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Study on Customer Satisfaction Model of Service Innovation: Using National Health Insurance Administration in Taiwan as an Example

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Abstract

In recent years, public sector advocates customer-oriented service. The public is the direct subject of public service. Their satisfaction with service represents the outcome of customer-oriented service. Thus, in order to explore performance of Service Innovation of local card issue practiced by National Health Insurance Administration for the public who applies for health insurance cards in Taiwan, this study follows American Customer Satisfaction model and scholars' suggestions as criteria of Customer Satisfaction model to measure public sector. After retrieving 285 valid questionnaires, it tests hypothesis model and compares the results by CB-SEM and PLS-SEM of structural equation modeling. According to research findings, "Customer Expectations" positively and directly influence "Perceived Quality", "Customer Satisfaction" and "Customer Complaint". "Perceived Quality" positively and directly influences "Customer Satisfaction" and "Citizen Trust". "Customer Satisfaction" positively and directly influences "Customer Complaint" and "Citizen Trust". Finally, "Customer Complaint" positively and directly influences "Citizen Trust". In addition, based on the research result, "Customer Complaint" matches TCSI proposed by scholars. Customer complaint changes from outcome of Customer Satisfaction into factor of Perceived Quality. As to comparison of two measures of structural equation modeling, only the dimension with low effect on customer complaint does not match the result of the previous studies. Findings of this study aim to serve as reference for future research upon structural equation modeling and reference to measure public satisfaction of public sector in Taiwan.

Keywords: Customer Satisfaction model, public sector, CB-SEM, PLS-SEM

1. Introduction

1.1 Research Background and Motives

In July 1995, National Health Insurance Administration conducted experimental project of health insurance card in Taiwan. The key of the project is that the success of trial of health insurance card in Taiwan is associated with the future feasibility of health insurance card around Taiwan. For the concern of the public, national business sector starts paying attention to image, word-of-mouth, and service of the whole team. Thus, for sustainable operation, the innovation must be continued to meet the public expectation. National Health Insurance Administration adopts continuous innovation as the aim of service concept. In 2016, Kaohsiung and Pingtung division of National Health Insurance Administration proposed the project "card service construction of Penghu office". The main purpose was to solve the following problem: currently, only six business divisions of National Health Insurance Administration in the cities provide on-site card issue service. People living in remote areas cannot experience the convenient service of direct card issue in the neighborhood. The outcome of the program refers to the feasibility of Service Innovation of local card issue in service stations of National Health Insurance Administration around Taiwan.

In recent years, public sector promotes customer-oriented service and the public is the

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direct subject of public service. People's evaluation of service satisfaction refers to outcome of customer-oriented service. Thus, one of the important performance measures on introduction of the project "card service construction of Penghu office" is satisfaction of the public who applies for health insurance card in National Health Insurance Administration of Taiwan Penghu County (citizen satisfaction index, CSI). Thus, measurement of the public satisfaction with innovative service project of National Health Insurance Administration in Taiwan Penghu County is one of the main motives of this study.

Although they both provide service and goods to customers, positions of public sector and private enterprises are different. The main difference is that public sector tends to be monopoly and price system does not exist. Thus, study on factors and ultimate outcomes of Customer Satisfaction of public sector and private enterprises refer to concerns of different dimensions. It is the second motives of this study.

After literature review, this study constructs Customer Satisfaction measurement model of the public who applies for health insurance card in Taiwan Penghu County. It selects the research methods of calculation of structural equation modeling. One method is derived from Joreskog (1973) who introduced covariance-based SEM (CB-SEM). By recognizing estimation of the set-theoretical model on covariance matrix of samples, it validates or rejects the theory. The method was broadly adopted. However, it is not the only measure to analyze structural equation. In recent years, a method called partial least squares SEM (PLS-SEM) is gradually valued. It refers to maximum variance of dependent variables explained by independent variables instead of actual covariance matrix. The previous two research methods show the advantages supported by different schools and the inconvenience. Thus, this study will adopt two calculation methods of structural equation modeling, CB-SEM and PLS-SEM, to analyze Customer Satisfaction model proposed and compared the analytical results of the two methods. It is the third motive of this study.

