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ORIGINAL ARTICLE

Research of the Effect of Social Service User's Perceived Adequacy of Cost on Service Satisfaction

: Focusing on the User of Community Service Investment

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ABSTRACT

This study aimed to improve the user's satisfaction of Community Service Investment (CSI), which conducted from 2007 by Ministry of Health and Welfare, by understanding and analyzing if CSI user's perception of cost adequacy might affect service user's satisfaction through Secondary analysis that conducted by utilizing the data from 'A Satisfaction survey of The Local Social Services Investment Projects 2012' by Ministry of Health and Welfare in 2012. User satisfaction is the most adequate index to evaluate CSI and moreover, user satisfaction can be the indirect outcome of service because CSI depends on the characteristics of people and community.

In the analysis, the dependent variable is the user's satisfaction and the independent variable is the user's Perception of adequacy of cost. The data was analyzed though SPSS Statistics 20.0.

In the analysis results, first, Users think total cost of service is adequate, their satisfaction increases. Second, Users think the out-of-pocket payment is adequate, their satisfaction increases. Based on these results of the research, it is necessary to consider user's real amount of out-of-pocket payment and if they think it is adequate or not. However, this study couldn't consider the real amount of money users paid because we used secondary data. In order to find out more reasonable results, follow-up research considering real amount of out-of-pocket money is necessary which considers real amount of out-of-pocket payment users paid.

<Key-words>

community service investment, user's satisfaction, perception of adequacy of cost

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I . Background

1. Community Service Investment (CSI)

Recently in Korea, people's demand of social services which has purpose of marketing has increased because of many changes in their life style. Population structure has been changing due to low birth rate and aging. Family structure has also been changing into nuclear family. Finally, new social risks such as women's participation in economy made people to require social services (Lee, 2011). Government understood them and started E-voucher program in 2007 to expand social services. Social service E-voucher program is now under the Ministry of Health and Welfare and it has 9 services such as Elderly Care Service, Assistance for Person with Disability and Medical Expense Support Before Childbirth.

However, those services are not enough to satisfy various demand from each community's characteristics or its residents with recent social services which are planned and managed by the main government. Moreover, the main government is suffering to deal with those diversifications of demands from different communities. It became an issue and government developed a program which has consumer-focused supply system. Therefore, one of social service E-voucher programs, Community Service Investment, is promoted. Community Service Investment intensifies autonomy of community to develop effective supply of social services. According to the Ministry of Health and Welfare (2012), Community Service Investment has a purpose of supplying social services to satisfy residents of communities. Local governments lead to find out and enforce Community Service Investment which is accord with various characteristics and demands of each community or family. Therefore, it has significant difference from the provider-focused supply system of recent social services which are planned and managed by the main government.

2. Performance evaluation of Community Service Investment (CSI)

The main government gives subsidies and grants autonomy to local governments which perform CSI. Then, it regularly evaluates performance of CSI in order to improve the quality of it.

When evaluating performance of service, quality of service, service effectiveness and user satisfaction are generally used as measurement indicators. In case of CSI, local governments have to manage services that are proper to each community's characteristics and its states. Moreover, community's characteristics and needs should be reflected to services because each community autonomically plans and develops those services. For that reason, services managed by CSI from each community seem to have unique characteristics. Therefore, it is not easy to check performance of services through effectiveness or quality of them. Because CSI is supplying services which are fit to demands of each community, user satisfaction will be an important indicator to see the

outcome of services (Lee, 2009). In other words, user satisfaction can be seen as indirect performance of services. Through understanding satisfaction of users, providers get to know general performance of services. To improve achievements through understanding performance of services, it is important to analyze which factors affect user satisfaction in the process of using services (Lee, 2011).

According to The Factors affecting Parental Satisfaction with the Use of the Voucher Service for Disabled Children's Development Rehabilitation (Park, 2014), accessibility of services, out-of-pocket payment and characteristics of service provider significantly affect parental satisfaction. Moreover, according to Kim and Jung(2012), information that users have, whether child is disabled or not, age of respondent, number of service usage per month and out-of-pocket payment affect satisfaction of Early Intervention about Children with Problem Behavior Service users.

Likewise, many factors such as characteristics of services, users or providers affect user satisfaction. In case of CSI, characteristics related to users are main factors which affect satisfaction. Especially in this research, we focused on the characteristics of costs out of many factors related to users.

