The Role of Sex Types in Relationship Benefits Management: Based on Data Mining

Mingli Zhang
School of Economics and Management of BeiHang University, Beijing, P.R.China
znang1234@sina.com

Qingmin Kong
School of Economics and Management of BeiHang University, Beijing, P.R.China
qingmin_kong@163.com

Abstract—**In recent years, as the relationship marketing becomes an important part of enterprises' marketing activities, more enterprises start to take seriously to the relationship with the customers, based on this, there comes the concept of relationship benefits. Customer sex types have significant correlation with relationships, different sex types customers have different benefits preference. This paper uses data mining to analyze the role of customer sex types in relationship management. This paper firstly use factor analysis to explore the basic dimensions of relationship benefits, then use regression analysis to analyze the relationship benefits preference and the moderating effect of different sex type customers. After this, this paper uses structural equation modeling to analyze the different impact of relationship benefits on customer satisfaction and customer loyalty among different sex types customers. Finally, this paper proposes a relationship benefits management strategy. The findings of this paper are directions for future research and managerial implications.**

Index Terms—**relationship benefits, sex types, data mining, factor analysis, regression analysis, structural equation modeling**

I. Introduction

In global services markets, continuing competitive pressures and resource constraints make enterprises to establish a close relationship with customers to gain competitive advantage. The prominent relationship marketing researchers called for further research to build a comprehensive picture of what is the motivation of customers remain in relationships (Bendapudi and Berry, 1997)[1]. Over the past few years, the relationship marketing literature has begun to explore the question of what kinds of relationship benefits customers derive from staying in long-term relationship with companies (Gwinner, Gremler, and Bitner, 1998; Reynolds and Beatty, 1999)[2][3].

Relationship benefits are defined as the benefits customer obtains from the relational exchanges above or beyond the core product and services (Gwinner, Gremler, and Bitner, 1998)[2]. Gwinner, Gremler, and Bitner(1998) found confidence benefits, social benefits, and special treatment benefits, based on interpersonal relationships research[2]. And they also referred to that in specific circumstances, may be specific benefits exist. Based on the brand equity research, Hennig-Thurau, Gwinner, and Gremler(2000) raised the concept of identity-related benefits, but no further evidence[4]. Confidence Benefits are psychological benefits related to a comfort of feeling of security, reduced anxiety and trust in having developed a relationship with a services provider. Social benefits refer to the development of personal relationships between customer and services provider, including several senses, such as belonging, empathy, courtesy, understanding, familiarity and even friendship. Special treatment benefits refer to customer's perception of preferential treatment, extra attention or personal recognition, and special services not available to other customers. Identity-related benefits bring customer special identity meaning.

Gwinner, Gremler, and Bitner(1998) found that relationship benefits and customer satisfaction, customer loyalty were significantly related[2]. Molina, Martín-Consuegra, and Esteban (2007) found that relationship benefits have positive and significant impact on customer satisfaction under banking services background[5]. Lacey, Suh, and Morgan (2007) also suggested that relationship benefits should have positive impact on customer loyalty[6]. There high relationship benefits means establishment of strong relationship(Hennig-Thurau, Gwinner, and Gremler, 2002) [7].

The interaction theory notion that characteristics of relators can impact the nature and quality of the interaction(Smith, 1998)[8]. This suggests that men and women differ in their relationship styles. However, it is not clear that sex differences are manifest in the relationship benefits preference. Therefore, the purposes of this study are to: (1) explore what kinds of relationship benefits exist; (2) analyze the different preference of relationship benefits between male and female; (3) analyze the moderating effect of sex types in relationship benefits preference; (4) explore the different

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Corresponding author: Qingmin Kong.
Email: qingmin_kong@163.com

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impact of relationship benefits on customer satisfaction and customer loyalty between male and female customers.

II. Research Procedures and Modeling

This research use data mining to analyze the role of customer sex types in relationship benefits preference and their impact on customer satisfaction and customer loyalty. The research procedures and modeling were shown in Fig. 1.