2. Literature Reviews

2.1 Service Innovation

2.1.1 Definition of Service Innovation

Tax and Stuart (1997) proposed two definitions of Service Innovation: one is change of current service system scope of enterprises and the other is change of consumption process and customers. Gallouj (2002) defined Service Innovation as enterprises' offering of service different from customers' past consumption experience. It is called Service Innovation. Drejer (2004) argued that Service Innovation includes not only successful development of new service and product, but also modification and improvement of current products and all innovative activities of service and information system. Tidd and Hull (2003) stated that Service Innovation means total or relative change of enterprises' customer service concept or transmission process. They create higher value added for customers by new or improved service. It will enhance corporate performance.

Voss (1992) proposed process of Service Innovation, as shown in Figure 1. It obtains knowledge of market demand by technical methods and develops new service concept and originality. The next step is development of Service Prototype. Generally speaking, enterprises conduct test of Service Prototype and after the customers' use, they modify Service Prototype and finally introduce it to the market. After the introduction of new service in the market, enterprises must continuously improve the service measure or process to result in the next innovative project.

Public sector innovation is significantly different from past research which emphasized products and Service Innovation process in the organizations. Public sector innovation is beyond organizational level.

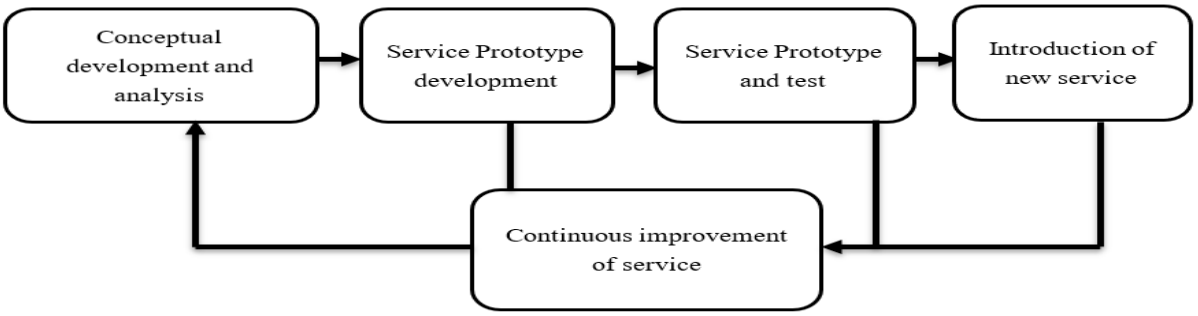

Figure 1. **Process of Service Innovation**
Source: Voss C.R. Johnston R. Silvestro L. Fitzgerald and Brignall T. (1992)

It must be executed and implemented by more general public participation and cross-organizational or cross-departmental collaborative network. In addition, public sector innovation refers to not only public service content and process innovation, but also operation of personnel affair and financial resources related to project in service production process as well as political and social backgrounds (Moore and Hartley, 2008).

Koch and Hauknes (2005) classified public sector innovative service as the following:

Incremental innovation: most of public sector innovation is derived from progressive improvement of original or process service degree. Innovation from top to bottom and from bottom to top: it is classified by executors' levels in the organization. Top level means high-rank managers; lower level means general public officials or medium-level policy makers. Demand-oriented and efficiency-oriented innovation. The main purpose of innovation is to solve specific problems or improve efficiency of original products, service or process.

2.3 National Customer Satisfaction

National Customer Satisfaction measure model was first constructed by Sweden Customer Satisfaction Barometer (SCSB) in 1989. It was mainly based on concept of Customer Satisfaction Elasticity which means sensitivity of customer loyalty to Customer Satisfaction. That is to say, when Customer Satisfaction is increased by one percentage, customer loyalty will be relatively increased by certain percentage. Thus, it can be quantified to explore the effects.

Fornell proposed the suggestions on measurement of public sector Customer Satisfaction model below, as shown in model of Figure 2:

When measuring public sector, it is suggested to delete "perceived value" from the model.

The reason is that when the public receives governmental public service or product, it is free consumption behavior and the prices do not exist.

When measuring public sector, it is suggested to replace "customer loyalty" by "confidence".