3. Cost of Social Service Users

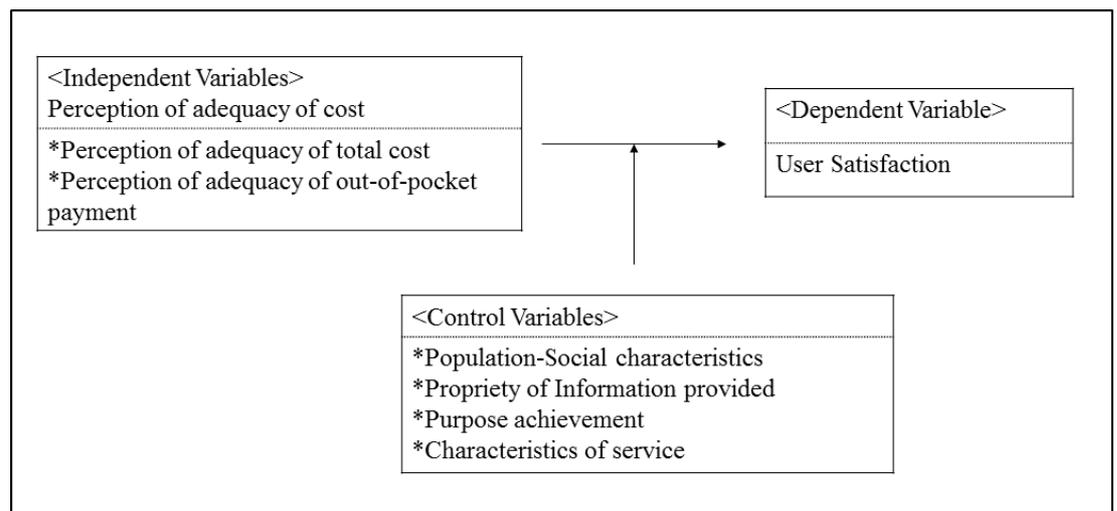
Cost of social service users is composed of government subsidy and out-of-pocket payment which users actually pay. In case of CSI, Local governments autonomically set the actual amount of out-of-pocket payment and make users to pay some of service cost. By doing that, they prevent moral hazard and intensify responsibility of attending services. Recently, there are some competitions between providers to make profit and they excessively reduce out-of-pocket payment or they even make it free to keep more users. Because of those problems, there might be some difference on perception of cost adequacy among service users who actually pay out-of-pocket payment. As result, it will affect user's service satisfaction.

Therefore, this research aimed to improve the CSI user's satisfaction through finding out if CSI user's perceived adequacy of cost (perception of cost) affect user satisfaction or not.

II. Methods

1. Research Model

This research has a purpose to analyze the impact of CSI user's economic cost on user satisfaction. Then, we set our research model as <Figure 1>.



<Figure 1> Research Model

2. Hypothesis

Hypothesis 1.

Satisfaction will increase when CSI users think total cost of service is reasonable compared to content of service.

Hypothesis 2.

Satisfaction will increase when CSI users think out-of-pocket payment is reasonable.

3. Measurement tools

In this research, we set user's service satisfaction as a dependent variable and set perception of cost as an independent variable. Then, we measured each of them with 5 point scale. For control variables, factors of purpose achievement, provided information and service characteristics are set. In previously existing researches, these factors were considered as main factors which affect user satisfaction. However, we set them as control variables to see pure impact of perception of cost.

<Table 1> Key variables

Variables	Item	Details
Dependent Variable	Service Satisfaction	Overall service satisfaction of user (5point scale)
Independent Variables	Perception of cost	Perception of adequacy of total cost compared to content of service (5point scale)
		Perception of adequacy of out-of-pocket payment (5point scale)
Control Variables	Population-Social characteristics	Gender, Age, Region
	Type of service	Service for children, Service for aged, Service for disabled, other services
	Propriety of Information provided	Propriety of information about supply organization provided from local government (5point scale)
		Propriety of information about service provided from supply organization (5point scale)
	Purpose achievement	Degree of Purpose achievement considering the original purpose of service use (5point scale)
	Service Characteristics	
Propriety of personnel of service (5point scale)		
Kindness of service personnel (5point scale)		

4. Data Collection and Subject

We did secondary data analysis by using the data named “CSI satisfaction research 2012” from the Ministry of Health and Welfare in 2012. This survey was conducted in order to review the effectiveness, issues and improvement plans of the CSI services and to secure the basis for future projects through measuring the utilization and satisfaction of CSI.

