Assessing the Influence of Citizen Emotions on E-Government Satisfaction in Service Recovery Situations

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Abstract

E-government involves many aspects of public administration ranging from introducing new technology to provide citizens with access to programs, services and information via the online channel. Citizen's emotion plays a significant role in e-government satisfaction, but much less is known about citizen emotions. The purpose of this study is to explore how citizen emotions affect satisfaction in e-government service recovery. The citizen's psychology mechanism under the service recovery circumstance is carefully studied, and a conceptual model among the key constructs of citizen's emotion and citizen satisfaction of e-government is developed. The method of Structural Equation Modeling (SEM) is adopted to verify the internal quality of the proposed measurement model. The empirical results indicated that positive emotions have a significant impact on citizen satisfaction of e-government and no significant impact of negative emotions. Furthermore, our study identifies that perceived justice and perceived service quality that influence citizen satisfaction.

Introduction

During the past two decades, electronic government is becoming increasingly important in public administration. E-government growth, also known as web-based self-service, has further magnified the importance of service sector roles in modern government management. Complaint handling is considered as a major part of the quality management program in e-government service, and as an important tool to win citizen satisfaction and citizen trust. If service failure cannot be wholly eliminated, failure to immediately and effectively address service failures is sure to arouse dissatisfaction or complaints. It is believed that unsatisfied citizens discontinue the service usage and discourage others from using the service. Indeed some would argue that service recovery and complaint handling should be seen as critical "moments of truth" for organizations in their efforts to satisfy and keep citizens. As Barlow and Maul [1] observe, customers' consumption process is not only a cognitive process, but also an emotional process. During the service recovery, citizen emotions have important practical implications, because how citizens feel about a product or service impacts on citizen satisfaction. So far, little has been done in specifying the effect of actual citizens' behavioral and emotional responses on citizen satisfaction to complaint handling and service recovery. Therefore, citizen emotions are an important factor to facilitate e-government service. This study aims to propose a comprehensive conceptual model to explain the factors and consequences of citizen emotions and tests of the model by the survey data with a focus on service failure and recovery of e-government, where emotions are heightened.

Theoretical Framework and Hypotheses

Citizen emotions in e-government service recovery

Under e-government service recovery circumstance, any unsatisfactory service of e-government has the potential to quickly generate negative emotions and consequent behaviors. Prior research on affect in consumer behavior literature [2, 3] recognized emotions can best be characterized in terms of two independent dimensions: positive and negative, is that their responses would be influenced by the type and intensity of discrete emotions that underlie their overall affective condition. According to Affect Control Theory (ACT), consumers who are proposed an unacceptable service recovery may express their emotions. The results of another study conducted by Bloemer and Odekerken-Schroder [4] in retail enterprises indicate that customers' positive consumption emotions will enhance customer satisfaction, trust and commitment. Core service failure is exactly what customers complain about the most [5].Citizen's emotions are an important element affecting citizens' behaviors. However, up to now, the studies of citizen emotions of e-government are still not thorough enough. The purpose of this study is to explore how citizen emotions affect satisfaction in e-government service recovery.

Citizen satisfaction of e-government

Citizen satisfaction of an agency to provide online services is imperative for the widespread adoption of e-government initiatives. Before endorsing e-government initiatives, citizen must believe government agencies possess the astuteness and technical resources necessary to implement and secure these systems. Candid, non-fraudulent interaction with e-government service providers will enhance customer satisfaction. In the satisfaction literature, Westbrook [6] was one of the first to explore consumer emotional responses to product/consumption experiences and their relationship to several central aspects of post purchase processes. There has been a discussion as to whether satisfaction is itself an emotional construct or a cognitive construct which includes an emotional component [7]. We believe that citizen's positive emotion is linked to one's decision to stay and satisfaction of e-government, while citizen's negative emotion is linked to the opposite decision, such as to leave and complain.

Based on the previous decomposition arguments and preceding literature, the research model for this study is shown in Figure 1, focusing on the relationship between citizen emotion and perceived justice and perceived service quality, and its consequential impact on citizen satisfaction.
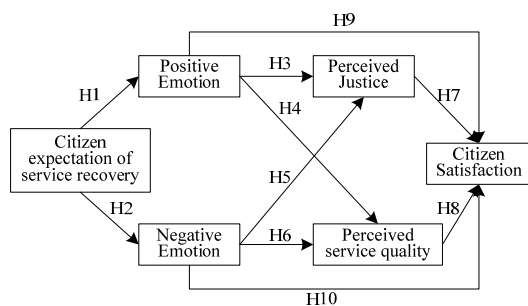

Figure 1   The theoretical model

Citizen expectation of service recovery. Evaluating the level of citizen expectations of service recovery has necessarily led researchers into the mine field of behavioral theory with studies addressing physiological issues such as cognitive dissonance, consumer design, implementation and operation.

Citizen emotions. In this study, emotions can best be characterized in terms of two independent dimensions: positive and negative. The positive emotion scale for this study consists of interest and joy. Negative emotions are represented by two discrete emotions: anxiety and disgust.

Perceived Justice. The literature review exposed earlier leads to hypothesize that the service recovery related perception of justice might have both direct and indirect effects on satisfaction.

Perceived service quality (IQ).Service quality covers the extent to which complete, accurate, and timely information is provided for the citizen in the electronic government service recovery.

Citizen satisfaction. Consistent with past research, we define citizen satisfaction with e-government as the overall affective evaluation an end-user has regarding his or her experience related with the e-government.

