

A Study on the Relationship between Customer Participation and Employee Service Innovation Behavior

Chao LIN^{1,a,*}, Lu MA^{1,b}

¹School of Management, Guangxi University of Science and Technology, Liuzhou, Guangxi, China 545005

^a415498130@qq.com, ^bmalu6655@163.com

*Corresponding author

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Abstract. The research object of this paper is the 320 first line employees of the major commercial banks in Guangxi. This article uses the literature reading method and the questionnaire survey to explore the relationship between customer participation and employee service innovation behavior. The research results show that three dimensions of customer participation have an extraordinary positive correlation to employee service innovation behavior, which are information provision, interpersonal interaction and cooperative behavior; Individual learning ability has a positive moderating effect on the relationship between interpersonal interaction and employee service innovation behavior, has a weak positive moderating effect on information provision and employee service innovation behavior, has no positive moderating effect on cooperative behavior and employee service innovation behavior. The empirical study of this paper improves the understanding of employee service innovation, deepens the micro level of employee service innovation behavior, and guides the direction of commercial banks to strengthen employee service innovation behavior.

Introduction

The staff of the service enterprise is not only the source of the enterprise's innovative ideas, but also the promoter and the executor of the service innovation. On the one hand, the staff of the service enterprises need to implement the regular work of customer service, on the other hand, it also needs to meet the special needs of customers. Therefore, customer participation is an indispensable process in the production process of service and staff interaction, some scholars even believe that Enterprise employees include customers in a broad sense. It can be seen that the customer participation behavior and service employee's innovative behavior is an organic whole and they are related to each other. At present, most researchers in the study of customer participation in the enterprise level of the relevant results, but few people study the impact of customer participation will be on the staff. Therefore, it is very necessary to study the interaction between customer participation and employee behavior.

Research Assumptions

The Influence of Customer Participation on Employee Service Innovation Behavior

Lovelock (1979) believes that the interaction between service providers and customers is the fourth form of staff to improve the productivity of innovation. Customer participation in the service process can improve employees' understanding to customer behavior, combining the research object, in this paper, customer participation is defined as the information provided by customers and employees in the process of interaction, interpersonal interaction and cooperation behavior, in order to seek cooperation with the staff to create service value.

Information provision refers to the customer and employee share information to get better service, so as to better understand customer needs, and on the basis of customer needs make full use of the position of the knowledge and skills to solve problems, and thus stimulate employee service innovation behavior; Interpersonal interaction refers to the interaction between the service provider and the customer, and the communication between the front-line staff and customers can record the problems raised by the customers, according to the problem, putting forward the targeted service innovation; Cooperative behavior refers to the role that the customer should perform the "part time employee" in order to make the service process successfully completed. The higher the level of cooperation of customers, more staff by the customer to bear, employees have more time to deal with the interaction between customers and service, and better access to innovative behavior more in line with the demands of customers from interaction with customers. As a result, this paper puts forward the following assumptions:

H1: customer participation and employee service innovation behavior has a positive correlation, that is:

H1a: information provision and employee service innovation behavior has a positive correlation

H1b: interpersonal interaction and employee service innovation behavior has a positive correlation

H1c: cooperative behavior and employee service innovation behavior has a positive correlation

The Moderating Effect of Individual Learning Ability

Individual learning ability refers to the individual to adapt to the external environment, at the same time, learning continuously and access to knowledge, information, experience, through practice to improve the degree of personal cognition, in order to obtain the ability to sustainable development. Individuals with strong learning ability can quickly identify, select, absorb the valuable information provided by customers, and then implement the corresponding service innovation behavior according to the situation. The individual learning ability plays a moderating role between customer participation and employee service innovation, and the following assumptions are made in this paper:

H2: individual learning ability has a positive moderating effect on the relationship between customer participation and employee service innovation behavior.

H2a: individual learning ability has a positive moderating effect on the relationship between information provision and employee service innovation behavior.

H2b: individual learning ability has a positive moderating effect on the relationship between interpersonal interaction and employee service innovation behavior.

H2c: individual learning ability has a positive moderating effect on the relationship between cooperative behavior and employee service innovation behavior.

This paper's theoretical model is shown as Fig.1.