So subject of this study is 5,421 CSI users. In case when users cannot respond (children, severely disabled, etc), parents or guardian answered the questionnaire.

5. Analysis Method

This research analyzed each questionnaire with statistics by using SPSS Statistics 20.0. Analysis method is as following.

First, we figured out general characteristics of users, user satisfaction and perception of cost through frequency analysis.

Second, we analyzed average difference according to general characteristics of users through T-test and Analysis of variance (ANOVA).

Third, we verified impact of perception of cost which is an independent variable on user satisfaction which is dependent variable through regression analysis.

III. The Results of the Research

1. General Characteristics of Users

General characteristics of users are as following as <Table 2>.

Out of 5,421 CSI users, there are 2,479 (45.7%) men and 2,942 (54.3%) women. The result came out that women use CSI more than men. When we look at the age, majority of users are children (61.5%) and the second high is elderly (23.1%). In the result of the size of city, people in small and medium-size cities (57.2%) use CSI more than people in major cities (42.8%).

We categorized 10 CSI services into four groups. They are children-targeted, elderly-targeted, disabled-targeted and others. If we look at the number of users by category above, users of children-targeted services are 1,066 (19.7%), users of disabled-targeted services are 669 (12.3%) and users of elderly-targeted services are 189 (3.5%). The result came out that the number of children-targeted service users is the highest. Moreover, 3,497 (64.5%) people use other services than those 10 CSI services which is majority. This is because of the characteristic of CSI which means there are various and different services in each community except the 10 services.

<Table 2> General characteristics of CSI Users

Variables	Classification	Frequencies of people	Percentage(%)
Gender	Male	2,479	45.7
	Female	2,942	54.3
	Total	5,421	100.0
Age	0~4	250	4.6
	5~14	3,333	61.5
	15~19	135	2.5
	20~59	453	8.4
	Over 60	1,250	23.1
	Total	5,421	100.0
Size of city	Major cities	2,322	42.8
	Small and Medium-size cities	3,099	57.2
	Total	5,421	100.0
Type of service	Service for children	1,066	19.7
	Service for aged	189	3.5
	Service for disabled	669	12.3
	Others	3,497	64.5
	Total	5,421	100.0

2. Characteristics of Perception of Cost

Characteristics of Perception of Cost are as following as <Table 3>.

Perception of adequacy of total cost shows if users think the total cost of service is adequate compare to the content of services and the result came out the mean of 3.90. Users think total cost of service is quite adequate.

Perception of adequacy of out-of-pocket payment shows if users think the out-of-pocket payment for service usage is adequate and the result came out the mean of 4.09. Users think out-of-pocket payment is very adequate.

The result came out that perception of adequacy of both total cost and out-of-pocket payment are partly high. With this result, we can say that total cost and out-of-pocket payment of CSI are quite adequate from user's standpoint.

<Table 3> Level of perception of adequacy of cost

Variables	Mean	S.D.
Perception of adequacy of total cost	3.90	1.893
Perception of adequacy of out-of-pocket payment	4.09	1.319

3. Characteristics of User Satisfaction

A characteristic of User Satisfaction is as following as <Table 4>. Overall satisfaction of service users came out the mean of 4.11. CSI user's satisfaction came out very high.

<Table 4> CSI user's satisfaction

Variable	Mean	S.D.
User Satisfaction	4.11	.843

4. Difference of Satisfaction in general characteristics of users

To understand difference of satisfaction in general characteristics of users, we did T-test and Analysis of variance (ANOVA) as following <Table 5>.

When we look at the difference in gender, mean of male is 4.08 (SD = .810) and mean of female is 4.14 (SD = .869). This means that the satisfaction of female is little higher than the satisfaction of male.

To check with T-test if this difference is statistically significant or not, t-value came out -2.483 which means the difference is statistically significant in the level of $p < .05$. In other words, mean of user satisfaction of CSI depends on gender and female's satisfaction is higher than male's.

When we look at the difference in age, satisfaction of elderly group (over 60) is the highest with the mean of 4.27, middle-aged group is the second high with the mean of

4.13, the mean of infant group (0~4) is 4.07, the mean of children group is 4.06, and the mean of teenager group is 4.00. To check if the mean of satisfaction is statistically significant, the result came out significantly with F-value of 15.012 in the level of $P < .001$. To figure out if any specific groups have differences, we did Post-hoc analysis with Scheffe's. Mean of elderly group's satisfaction has statistically significant difference compared to infant group, children group and teenager group. There is no significant difference between the mean of elderly group's satisfaction and the mean of middle-aged group's satisfaction. Moreover, there are not significant differences in satisfaction among other groups.

