unfairness) were used as observation variables for the purpose of validation of the hypothesis, using a covariance structure analysis. The results are shown in Figure 2¹. All the goodness of fit measures of the analytical model were satisfactory with $\chi^2 = 66.345$ (degree of freedom 50), p-value = .061, GFI (goodness of fit index) = .924, AGFI (adjusted goodness of fit index) = .882, RMSEA (root mean square of approximation) = .052, suggesting that the model reflected the structure of patients' satisfaction with the medical services. The path coefficient from disconfirmation to satisfaction at -.684 has a test statistic value of -6.312, indicating significance at a probability of 5%, thereby supporting the validity of the model. Therefore, as stated in the Expectancy Disconfirmation model, a high level of performance related to expectations increases the level of satisfaction. With regard to hypothesis 1, which states that 'The lower the feeling of unfairness, the higher is the level of satisfaction', the

¹ During the data analysis the levels of goodness of fit for several models were compared according to the existence of direct results. The results shown here pertain to the conceptual model with the greatest goodness of fit.

path coefficient from disconfirmation to satisfaction at -0.684 has a test statistic value of -6.312 , indicating a significance at a probability of 5%, thus supporting the validity of the model.

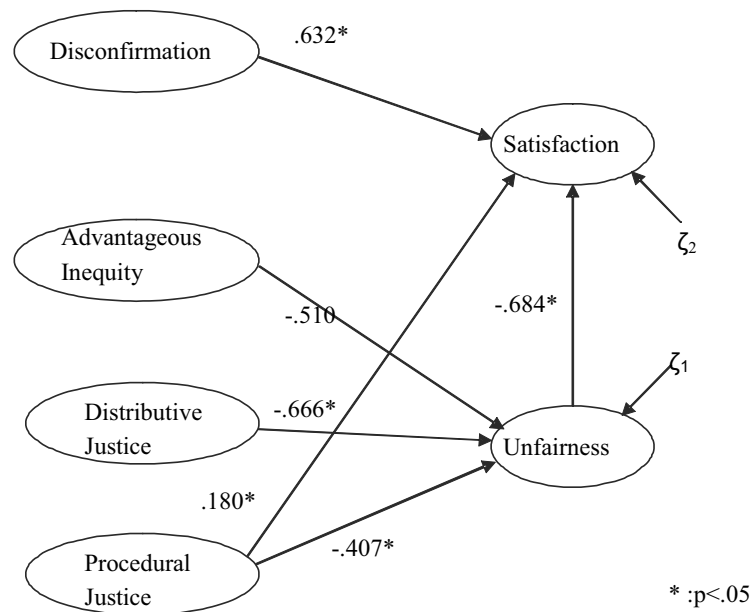


Fig. 2. Results of the Covariance Structure Analysis

The path coefficient from distributive justice to unfairness at -0.666 has a test statistic value of -8.092 , indicating significance at a probability of 5%. Moreover, the path coefficient from procedural justice to satisfaction at -0.407 has a test statistic value of -5.059 indicating significance at a probability of 5%, thus supporting Hypotheses 2-1 (the level of distributive justice has a negative effect on the feeling of unfairness) and 2-2 (the level of procedural justice has a negative effect on the feeling of unfairness). However, the path coefficient from advantageous inequity to unfairness at -0.510 that has a test statistics value of -6.312 and indicates a non-significant probability of 10%: that does not support hypothesis 2-3 (the level of advantageous inequity has a positive effect on the feeling of unfairness).

The results did not show significance in the relationship between advantageous inequity and unfairness, but rather the reverse relationship was observed. When one's outcome is comparatively higher than that of the other person's outcome, i.e. when one receives special treatment, the feeling of unfairness increases and satisfaction decreases. This was the hypothetical causal relationship assumed in this research. However, there appears to be a connection different from the assumption. When distribution is unfair, one feels unfairness. However, in the case of advantageous inequity toward oneself, it is possible to state that there exists a different relationship from the model. Oliver and Swan (1989) have defined advantageous inequity as a situation, such as an exchange where one gets more than the other in terms of benefits or results. Further, they assumed that advantageous inequity increases satisfaction. This point requires further research.