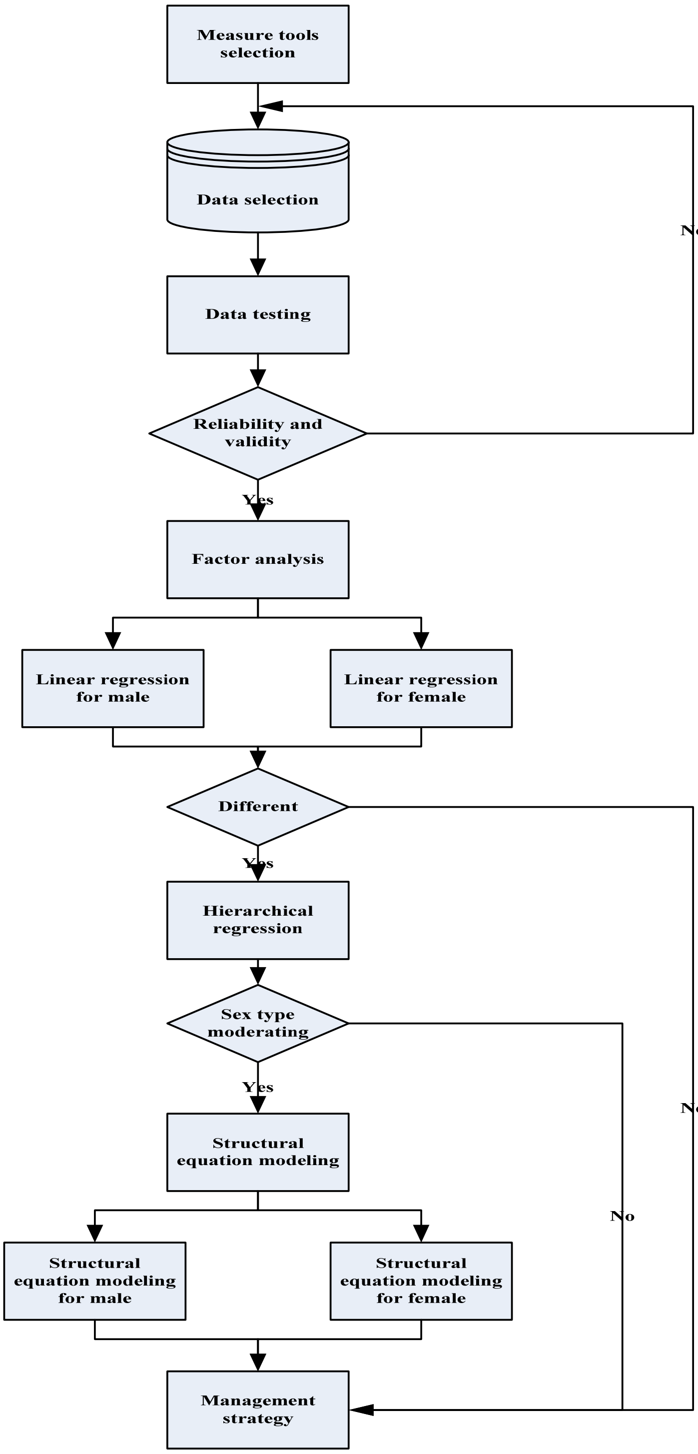

Figure 1. Research procedures and modeling

A. Measure Tools Selection

We used overall perceived benefits to measure customers' overall attitude and cognition toward relationship benefits, and the scales measured overall perceived benefits were modified from Wofgang and Andreas(2006)[9], the scales of confidence benefits, social benefits, special treatment benefits were modified from Gwinner, Gremler, and Bitner(1998)[2], the scales of identity-related benefits were modified from Hennig-Thurau, Gwinner, and Gremler(2000)[4], the scales of customer satisfaction were modified from Crosby and Stephens(1987) [10], and the scales of customer loyalty were modified from Ganesh, Arnold, and Reynolds (2000) [11].

B. Data Selection

Customers of the services of hairdressers formed the sample population for the investigation. The questionnaire survey began in 13 February 2009 and ended in 15 March 2009. A total of 300 questionnaires were issued, finally 293 questionnaires were returned, 97.6% recovery rate. After the invalid questionnaire removed, 252 valid questionnaires were remained, effective recovery rate of 84%. Most of the respondents for the sample were women (63%). The respondent's age ranges from 25 to 35 years old.