Experiment study

Sampling and surveying

Data collection is carried out by a structured questionnaire administered through personal interviews to citizens who had recently perceived some type of recovery effort. A total of 19 questionnaire items are established to measure the extent to which participants give to the level of emotions toward satisfaction of e-government. With purposive sampling method, a total of 130 questionnaires are distributed and all of them are returned. However, three of the returned questionnaires are incomplete and are discarded, producing a total of 127 usable questionnaires. The sample size of 127 exceeds the recommended minimum of 45 and is adequate for model testing.

Reliability analysis

The various constructs are tested for validity using principal component analysis with varimax rotation. In this study, SPSS 13.0 software is used to conduct descriptive statistic analysis of the data and internal consistent reliability analysis of measurement scales.

Table 1 List of construct indicators and reliability

Construct	Mean	Cronbach's α
Citizen expectation of recovery	3.56	0.895
positive emotion	4.05	0.832
negative emotion	3.68	0.903
Perceived Justice	4.22	0.874
Perceived service quality	3.08	0.793
citizen satisfaction	4.16	0.889

Table 1 presents the results of the reliability, the survey had strong internal consistency with all multiple-item constructs achieving Cronbach's between 0.793 and 0.903, so they are deemed acceptable. The results indicate that measurement scale is reliable.

Methodology

The hypothesis and overall fit of the path model are tested by using structure equation model (SEM). SEM provides an appropriate method of dealing with multiple relationships simultaneously while

providing statistical efficiency. Structure equation model express relationships among several variables that can be either directly observed variables or unobserved variables. A structural equation modeling technique called Partial Least Square Graph method [8]) is used to test the model. The PLS approach is superior to other SEM approaches for this study because of its flexibility for distributional assumptions, its small sample size requirements, and its strength in handling complex predictive models [9].
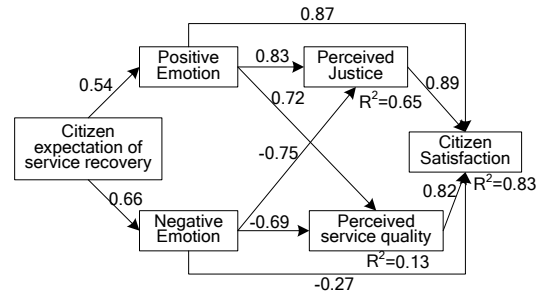
Results

A. Testing the Measurement Model

Internal consistency of the constructs is evaluated with internal composite reliability, as defined by Fornell and Larcker [10]. Another indicator of discriminant validity is that each item has a higher loading on its assigned construct than on the other constructs. Convergent validity indicates the degree to which multiple items measuring the same construct agree. As a measure of discriminant validity, we examined the average variance extracted (AVE). Convergent validity is adequate when constructs have an Average Variance Extracted (AVE) of at least 0.5.Construct reliability is acceptable when Internal Composite Reliability (ICR) is above 0.70 for each construct [11] in PLS method. Table 2 presents the results of the tests for measurement model.

Table2 ICR and AVE of the measurement model

	Internal Composite Reliability (ICR)	Average Variance Extracted (AVE)
Citizen expectation of recovery	0.88	0.68
positive emotion	0.79	0.63
negative emotion	0.83	0.75
Perceived Justice	0.65	0.45
Perceived service quality	0.87	0.69
citizen satisfaction	0.76	0.65

Table 2 presents the results of the tests for internal consistency and convergent validity. The internal composite reliabilities of all constructs are at least 0.70, except for the factor of Perceived service quality (0.65), thus indicating adequate internal consistency. Most of the constructs have an AVE of at least 0.5 except for Perceived service quality (0.45). Thus, in this study both criteria of construct validity are met.

B. Testing the Structural Model

Testing the structural model includes estimating the path coefficients and the R^2 values. Figure 2 presents the significant structural relationships among the research variables and the standardized path coefficients and R^2 values of structural mode.

Figure 2   Testing the structural model

The results show that about 83% of variance in citizen satisfaction is explained by Perceived Justice, Perceived service quality, positive emotion and negative emotion. The R^2 for Perceived service quality is 0.13, suggesting that other important determinants for service quality had been omitted in this model. Positive emotion and negative emotion all contributed to Perceived Justice, with a total of R^2 0.65.

Most of the hypotheses are strongly supported except for H10. As hypothesized, Perceived Justice, Perceived service quality, and positive emotion have a significant effect on citizen satisfaction (path=0.89, 0.82, 0.87), so H7, H8 and H9 are supported. Negative emotion is not a significant predictor of citizen satisfaction (path=-0.27), so H10 is rejected. Perceived Justice is a very important and significant predictor of citizen satisfaction among all the four indictors. Positive emotion is found to be significantly influences Perceived Justice (path=0.83). Negative emotion significantly associated with both Perceived Justice and Perceived service quality supporting H5 and H6 (path=-0.75, -0.69).Citizen expectation of recovery contribute to positive emotion and negative emotion, thus supporting H1 and H2.

Conclusion

The study seeks to investigate the relationship between citizen emotions and citizen satisfaction in electronic government service recovery and to develop guidelines to predict citizen behavior in e-government. First, the article offers a brief overview of the literature on key conceptual issues concerning citizen satisfaction of e-government and the citizen emotions in service recovery situations. Subsequently a model of determining how citizen emotions influencing satisfaction is developed and tested. The empirical findings presented in this study also provide helpful suggestions that government can use to enhance citizen's willingness to use online service and satisfaction of e-government.

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