Discussion

Managerial Implications

The results of the investigation have indicated that unfairness impacts customer satisfaction. In the medical services unfairness has the same impact as the overall performance on customer satisfaction. It is possible to draw some important implications from the results of our study. The concept of unfairness, which had not been adequately investigated thus far in the dominant paradigm of the

Expectancy Disconfirmation model, also has an impact on customer satisfaction. In effect, marketing activities have focused on providing customers with services beyond their expectations in order to increase satisfaction. Whereas, this research indicates that corporate interaction towards customers may generate a feeling of unfairness that could lower satisfaction level. While acknowledging the importance of customer retention, firms must also take it into consideration. It is necessary to design the management activities to sustain customers through reducing the feeling of unfairness.

A question then arises regarding the manner in which the feeling of unfairness can be reduced. One of the necessary management approaches to reduce the feeling of unfairness is to secure distributive justice by developing environments that make customers unaware of distributive justice. For instance, when providing a service, it is necessary to present customers with a price list in order to clearly convey fairness in the input perceived by them. Activities aimed at reducing outcome dispersion may also be mandatory. When outcomes are clearly different, it is important to note the difficulty to make a comparison between the level of service received by another customer and oneself. Then procedural justice should be secured in the marketing management to reduce the feeling of unfairness. For instance, in the case of medical services, feedback to patients regarding treatment details or examination results needs to be managed carefully because the evaluation of the feedback impacts the procedural justice.

Recently, many medical facilities have begun using the Internet to display information pertaining to waiting room occupancy or to accept online reservation for the purpose of reducing the waiting time of patients. This may increase the level of service to patients; however, if the information on these services is not able to reach all patients, it may result in procedural injustice thereby lead to a feeling of unfairness.

The Scope of Application and Further Research

In which services do unfairness impact customer satisfaction? In this section, we would like to consider the categorization of services in contrast to the general definition of unfairness. Based on the definition of distributive justice, it can be concluded that a customer (1) estimates the existence of fairness by comparing with another person. The customer uses (2) inputs and outcomes to perform the comparison. Therefore, it is necessary to integrate these viewpoints into the categorization of service that affects customer satisfaction. First, for comparison, the presence of another person near the place where one receives services is necessary. However, even if several customers are present in the same place, a comparison is impossible unless services are being offered. Therefore, 'customer's interaction' should be set as a category dimension. Next, from the viewpoint of input and outcome, the potential that diversions exist in the outcome, i.e. the quality of service to each customer is also a source of unfairness. In other words, the possibility of outcome diversions increases when a service is delivered through people, unlike when delivered by machines. It can be said that the latter is a case where unfairness cannot thrive easily. These two category dimensions enable the classification of services by means of a 4 cell matrix as presented in Table 2.

In order to increase customer satisfaction, 'customer's feeling of unfairness' needs to be paid more attention in the following categories of services: 'services where customers' interaction is high and quality of service varies greatly', 'services where customers' interaction is low but quality of service varies greatly' and 'services whose quality does not vary but customer's interaction is high'. These services occur in contexts where service procurement is visible or where service varies according to staff or conditions.

In this research, the two-category dimensions refer to services provided by medical faculties, where patients come to receive treatment and interact with other patients. Furthermore, medical services are largely affected by the roles of physicians and nurses, and also by the administrative staff at front-desks. This also explains why diversions in service quality occur easily. "Why do they behave respectfully toward that patient, although they are rude to me?", "That patient's physician conducts examinations with a kind demeanour unlike my physician". One can conclude that

fairness/unfairness has an impact on customer satisfaction. Furthermore, it appears that the derived model can be generalized to other services pertaining to the same *genre* as medical services (e.g. Banking, Hotel, and Airlines Industries). Further research is required in order to test the model with respect to these adjunct service sectors.

Table 2

Categories of Service and Unfairness

Diversion of Service Quality	Interaction with Customers	
	High	Low
High	Medical care Banking Securities investment Hotel industries Airline industries	Office cleaning service Repair and maintenance Business consultancy Accounting
Low	Railroad Restaurants Fitness centers Warehousing/storage	Advertising Data-processing Telephone Online banking

Conclusions

Fairness/unfairness can impact customer satisfaction; but corporations can control the situation to some extent through strategic management. This type of managerial method does not belong to the 'increase customer satisfaction' activity that aims at providing performances exceeding expectations. Rather, it is positioned as an 'action against dissatisfaction' that reduces the sense of unfairness. As identified initially, it is difficult for firms to increase customer satisfaction by solely repeatedly delivering performances that exceed customers' expectations. It is not rare for customer satisfaction programs to translate into segregation of the privileged customers and to generate for other customers' a sense of unfairness. Thus, it is necessary to act towards handling dissatisfaction in a manner that reduces the feeling of unfairness.

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