C. Data Testing

To examine the reliability of the scales of relationship benefits, customer satisfaction and customer loyalty we computed cronbach's alphas(Cronbachα) and construct reliability(CR) for the scales. Respectively, the alphas were 0.935, 0.902, 0.940, and 0.906 for special treatment, identity-related, social, and confidence benefits; 0.902 for overall perceived benefits; 0.949 and 0.891 for customer satisfaction and customer loyalty. Respectively, the construct reliability were 0.925, 0.900, 0.942, and 0.916 for special treatment, identity-related, social, and confidence benefits; 0.908 for overall perceived benefits; 0.947 and 0.901 for customer satisfaction and customer loyalty. These values suggest a high internal consistency among the items and with their related constructs.

To test the validity of scales, we test the discriminant validity, by conducted a confirmatory factor analysis and analyzed the covariance matrix using the maximum likelihood procedure of Amos 7.0. The results of discriminant validity were shown in Table Ⅰ, we compared the correlation coefficients between factors with the average variance extracted of the individual factors. This showed that the correlation coefficient between factors were lower than the average variance extracted of the individual factors, confirming discriminant validity.

D. Modeling of Factor Analysis

The core of factor analysis is to show most information of original variables through a few independent factors(Xue Wei, 2006; Harman, 1967)[12][13]. We suppose there are several original variables x_1, x_2, x_3, ⋯, x_p, each variable is 0.000 mean and 1.000 standard deviation. The original variable can be expressed as a linear combination by k ($k < p$) factors, such as:

$$\begin{cases} x_1 \\ = \alpha_{11} f_1 + \alpha_{12} f_2 + \alpha_{13} f_3 + \cdots + \alpha_{1k} f_k + \varepsilon_1 \\ x_2 \\ = \alpha_{21} f_1 + \alpha_{22} f_2 + \alpha_{23} f_3 + \cdots + \alpha_{2k} f_k + \varepsilon_2 \\ x_3 \\ = \alpha_{31} f1 + \alpha_{32} f_2 + \alpha_{33} f_3 + \cdots + \alpha_{3k} f_k + \varepsilon_3 \\ \vdots \\ x_p \\ = \alpha_{p1} f_1 + \alpha_{p2} f_2 + \alpha_{p3} f_3 + \cdots + \alpha_{pk} f_k + \varepsilon_p \end{cases} \quad (1)$$

We use the matrix to express the mathematical model of factor analysis, such as:

$$X = AF + \varepsilon \quad (2)$$

F was named after factor, and A was named after loading matrix, a_{ij} (i=1, 2, ⋯, p; j=1, 2, ⋯, k) were named after factor loading.

The core of factor analysis is to solve the factor loading matrix. Solving methods are principal component analysis, least squares, maximum likelihood method, etc. We select principal component analysis to find the factor loading matrix. Principal component analysis transforms the original relevant variables x_i which was standardized and linear combination into another unrelated variables y_i, such as:

$$\begin{cases} y_1 = \mu_{11} x_1 + \mu_{12} x_2 + \mu_{13} x_3 + \cdots + \mu_{1p} x_p \\ y_2 = \mu_{21} x_1 + \mu_{22} x_2 + \mu_{23} x_3 + \cdots + \mu_{2p} x_p \\ y_3 = \mu_{31} x_1 + \mu_{32} x_2 + \mu_{33} x_3 + \cdots + \mu_{3p} x_p \\ \vdots \\ y_p = \mu_{p1} x_1 + \mu_{p2} x_2 + \mu_{p3} x_3 + \cdots + \mu_{pp} x_p \end{cases} \quad (3)$$

Where

$$\mu_{i1}{}^2 + \mu_{i2}{}^2 + \mu_{i3}{}^2 + \cdots + \mu_{ip}{}^2 = 1 (i = 1,2,3,\cdots, p)$$

The variable y_1, y_2, y_3, ⋯, y_p were name after principal components of original x_1, x_2, x_3, ⋯, x_p. Then we can find eigenvalue $\lambda_1 \ge \lambda_2 \ge \lambda_3 \ge \cdots \ge \lambda_p \ge 0$ and eigenvector $\mu_1, \mu_2, \mu_3, \cdots \mu_p$.With the eigenvalues and their corresponding eigenvector, we calculate the factor loading matrix:

TABLE I.
DATA TESTING

	Cronbachα	CR	CB	SB	STB	IB	OPB	CS	CL
CB	0.906	0.916	0.775						
SB	0.940	0.942	0.318	0.713					
STB	0.935	0.925	0.378	0.188	0.802				
IB	0.902	0.900	0.260	0.440	0.600	0.707			
OPB	0.902	0.908	0.427	0.430	0.453	0.508	0.813		
CS	0.949	0.947	0.588	0.468	0.378	0.468	0.537	0.832	
CL	0.891	0.901	0.482	0.308	0.389	0.406	0.570	0.607	0.761

Note: CB, SB, STB, IB, OPB, CS, CL, respectively refers to “confidence benefits”, “social benefits”, “special treatment benefits”, “identity-related benefits”, “overall perceived benefits ”, “customer satisfaction”, “customer loyalty”.

$$A = \begin{pmatrix} \alpha_{11} & \alpha_{12} & \cdots & \alpha_{1p} \\ \alpha_{21} & \alpha_{22} & \cdots & \alpha_{2p} \\ \vdots & \vdots & & \vdots \\ \alpha_{p1} & \alpha_{p2} & \cdots & \alpha_{pp} \end{pmatrix} = \begin{pmatrix} \mu_{11}\sqrt{\lambda_1} & \mu_{21}\sqrt{\lambda_2} & \cdots & \mu_{p1}\sqrt{\lambda_p} \\ \mu_{12}\sqrt{\lambda_1} & \mu_{22}\sqrt{\lambda_2} & \cdots & \mu_{p2}\sqrt{\lambda_p} \\ \vdots & \vdots & & \vdots \\ \mu_{1p}\sqrt{\lambda_1} & \mu_{2p}\sqrt{\lambda_2} & \cdots & \mu_{pp}\sqrt{\lambda_p} \end{pmatrix} \quad (4)$$

Because $k < p$, we choose the eigenvalues and their corresponding eigenvector, then we solve the factor loading matrix:

$$A = \begin{pmatrix} \alpha_{11} & \alpha_{12} & \cdots & \alpha_{1k} \\ \alpha_{21} & \alpha_{22} & \cdots & \alpha_{2k} \\ \vdots & \vdots & & \vdots \\ \alpha_{p1} & \alpha_{p2} & \cdots & \alpha_{pk} \end{pmatrix} = \begin{pmatrix} \mu_{11}\sqrt{\lambda_1} & \mu_{21}\sqrt{\lambda_2} & \cdots & \mu_{k1}\sqrt{\lambda_k} \\ \mu_{12}\sqrt{\lambda_1} & \mu_{22}\sqrt{\lambda_2} & \cdots & \mu_{k2}\sqrt{\lambda_k} \\ \vdots & \vdots & & \vdots \\ \mu_{1p}\sqrt{\lambda_1} & \mu_{2p}\sqrt{\lambda_2} & \cdots & \mu_{kp}\sqrt{\lambda_k} \end{pmatrix} \quad (5)$$

Here we can find the factor loading.

E. Modeling of Linear Regression and Hierarchical Regression

Multiple linear regression model can be expressed like this(Xue Wei, 2006)[12]:

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_p x_p + \varepsilon \quad (6)$$

Where y was named after dependent variable, x_1, x_2, x_3, $\cdots$, x_p were named after independent variables.

We use least square estimation to calculate the parameters:

$$Q\left(\hat{\beta}_0, \hat{\beta}_1, \hat{\beta}_2, \cdots \hat{\beta}_p\right) = \sum_{i=1}^{n}\left(y_i - \beta_0 - \beta_1 x_{i1} - \beta_1 x_{i2} - \cdots - \beta_1 x_{ip}\right)^2 = \min_{\beta_0, \beta_1, \beta_2, \cdots, \beta_p} \sum_{i=1}^{n}\left(y_i - \beta_0 - \beta_1 x_{i1} - \beta_1 x_{i2} - \cdots - \beta_1 x_{ip}\right)^2 \quad (7)$$