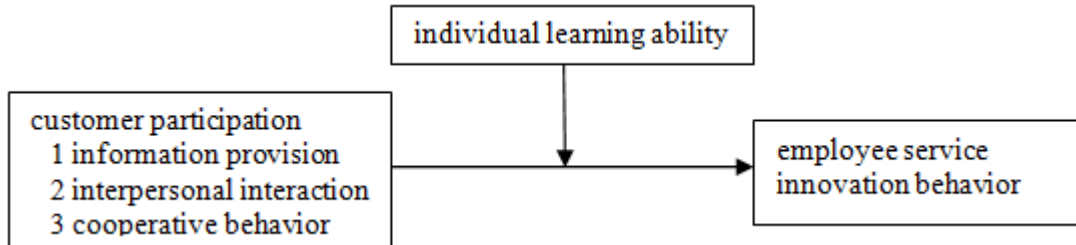


Figure 1. Theoretical model.

Research Method

Research Sample

The research object of this paper comes from the Guangxi region of major commercial banks. This paper uses network electronic files and paper questionnaires to release 400 questionnaires, and 355 were recovered, the recovery rate of the questionnaire was 88.7%. Excluding 35 invalid questionnaires, it had 320 valid questionnaires and the effective recovery rate was 90%. The characteristics of the sample population are as follows: 38.75% male, 61.25% female; Working ages less than 1 years is 17.5%, 1 to 3 years is 22.5% , 3 to 5 years is 22.5%, 5 to 7 years is 36.25%, more than 7 years is 1.25%.

Variable Measure

The survey questionnaire using Likert five scale scoring method. The questionnaire's digital 1 to 5 named "very inconsistent with" to "very in line with". The customer participation variable, based on Ennew & Binks (1999), Groth (2005), Kimmy (2010) and Pengyanjun (2010)'s maturity scale, use information provision, interpersonal interaction and cooperative behavior to measure customer participation. It has 12 items. The individual learning ability, based on Chenguoquan (2010)'s maturity scale, use a total of 27 items to measure. The employee service innovation behavior, based on the Kleysen and Street (2001)'s theoretical research and referred to the domestic scholar Guyuandong's (2010) scale, uses a total of 8 items to measure.

Research Results

Descriptive Statistics

In this study, 320 valid questionnaires were analyzed by descriptive statistics, the specific results are shown in Table 1.

Table 1. Sample distribution (N=320).

basic document	project	Sample number(320)	percentage %
sex	male	124	38.75
	femal	196	61.25
working age	below one year	56	17.5
	one to three years	72	22.5
	three to fives years	72	22.5
	five to seven years	116	36.25
	more than seven years	4	1.25

The reliability of each scale and its dimensions used in the study are shown in Table 2. Employee service innovation behavior, customer participation and individual learning ability scale's α values is 0.912, 0.870 and 0.964, they all greater than 0.8, and customer participation every dimension is also greater than 0.7. So it indicates that these three scales have a good reliability. Through the test of KMO and Bartlett, the KMO value of this study is 0.824, more than 0.7, and Sig. is.000, which showed that the variables' validity in this scale is very high.

Table 2. Reliability analysis of scale (N=320).

construct	dimension	item	dimension cronbach's α	Construct cronbach's α
employee service innovation behavior	—	8	—	0.912
customer participation	information provision	5	0.835	0.870
	interpersonal interaction	4	0.782	
	cooperative behavior	3	0.813	
individual learning ability	—	27	—	0.964

From Table 3 ,we can find that customer participation, information provision, interpersonal interaction, cooperative behavior and individual learning ability has significant positive correlation with employee service innovation behavior ($r=0.572,0.458,0.404,0.550,0.821$; $p<0.01$). Using LISREL8.7 to analysis scale confirmatory, we get all fitting index: $X^2/df=2.96$, $GFI=0.925$, $CFI=0.944$, $IFI=0.945$, $p=0.000$, $RMSEA=0.086$, it proved that the model has good fitting degree.