When the public receives governmental public service or product, public sector values their trust and support instead of consumer behavior such as repurchase or purchase of other products. The main reason is that governmental public service is based on consumer behavior of monopoly. Besides the previous two points, total frameworks of satisfaction measure model of public sector and those applied by private enterprises are similar. Customer Satisfaction is placed in the center of total model framework. Dimensions which influence Customer Satisfaction are one the left and the outcomes of Customer Satisfaction are on the right.

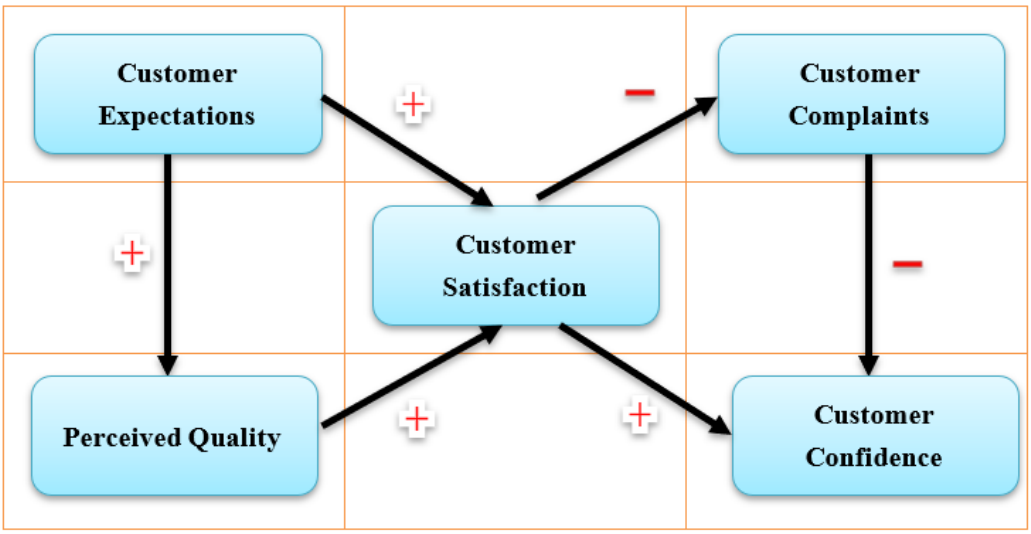

Figure 2. **Customer Satisfaction model diagram of government**
Source: **http://www.theacsi.org/industries/government/ACSI Government Model**

Parasuraman et all (1993) argued that Customer Expectations are determined by different dimensions and formed according to different situations and experiences. Anderson et al. (1994) stated that Customer Expectations mean customers' expectations toward product or service

quality of enterprises. The factors include customers' past consumer experience and expectation or product or service competence of companies. Past consumer experience refers to previous actual consumer experience, advertising image and word-of-mouth. According to research findings, Customer Expectations positively and directly influence Customer Satisfaction. Mohr and Spekman (1994) defined Customer Trust as below: enterprises make efforts to fulfill responsibility for customers in trading process. Customers recognize reliability of enterprises and it results in trust. According to empirical research result of Li (2005), customer satisfaction positively influences customer trust. In other words, customers trust enterprises when they are satisfied. Gioia (2000) indicated that when encountering customer complaint if enterprises can propose solutions which satisfy Customer Expectations, it will positively influence customer satisfaction. Based on research of Teo and Liu (2007), perceived quality of online stores is positively related to consumers' trust in stores.

3. Research Method

3.1 Research Structure

This study focuses on Service Innovation of local issue of health insurance card of National Health Insurance Administration in Taiwan Penghu County. The most important measure of performance of Service Innovation is satisfaction of the public who applies for health insurance card on site in Taiwan Penghu County.

3.2 Research Hypotheses

Hypotheses of Customer Satisfaction model are shown in Figure 3.