We use several index to estimate the fit statistics:

$$R^2 = \frac{\sum_{i=1}^{n}(\hat{y}_i - \bar{y})^2}{\sum_{i=1}^{n}(\hat{y}_i - \bar{y})^2} = 1 - \frac{\sum_{i=1}^{n}(y_i - \hat{y})^2}{\sum_{i=1}^{n}(y_i - \bar{y})2} \quad (8)$$

$$\text{Adjust } R^2 = 1 - \frac{\dfrac{\sum_{i=1}^{n}(y_i - \hat{y})^2}{n-p-1}}{\dfrac{\sum_{i=1}^{n}(y_i - \bar{y})^2}{n-1}} \quad (9)$$

$$F = \frac{\sum_{i=1}^{n}(\hat{y}_i - \bar{y})^2 \Big/ p}{\sum_{i=1}^{n}(y_i - \hat{y}_i) \Big/ (n-p-1)} \quad (10)$$

F. Modeling of Structural Equation Modeling

Structural equation modeling can be expressed by three matrix equation:

$$\mathrm{X} = \Lambda_{\mathrm{X}}\zeta + \delta \tag{11}$$

$$\mathrm{Y} = \Lambda_{\mathrm{Y}}\eta + \varepsilon \tag{12}$$

$$\eta = \mathrm{B}\eta + \Gamma\zeta + \tau \tag{13}$$

Structural equation modeling can be used to expressed relationship between endogenous latent variables and exogenous latent variables(Kaplan, 2000)[14].

We use several index to estimate the fit statistics:

$$\chi^2 = (n-1)F \tag{14}$$

$$df = \frac{1}{2}(p+q)(p+q+1) - t \tag{15}$$

Where n means sample, F means the least value of fit function, p is the number of independent variable x, q is the number of dependent variable, t is the number of free variable.

$$GFI = 1 - \frac{F\left[s, \sum\left(\hat{\theta}\right)\right]}{F\left[s, \sum(0)\right]} \tag{16}$$

$$AGFI = 1 - \frac{(p+q)(p+q+1)/2}{df}\left(1 - GFI\right) \tag{17}$$

$$RMSEA = \sqrt{\hat{F}_0 / df} \tag{18}$$

Where $\hat{F}_0 = \max\left[\hat{F} - df/(n-1), 0\right]$

$$NFI = \frac{\chi_0^{\ 2} - \chi_t^{\ 2}}{\chi_0^{\ 2}} \tag{19}$$

Where $\chi_0^{\ 2}$ comes from the independent model, and $\chi_t^{\ 2}$ comes from the target model.

$$IFI = \frac{\chi_0^{\ 2} - \chi_t^{\ 2}}{\chi_0^{\ 2} - df_t} \tag{20}$$

$$CFI = 1 - \frac{\tau_t}{\tau_0} \tag{21}$$

Where $\tau_0 = \chi_0^{\ 2} - df_0, \tau_t = \chi_t^{\ 2} - df_t$.

III. Results of Data Mining

A. Results of Factor Analysis

All the factor loadings were greater than 0.5, that means that there are four types relationship benefits exist which are confidence benefits, social benefits, special treatment benefits, and identity-related benefits.