Table 3. Research variables correlation matrix (N=320).

variables	correlation					
	1	2	3	4	5	6
1 employee service innovation behavior	1					
2 customer participation	.572**	1				
3 information provision	.458**	.868**	1			
4 interpersonal interaction	.404**	.815**	.529**	1		
5 cooperative behavior	.550**	.697**	.436**	.405**	1	
6 employee service innovation behavior	.821**	.733**	.623**	.518**	.644**	1

Hypothesis Test

In this paper, we use the hierarchical regression method to test the hypothesis. Firstly, in order to test the main effect, this paper is divided into two levels of control variables and independent variables. The employee service innovation ability is set as the dependent variable, join the gender and working age as the control variable, and then put the customer participation, information provision, interpersonal interaction, cooperative behavior into the regression equation. By analysis, all variables' VIF less than 3, so it means no significant common linear problem between the variables. From the table 4's regression analysis result, we found that employee service innovation behavior has a significant positive correlation with information provision, interpersonal interaction and cooperative behavior ($P = 0.450$, $p < 0.001$; $P = 0.394$, $p < 0.001$; $P = 0.543$, $p < 0.001$), so it supports the hypothesis H1, H1a, H1b, H1c. Secondly, in order to test the moderating effect, we first let the moderating and independent variable have a elimination of central processing. Thus it can avoid primitive variables and interaction term has a significant common linear problems. Then we get all variables' VIF less than 1.5, so it means no significant common linear problem. From the model a' s M3 in Table 5, we can know that the individual learning ability has a positive moderating effect on the relationship between customer participation and employee service innovation behavior ($\beta = 0.020$, $p < 0.001$); the model b' s M3, the individual learning ability has a weak moderating effect on the relationship between information provision and employee service innovation behavior ($\beta = 0.018$, $p < 0.001$); the model c' s M3, the individual learning ability has a positive moderating effect on the relationship between interpersonal interaction and employee service innovation behavior ($\beta = 0.016$, $p < 0.001$); the model d' s M3, the individual learning ability has no moderating effect on the relationship between cooperative behavior and employee service innovation behavior has no effect ($P = 0.016$, $p < 0.001$). Based on this hypothesis, it supports the hypothesis H2, H2b.

Table 4. Multiple regression analysis of employee service innovation behavior (N=320).

variables	employee service innovation behavior				
	M1	M2	M3	M4	M5
sex	0.053	0.005	-0.101	-0.008	-0.047
working age	0.130	0.012	0.040	0.058	0.081
customer participation		0.570***			
information provision			0.450***		
interpersonal interaction				0.394***	
cooperative behavior					0.543***
R ²	0.018	0.328	0.212	0.167	0.310
ΔR ²	0.012	0.321	0.204	0.159	0.304
F	2.869	51.302***	28.268***	21.077***	47.384

Table 5. Regulatory effect test (N=320).

variables	employee service innovation behavior								
	Model a			Model b		Model c		Model d	
	M1	M2	M3	M2	M3	M2	M3	M2	M3
sex	0.053	0.042	0.045	0.044	0.044	0.040	0.040	0.036	0.037
Working age	0.130 *	0.039	0.041	0.037	0.040	0.041	0.043	0.042	0.042
CP		0.066	0.062						
IP				0.088 *	0.064				
II						0.030	0.007		
CB								0.034	0.024
IL		0.878 ***	0.882 ***	0.883 ***	0.880 ***	0.845 ***	0.840 ***	0.808 ***	0.813 ***
CP*IL			0.071 *						

IP*IL					0.062				
II*IL							0.070 *		
CB*IL									0.017
R ²	0.018	0.824	0.684	0.682	0.685	0.678	0.682	0.678	0.678
Δ R ²	0.012	0.679	0.679	0.678	0.680	0.674	0.677	0.674	0.673
F	2.869	166.5 53***	135.8 93***	168.6 01***	136.5 86***	165.5 14***	134.6 91***	165.5 45***	132.1 65***

Notes: CP- customer participation, IP- information provision, II- interpersonal interaction, CB- cooperative behavior, IL- individual learning ability, and *P<0.05, **P<0.01, ***p<0.001

Conclusion

There is a significant positive correlation between customer participation and employee service innovation behavior. Each dimension of customer participation has a significant positive impact on employee service innovation behavior, and the influence of cooperative behavior and information provision on employee service innovation behavior is greater than the impact of interpersonal interaction; Individual learning ability positively regulates the relationship between customer participation and employee service innovation behavior, and the moderating effect of interpersonal interaction is significant, the moderating effect of information provision is weak, and the moderating effect of cooperative behavior is not significant. The adjustment of interpersonal interaction is significant, because the interpersonal interaction is conducive to the exchange of ideas, creating a friendly and relaxed environment, and effective communication with customers can help to establish the trust relationship between each other, individuals with strong learning ability are good at communicating with customers to find problems and solve problems, so as to stimulate the production of innovative services.

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