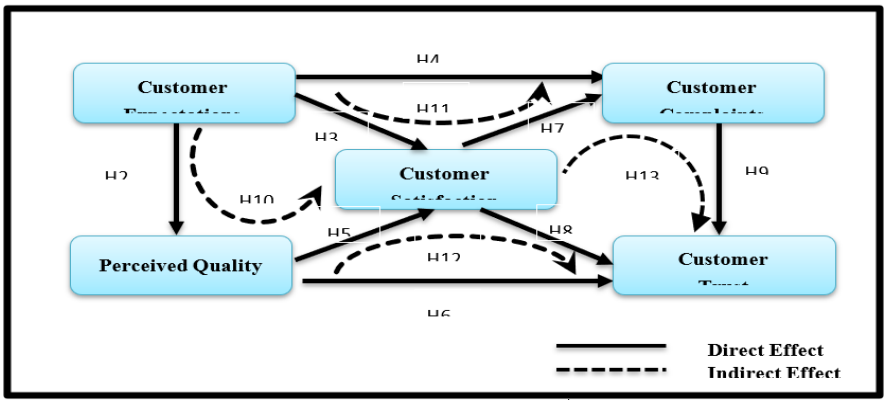

Figure 3. **Research Hypotheses**

3.3 Operational Definition

Based on Fornell's (1996) proposal of American Customer Satisfaction model (ACSI) and the suggestion for dimensions to measure public sector, this study states operational definitions as follows:

Customer Expectations: before purchase or use, customers' expectation toward product or service quality provided by public sector. Customer expectations are influenced by past consumer experience, advertising, public sector image and anticipation of future high-quality product or service offered by public sector.

Perceived Quality: it is the first factor of customers' decision making. It is customers' actual perception of quality after using product or service provided by public sector. Perceived quality is influenced by personal perception of product or service which satisfies the need, perception of product reliability and total perception of product or service quality.

Customer Satisfaction: Customer satisfaction means the customers' total perception and gap between Customer Expectations and their perception of product or service. The variable of Customer Satisfaction is the index obtained from weighted average of cause and result of framework model.

Customer Complaints: there is only one observed variable which determines the structural variable customer complaint. It is customers' formal or informal complaint frequency and customers' perception of public sector's attention on their complaints.

Citizen Trust: public sector is generally in the market of monopoly. Thus, repurchase intention of Customer Loyalty and performance of public sector are not the concerns. The focus is customers' perception of recommendation and support of service or product provided by public sector.

4. Data Analysis

4.1 Research framework of samples

Research subjects were the people who applied for health insurance card in National Health

Insurance Administration of Penghu County in Taiwan. They were collected by purposive sampling. This study distributed physical questionnaires in National Health Insurance Administration. Data were collected from April 7 to May 20, 2015. A questionnaire survey was conducted in working hours of National Health Insurance Administration. During the period of questionnaire distribution, total application was 489 cases. This study distributed a total of 315 questionnaires and retrieved 315 ones. Return rate was 100%. After deleting 30 invalid questionnaires, this study obtained 285 valid ones. Valid return rate was 90%.

4.2 Correlation analysis

r of items of different dimensions in this study refers to medium and positive correlation. Thus, questionnaires of this study, including all items of dimensions, show high degree of linear correlation. Among the dimensions, there is medium linear correlation. Thus, this study can conduct linear regression analysis.