The factor loadings and R^2, item-total correlation for confidence benefits ($loading_1$=0.791, $loading_2$=0.789, $loading_3$=0.747; R_1^2=0.756, R_2^2=0.769, R_3^2=0.719; $correlation_1$=0.868,$correlation_2$=0.876,$correlation_3$=0.848); the factor loadings and R^2, item-total correlation for social benefits ($loading_1$=0.809, $loading_2$=0.800, $loading_3$=0.723; R_1^2=0.755, R_2^2=0.768, R_3^2=0.708; $correlation_1$=0.867,$correlation_2$=0.876,$correlation_3$=0.841); the factor loadings and R^2, item-total correlation for special treatment benefits ($loading_1$=0.842, $loading_2$=0.822, $loading_3$=0.811, $loading_4$=0.757; R_1^2=0.764, R_2^2=0.710, R_3^2=0.738, R_4^2=0.719; $correlation_1$=0.804,$correlation_2$=0.781, $correlation_3$=0.799, $correlation_4$=0.781); the factor loadings and R^2, item-total correlation for identity-related benefits ($loading_1$=0.743, $loading_2$=0.740, $loading_3$=0.700; R_1^2=0.739, R_2^2=0.738, R_3^2=0.794; $correlation_1$=0.731, $correlation_2$=0.798, $correlation_3$=0.764); the factor loadings and R^2, item-total correlation for overall perceived benefits ($loading_1$=0.709, $loading_2$=0.704, $loading_3$=0.685; R_1^2=0.713, R_2^2=0.774, R_3^2=0.730; $correlation_1$=0.780, $correlation_2$=0.821, $correlation_3$=0.790); the factor loadings and R^2, item-total correlation for customer satisfaction ($loading_1$=0.846, $loading_2$=0.816, $loading_3$=0.798, $loading_4$=0.785; R_1^2=0.737, R_2^2=0.798, R_3^2=0.826,R_4^2=0.766;$correlation_1$=0.849,$correlation_2$=0.893, $correlation_3$=0.906, $correlation_4$=0.862); the factor loadings and R^2, item-total correlation for customer loyalty ($loading_1$=0.766, $loading_2$=0.747, $loading_3$=0.849, $loading_4$=0.723, $loading_5$=0.711; R_1^2=0.769, R_2^2=0.776, R_3^2=0.480, R_4^2=0.724, R_5^2=0.736; $correlation_1$=0.743, $correlation_2$=0.762,$correlation_3$=0.756, $correlation_4$=0.822, $correlation_5$=0.703); those values show a good results of factor analysis.

B. Results of Linear Regression and Hierarchical Regression

The regression analysis was divided into two steps, linear regression analysis was the first step, which was used to test the different perception between male and female; hierarchical regression analysis was the second step, which used to test the moderating effect of sex types.

To analyze the different preference between the two subgroups of male and female customers in relationship benefits perception, linear regression analysis is used to test the standardized coefficients between the two subgroups. The equation as follows:

$$OPB = \beta_0 + \beta_1 CB + \beta_2 SB + \beta_3 STB + \beta_4 IB \tag{22}$$

Where CB, SB, STB, IB, OPB, respectively means “confidence benefits”, “social benefits”, “special treatment benefits”, “identity-related benefits”, “overall perceived benefits ”, ** $p<0.05$.

The most preference relationship benefits of male customers are identity-related benefits(β_4=0.416**). The second and third preference relationship benefits are social benefits(β_2=0.383**), special treatment benefits (β_3=0.337**) respectively. The fourth preference are confidence benefits (β_1=0.325**). The most preference relationship benefits of female customers are identity-related benefits (β_4=0.528**), this result is similar to male customers'. The second and third preference relationship benefits are special treatment benefits (β_3=0.389**), social benefits (β_2=0.345**) respectively, these results are different from male customers. The fourth preference are confidence benefits (β_1=0.245**), this result is similar to male customers'. The different distribution of relationship benefits perception shows that the perception of relationship benefits are different between male and female customers.

To test the moderating effect of sex types, hierarchical regression analysis was conducted. This analysis allowed the researchers to test the significance of an interaction term. The significant coefficients of interaction term support the role of the moderator. In the hierarchical regression analysis, interaction term of relationship benefits and sex types were entered steps by steps respectively. If the coefficients of interaction term was significant, it could be determined that sex types had a moderating effect. The model can be specified as follows:

$$OPB = \beta_0 + \beta_1 CB \times S \tag{23}$$

$$OPB = \beta_0 + \beta_1 CB \times S + \beta_2 SB \times S \tag{24}$$

$$\begin{aligned} &OPB \\ &= \beta_0 + \beta_1 CB \times S + \beta_2 SB \times S + \beta_3 STB \times S \end{aligned} \tag{25}$$

$$\begin{aligned} &OPB \\ &= \beta_0 + \beta_1 CB \times S + \beta_2 SB \times S + \beta_3 STB \times S \\ &+ \beta_4 IB \times S \end{aligned} \tag{26}$$

Where CB, SB, STB, IB, OPB, S respectively means "confidence benefits", "social benefits", "special treatment benefits", "identity-related benefits", "overall perceived benefits ", "sex types", *** $p<0.001$, ** $p<0.05$.