When we look at the difference of satisfaction mean, in region of service usage, the mean of satisfaction of users in major cities is 4.10 (SD = .856) and the mean of satisfaction of users in small and medium-size cities is 4.12 (SD = .832). It shows that user satisfaction of small and medium-size cities came out little higher than user satisfaction of major cities. Through T-test, we checked if the result is statistically significant. The t-value came out -.991 in the level of $p > .05$ which is not significant result. In other words, there is no mean of satisfaction difference in region.

Finally, when we look at the difference of satisfaction mean in service type, elderly-targeted service user's satisfaction is the highest with the mean of 4.31. The second high is disabled-targeted service user's satisfaction with the mean of 4.17. Then, children-targeted service came out the mean of 4.12 and other services came out 4.09. F-value is 5.371 in the level of $P < .01$ and differences among type of services came out statistically significant. Through Post-hoc analysis with Scheffe's, we find out that there are significant satisfaction difference between children-targeted service and elderly-targeted service. Moreover, elderly-targeted service and other services have significant difference in their satisfaction mean. However, there is not significant difference in other services.

<Table 5> Satisfaction difference by General characteristics of Users

	Variables	Number of case	Mean	S.D.	t / F
Gender	Male	2,479	4.08	.810	-2.483*
	Famale	2,942	4.14	.869	
Age	0~4	250	4.07	.842	15.012***
	5~14	3,333	4.06	.853	
	15~19	135	4.00	.712	
	20~59	453	4.13	.848	
	Over 60	1,250	4.27	.804	
Region	Major city	2,322	4.10	.856	-.991
	Small and medium-size city	3,099	4.12	.832	
Type of service	Children	1,066	4.12	.831	5.371*
	Aged	189	4.31	.912	
	Disabled	669	4.17	.823	
	Others	3,497	4.09	.843	

* $p < .05$, ** $p < .01$, *** $p < .001$

5. Analysis of factors affecting user satisfaction

To find out the impact of adequacy of cost which is independent variable on user satisfaction which is dependent variable, we used regression analysis and the result is as following as <Table 6>.

To compare the influence of total cost and out-of-pocket payment which are under user's economic cost factor on user satisfaction, adequacy of total cost is = .029 ($p < .05$), and adequacy of out-of-pocket payment is = .040 ($p < .05$). With this result, adequacy of out-of-pocket payment affects user satisfaction relatively more than adequacy of total cost.

Independent variable, user's economic cost factors, significantly affects user satisfaction. In case of CSI, when users feel the total cost and their out-of-pocket payment of services are adequate, user satisfaction comes out higher. Moreover, when users think adequacy of out-of-pocket payment more positively than adequacy of total cost, user satisfaction comes out higher.

<Table 6> Analysis of effect factors on user satisfaction

Model	Unstandardized coefficient		Standardized coefficient	t
	B	S.D.	Beta	
(invariables)	1.146	.088		13.081
Perception of adequacy of total cost	.013	.005	.029	2.501*
Perception of adequacy of out-of-pocket payment	.026	.007	.040	3.578***
Information provided from local government	.017	.006	.033	2.824 *
Information provided from supply organization	.058	.008	.093	7.562***
Purpose achievement	.092	.008	.133	11.208***
Characteristics of service	.511	.013	.485	40.133***
R ²			.385	
Corrected R ²			.383	
Standard error of the mean of estimated value			.662	

a. dependent variable: user satisfaction

* $p < .05$, ** $p < .01$, *** $p < .001$

IV. Considerations and Conclusions

To sum up the result of research, CSI user's perceived adequacy of total cost affects user satisfaction. Then, the hypothesis 1 can be true. In other words, when users think total cost of service is adequate compared to the service content, satisfaction increases.

In addition, CSI user's perceived adequacy of out-of-pocket payment affects user satisfaction. Then, the hypothesis 2 also can be true which means that satisfaction increases when users think out-of-pocket payment is adequate.

Therefore, CSI user's satisfaction increases, when they think the cost for service is adequate.

In this research, we found out that perceived adequacy of user's cost affects satisfaction, but it is necessary to research which factors affect user's perception. Especially, it should be considered how adequate users think considering to how much they actually paid. However, this research used secondary data and it is limited to consider the actual payment of users.

Finally, based on this result, a follow-up study will be necessary regarding how much users actually pay for services to make better suggestions and implications.

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