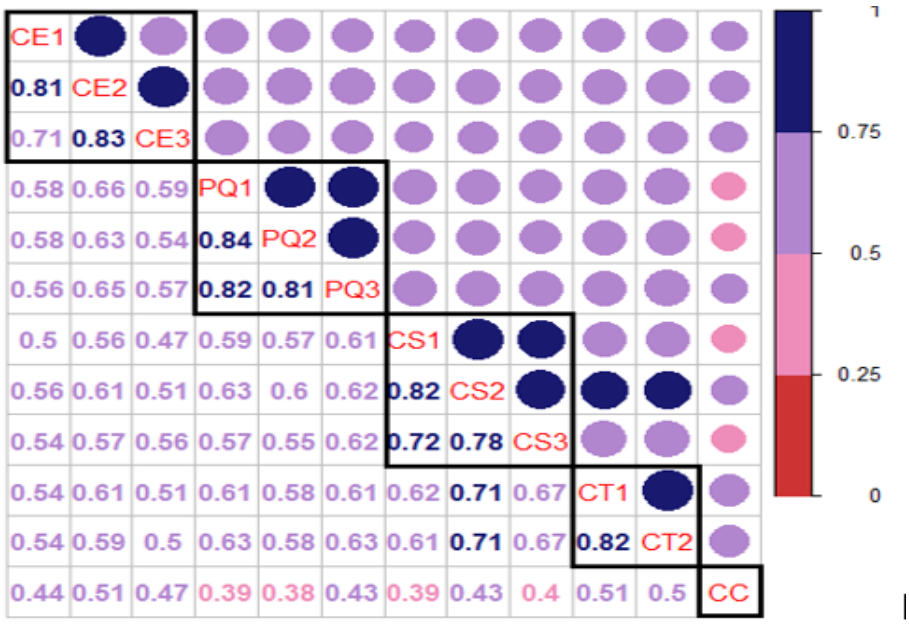

Figure 4. **Correlation analysis**

Note: Color of scale zone on the right is based on correlation coefficient r

4.7 Structural equation modeling model analysis (CB-SEM)

This study first analyzes causal relationship among several latent variables by AMOS (Analysis of Moment Structure).

4.7.1 Measurement model of the first phase

(1) Total model fit

Values of total fit measures in this study and scholars' acceptance values are shown in Table 1:

Table 1. **Total model fit**

Measures	Statistical test	Acceptance value	References	Values
Absolute fit	Chi-square value	-	-	63.57
	Degree of freedom	-	-	47
	P value	>0.05	-	0.054
	GFI	>0.9	Bentler (1983)	0.97
	RMR	<0.05	Bentler (1999)	0.021
	RMSEA	<0.05	Browne (1993)	0.035
	AGFI	>0.9	Bentler (1983)	0.943
Relative fit	NFI	>0.9	Bentler (1980)	0.98
	RFI	>0.95	Bentler (1999)	0.971
	IFI	>0.9	Bentler (1980)	0.995
	TLI (NNFI)	>0.9	Bentler (1980)	0.992
	CFI	>0.9	Bagozzi (1988)	0.995

Table 2. **Total model fit (continued)**

Measures	Statistical test	Acceptance value	References	Values
Parsimonious fit	Chi-square/degree of freedom	1~3	Hayduk (1987)	1.51
	PGFI	>0.5	Mulaik (1989)	0.582
	CN	>200	Hoelter (1983)	324

According to Table 2, as to absolute fit, when chi-square value is less, it means fit between causal path diagram of the model and actual data is more significant. Hence, model fit of this study is excellent and perfect.

4.7.2 Structural model of the second phase

Structural model test of the second phase refers to path analysis on causal path relationship among latent variables in order to test structural model fit and validate hypotheses H1~H12. Path analytical result of Customer Satisfaction model is shown in Table 3

Table 3. **Model path analysis**

Dependent variable	Effect	Independent variable	Non-standardized estimate	Standardized estimate	S.E.	C.R. (t value)	P
Perceived Quality (PQ)	<---	Customer Expectations (CE)	0.72	0.74	0.05	13.38	* * *
Customer Satisfaction (CS)	<---	Perceived Quality (PQ)	0.47	0.52	0.07	7.05	* * *
Customer Satisfaction (CS)	<---	Customer Expectations (CE)	0.27	0.30	0.06	4.27	* * *
Customer Complaint (CC)	<---	Customer Satisfaction (CS)	0.23	0.18	0.10	2.42	0.015*
Customer Complaint (CC)	<---	Customer Expectations (CE)	0.46	0.41	0.08	5.44	* * *
Citizen Trust (CT)	<---	Customer Satisfaction (CS)	0.58	0.58	0.07	8.66	* * *
Citizen Trust (CT)	<---	Customer Complaint (CC)	0.15	0.19	0.03	4.46	* * *
Citizen Trust (CT)	<---	Perceived Quality (PQ)	0.20	0.23	0.06	3.67	* * *

Note: when significance level P ≦0.05, it is denoted by *; P ≦0.01, it is denoted by * *; P ≦0.001, it is denoted by * * *According to Table 3, it validates hypothesis relationship among dimensions of research model. Since p values of path analysis are lower than 0.05, H1~H12 are supported. Subsequently, this study explores effects of causal relationship among dimensions in the following table.