In the first step, the interaction term of confidence benefits and sex was added in the model, the coefficient was significant and fit statistics show a good model fit (β_1=0.338***, R^2=0.714, Adjust R^2=0.711, F=31.512, p=0.000***). In the second step, the interaction term of social benefits and sex was added in the model, the coefficient was significant and fit statistics show a good model fit (β_1=0.159**,β_2=0.327***, R^2=0.789, Adjust R^2=0.783, F=28.351, p=0.000***). In the third step, the interaction term of special treatment benefits and sex was added in the model, the coefficient was significant and fit statistics show a good model fit (β_1=0.162**, β_2=0.179***, β_3=0.302***, R^2=0.783, Adjust R^2=0.733, F=24.500, p=0.000***). In the fourth step, the interaction term of identity-related benefits and sex was added in the model, the coefficient was significant and fit statistics show a good model fit (β_1=0.130**, β_2=0.147**, β_3=0.246***, β_4=0.139**, R^2=0.792, Adjust R^2=0.742, F=19.217, p=0.000***). These results indicate that sex types moderate the perception of customers toward relationship benefits.

C. Results of Structural Equation Modeling

For testing of different impact of relationship benefits on customer satisfaction and customer loyalty for subgroups of male and female customers, we used Amos 7.0 to conduct standardized path coefficients testing. The results were shown in Table Ⅱ, Table Ⅲ and Fig. 2. The fit statistics for subgroup of male customers (χ^2=745.659, df=125, GFI=0.908, AGFI=0.906, IFI=0.912, CFI=0.912, NFI=0.918, RMSEA=0.079) and those for subgroup of female customers (χ^2=728.629, df=100, GFI=0.905, AGFI=0.903, IFI=0.905, CFI=0.905, NFI=0.904, RMSEA=0.084) show a good model fit. The difference between male and female model was significant ($\triangle\chi^2$=17.030, $\triangle$df=25.000), this result shows that relationship benefits have different impact on customer satisfaction and customer loyalty.

Confidence benefits have significant impact on customer satisfaction, the impact is greater among male than among female (0.882***＞0.870***, Diff=0.012); confidence benefits have significant impact on customer loyalty, and the impact is greater among female than among male (0.106**＜0.285***, Diff=-0.179). Social benefits have significant impact on customer satisfaction among female, and do not have significant impact among male, the impact is greater among female than among male (0.003ns＜0.299***, Diff=-0.296); social benefits have significant impact on customer loyalty among female, and do not have significant impact among male, the impact is greater among female than among male (0.006ns ＜ 0.262***, Diff=-0.256). Special treatment benefits have significant impact on customer satisfaction among female, do not have significant impact among male, the impact among female is greater than among male (0.089ns ＜ 0.333***, Diff=-0.244); special treatment benefits have significant impact on customer loyalty among female, do not have significant impact among male, the impact among female is greater than among male (0.012ns＜0.112**, Diff=-0.100). Identity-related benefits have significant impact on customer satisfaction among male, do not have significant impact among female, the impact among male is greater than among female (0.121** ＞ 0.037***, Diff=0.084); identity-related benefits do not have significant impact on customer loyalty, the impact among female is greater that among male (0.003ns＜0.016ns, Diff=-0.013). Customer satisfaction have significant impact on customer loyalty, the impact among male is greater than among female (0.854***＞0.507***, Diff=0.347).

TABLE II.
THE MODEL FIT STATISTICS

	χ2	df	GFI	AGFI	IFI	CFI	NFI	RMSEA
Male	745.659	125	0.908	0.906	0.912	0.912	0.918	0.079
Female	728.629	100	0.905	0.903	0.905	0.905	0.904	0.084
△χ2=17.030, △df=25.000								

TABLE III.
THE IMPACT OF RELATIONSHIP BENEFITS ON CUSTOMER SATISFACTION AND CUSTOMER LOYALTY BETWEEN MALE AND FEMALE

Impact	Estimate of male	Estimate of female	Diff
CB→CS	0.882***	0.870***	0.012
CB→CL	0.106**	0.285***	-0.179
SB→CS	0.003ns	0.299***	-0.296
SB→CL	0.006ns	0.262***	-0.256
STB→CS	0.089ns	0.333***	-0.244
STB→CL	0.012ns	0.112**	-0.100
IB→CS	0.121**	0.037ns	0.084
IB→CL	0.003ns	0.016ns	-0.013
CS→CL	0.854***	0.507***	0.347

Note: CB, SB, STB, IB, OPB, CS, CL, respectively refers to “confidence benefits”, “social benefits”, “special treatment benefits”, “identity-related benefits”, “overall perceived benefits ”, “customer satisfaction”, “customer loyalty”. *** p＜0.001, ** p＜0.05, ns means not significant.