The effects include 3 dimensions: direct effects, indirect effects and total effects. Effects of dimensions are shown in Table 4:

Table 4. **Analytical result of effect of CB-SEM**

Dependent variables	Effect	Independent variables	Direct effects	Indirect effects	Total effects
Perceived Quality (PQ)	<---	Customer Expectations (CE)	0.74	-	0.74
Customer Satisfaction (CS)	<---	Customer Expectations (CE)	0.30	0.38	0.68
Customer Satisfaction (CS)	<---	Perceived Quality (PQ)	0.51	-	0.51
Customer Complaint (CC)	<---	Customer Satisfaction (CS)	0.18	-	0.18
Customer Complaint (CC)	<---	Customer Expectations (CE)	0.41	0.05	0.46
Citizen Trust (CT)	<---	Customer Satisfaction (CS)	0.58	0.03	0.61
Citizen Trust (CT)	<---	Customer Complaint (CC)	0.19	-	0.19
Citizen Trust (CT)	<---	Perceived Quality (PQ)	0.23	0.3	0.53

4.8 Structural equation modeling analysis (PLS-SEM)

This study analyzes PLS-SEM by SmartPLS and estimates path coefficients of internal model, relationship among latent variables and internal latent variable R square value (Hulland, 1999).

When the researcher adopts PLS-SEM, number of samples should be based on model background and data characteristics (Hair, 2011). This study follows Marcoulides' (2006) suggestion on reasonable number of samples. Since the lowest standard to scree factor loading is at least 0.7 and medium correlation in correlation setting is at least 0.3, In this study, there are 285 samples and it meets standard of the lowest number of samples in PLS-SEM.

(2) Reliability and validity analysis

It is shown in Table 5:

Table 5. **Reliability and validity analysis of PLS-SEM**

Dimensions	Items	Factor loading	α	CR	AVE	Customer Expectations	Perceived Quality	Customer Satisfaction	Citizen Trust	Customer Complaint
Customer Expectations	CE1	0.91	0.92	0.95	0.86	0.93 ⊙				
	CE2	0.95								
	CE3	0.91								
Perceived Quality	PQ1	0.94	0.93	0.96	0.88	0.69	0.94 ⊙			
	PQ2	0.94								
	PQ3	0.93								
Customer Satisfaction	CS1	0.91	0.91	0.94	0.85	0.64	0.69	0.92 ⊙		
	CS2	0.94								
	CS3	0.91								
Citizen Trust	CT1	0.95	0.90	0.95	0.91	0.62	0.68	0.76	0.95 ⊙	
	CT2	0.96								
Customer Complaint	CC	1.00	1.00	1.00	1.00	0.51	0.43	0.44	0.53	1.00⊙

Note: ⊙ is square root of AVE (Fornell-Lacker index)

In this study, α of reliability is 0.9~0.93 and it matches Nunnally's (1978) suggestion that Cronbach's α is at least 0.7. Hence, questionnaire of this study is reliable. In addition, correlation among the dimensions is 0.43~0.76 and they are lower than 0.85. It complies with the principle: square root of AVE > correlation coefficients among the dimensions. It follows Fornell-Lacker index and it means this study has good discriminant validity.

4.8.2 Internal model of the second phase

PLS-SEM framework is shown below. R2 is the value in the circles of dimensions in the diagram. The values represent explained variance of latent dependent variables in the model by all exogenous variables.

Besides, direct effects of this study are standard deviations of path coefficients obtained by Bootstrap. As to indirect effects, by Bootstrap, it obtains 95% confidence interval (CI) of moderating effect. This study tests the significance to validate if H1~H12 are supported. The results are reorganized in Table 6.

Table 6. **Analytical result of PLS-SEM effect**

Independent variables	Effect	Dependent variables	Direct effects				Indirect effects			Total effects
			Coefficient	Standard deviation of Bootstrap	t value	P value	Coefficient	CI	P value	Coefficient
Customer Expectations (CE)	--->	Perceived Quality (PQ)	0.69	0.04	17.25	***	-	-	-	0.69
Customer Expectations (CE)	--->	Customer Satisfaction (CS)	0.31	0.06	5.17	***	0.33	0.24-0.41	***	0.64
Customer Expectations (CE)	--->	Customer Complaint (CC)	0.39	0.08	4.88	***	0.12	0.03-0.23	**	0.51
Perceived Quality (PQ)	--->	Customer Satisfaction (CS)	0.48	0.06	8.00	***	-	-	-	0.48
Perceived Quality (PQ)	--->	Citizen Trust (CT)	0.25	0.07	3.57	***	0.26	0.17-0.35	***	0.51
Customer Satisfaction (CS)	--->	Customer Complaint (CC)	0.19	0.08	2.38	*	-	-	-	0.19
Customer Satisfaction (CS)	--->	Citizen Trust (CT)	0.50	0.08	6.25	***	0.04	0.01-0.08	*	0.54
Customer Complaint (CC)	--->	Citizen Trust (CT)	0.20	0.06	3.33	***	-	-	-	0.20

Note: When significance level P ≦0.05, it is denoted by *; P ≦0.01, it is denoted by * * ; P ≦0.001, it is denoted by * * *

According to Table 6, as to validation of indirect effects, Quartile of normal distribution is the threshold. In two-tailed test, common threshold is 1.96 and it meets statistical significance level 5%. Thus, p<0.05 and H1~H8 of this study are supported. As to validation of indirect effects, 95% confidence interval of 5000 repetitive sampling through Bootstrap does not include 0 and p<0.05. Hence, indirect effects are statistically significant (Shrout, 2002) and H9~H12 are supported.

As to judgment of effect values, according to Cohen's (1988) suggestion, when effect values are 0.1~0.25, they are low; when they are 0.25~0.4, the values are medium; when they are higher than 0.4, they are high values. According to the result, only "Citizen Trust (CT) <–Customer Complaint (CC)" and "Customer Complaint (CC) <–Customer Satisfaction (CS)" is low effect and the rest are high effects.

5. Conclusion and Suggestions

5.1 Research Conclusion

5.1.2 Customer Satisfaction model

This study adopts CB-SEM and PLS-SEM for Customer Satisfaction model analysis. It conducts statistical analysis by these two measures. After validation, H1~H13 are supported, as shown in Table 7:

Table 6. **Analytical result of PLS-SEM effect**

Independent variables	Effect	Dependent variables	Direct effects				Indirect effects			Total effects
			Coefficient	Standard deviation of Bootstrap	t value	P value	Coefficient	CI	P value	Coefficient
Customer Expectations (CE)	--->	Perceived Quality (PQ)	0.69	0.04	17.25	***	-	-	-	0.69
Customer Expectations (CE)	--->	Customer Satisfaction (CS)	0.31	0.06	5.17	***	0.33	0.24-0.41	***	0.64
Customer Expectations (CE)	--->	Customer Complaint (CC)	0.39	0.08	4.88	***	0.12	0.03-0.23	**	0.51
Perceived Quality (PQ)	--->	Customer Satisfaction (CS)	0.48	0.06	8.00	***	-	-	-	0.48
Perceived Quality (PQ)	--->	Citizen Trust (CT)	0.25	0.07	3.57	***	0.26	0.17-0.35	***	0.51
Customer Satisfaction (CS)	--->	Customer Complaint (CC)	0.19	0.08	2.38	*	-	-	-	0.19
Customer Satisfaction (CS)	--->	Citizen Trust (CT)	0.50	0.08	6.25	***	0.04	0.01-0.08	*	0.54
Customer Complaint (CC)	--->	Citizen Trust (CT)	0.20	0.06	3.33	***	-	-	-	0.20

Note: When significance level P ≦0.05, it is denoted by *; P ≦0.01, it is denoted by * * ; P ≦0.001, it is denoted by * * *

5.2 Implication of research

Regarding the methods of this study, CB-SEM upon covariance or PLS-SEM upon explained variance of maximum dependent variable can be applied to analysis of data collected. The empirical study finding shows that the results derived from these two methods are not significantly different. However, the underlying thoughts, condition and calculation are not the same. PLS-SEM is different from CB-SEM which concerns about errors of measurement. Thus, with a limited number of samples and latent variables, PLS-SEM tends to overestimate factor loading of measurement model and underestimate latent variable coefficients of structural model. Analytical result of this empirical research mostly matches the situations discovered in past literature (Pan Ying-ru, 2010; Qiu Hao-zheng, 2011; Asyraf, 2013; Z. Jannoo, 2014). Besides the previous phenomenon, this study realizes that there is low effect relationship among the dimensions: "Citizen Trust (CT) <–Customer Complaint (CC)" 和 "Customer Complaint (CC)

<–Customer Satisfaction (CS).” In the results of two methods, PLS-SEM overestimates latent variable coefficients of structural model. The situation relies on the study of future research.

As to customer complaint, “Citizen Trust (CT) <–Customer Complaint (CC)” and “Customer Complaint (CC) <–Customer Satisfaction (CS)” refer to low effect relationship. However, “Customer Complaint (CC) <–Customer Expectations (CE)” is high effect relationship. The outcome matches the perspective of TCSI which suggests that in current Taiwan, enterprises can properly cope with customer complaint. Customer complaint has transformed from outcome of customer satisfaction into factor of perceived quality. Therefore, when future researchers measure customer satisfaction of Taiwan by ACSI, they should attempt to recognize customer complaint as cause or result in the model.

Finally, as to empirical result on study of Service Innovation in Customer Satisfaction model of application of health insurance card in Taiwan Penghu County, when perception of Customer Expectations is higher, that of perceived quality, customer satisfaction, and customer complaint is higher. When perception of customer satisfaction is higher, that of customer complaint and citizen trust is higher; in addition, when perception of perceived quality and customer complaint is higher, that of citizen trust is higher. In the model, customer satisfaction is the cause (customer expectations and perceived quality) and it is the key factor of outcome (customer complaint and citizen trust). The findings support the hypotheses and they serve as reference for future research.

5.3 Managerial implication of research

Service Innovation of local card issue of National Health Insurance Administration, for the public who applies for health insurance card in Taiwan Penghu County, their perception of Customer Expectations positively influences Customer Satisfaction and perceived quality. As to Customer Expectations, customized service of National Health Insurance Administration is the highest. It means that when National Health Insurance Administration provides public service, it should not always rely on standardized business process. It is suggested that it can propose service channel for individuals’ special and reasonable demands. It is the highest expectation for the public who applies for health insurance card in Taiwan Penghu County. For instance, for the disabled people, it can install the button on the door. For the elderly, it can provide glasses or assistance with form filling.

As to perceived quality of Service Innovation in Taiwan Penghu County, total evaluation of customers on service of National Health Insurance Administration is the highest. This study shows that gap between customer expectations and perceived quality of Service Innovation of local card issue in National Health Insurance Administration is significant and expectations are lower than perception. That is to say, regarding customers’ overall evaluation on service of National Health Insurance Administration, perception of customization and reliability is higher than expectation. They are not only satisfied with Service Innovation of National Health Insurance Administration but also surprised. As to Customer satisfaction, disconfirmation degree of expectation and perception is the highest. According to empirical result on the public who applies for health insurance card in Service Innovation of National Health Insurance Administration in Taiwan Penghu County, their actual perception matches the expectation and they are highly satisfied.

Since the public’s satisfaction with National Health Insurance Administration is considerably enhanced, it directly influences their trust in service provided by National Health Insurance Administration. Perception of continuous confidence in National Health Insurance Administration is higher. Hence, for the people in Taiwan Penghu County, Service Innovation of National Health Insurance Administration not only enhances people’s satisfaction but also influences their views toward implementation of new policy and new Service Innovation model.

By model estimation through SEM, this study obtains indicators in Customer Satisfaction model and the result shows that public satisfaction is 85.67 as the index.

Thus, regarding application service of health insurance card in National Health Insurance Administration, perception of Customer Expectations is significantly lower than that of Perceived Quality. That is to say, innovative service provided by National Health Insurance Administration not only meets their expectations but also is out of their expectation. The index can be compared with, in the future, implementation of local card issue of National Health Insurance Administration in other areas of Taiwan, regarding result of Customer Satisfaction measurement in this study. In addition, in Taiwan Penghu County, samples can be further collected to calculate the index and explore the difference between time series.

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