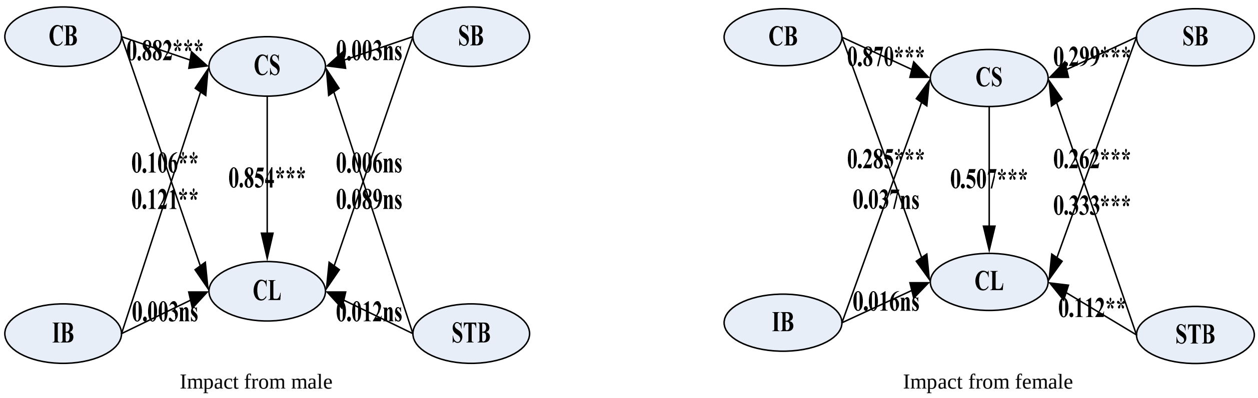

Figure 2. The impact of relationship benefits on customer satisfaction and customer loyalty between male and female

Ⅳ. CONCLUSION

A. Implication of Research

This paper investigated relationship benefits. Based on four types of benefits we found in the context, we analyzed the different preference between male and female customers in relationship benefits perception. Our findings have the following contributions to theories.

First, we found there are four types relationship benefits exist: special treatment benefits, identity-related benefits, social benefits, and confidence benefits.

Moreover, this paper explored the relationship benefits preference between different sex types. According to the preference degree, male customers mostly prefer identity-related benefits, then prefer social benefits and special treatment benefits respectively, the last preference is confidence benefits. Female customers mostly prefer identity-related benefits, which is similar to male customer preference, then prefer special treatment benefits and social benefits respectively, the last preference is confidence benefits, according to the relationship benefits preference too.

Third, Sex types have moderating effect in relationship perception. Sex types have the most greater moderating effect on special treatment benefits, then is the social benefits and identity-related benefits, the last is the confidence benefits.

Finally, the impact of relationship benefits on customer satisfaction and customer loyalty is different between male and female. Confidence benefits have greater impact on customer satisfaction among male than among female, have greater impact on customer loyalty among female than among male. Social benefits have greater impact on customer satisfaction and customer loyalty among female than among male. Special treatment benefits have greater impact on customer satisfaction and customer loyalty among female than male. Identity-related benefits have greater impact on customer satisfaction among male than female, have greater impact on customer loyalty among female than among male.

B. Managerial Implications

Enterprises aims at maintaining long-term and close relationship with customers can obtain relationship benefits management strategy from this research, especially the enterprises in services markets. Male and female customers have different preference toward relationship benefits.

Enterprises should distinguish and identify different relationships benefits as motivations to maintain different sex types customers. First of all, the identity-related benefits should be paid most attention, because male and female customers prefer them most. Then, enterprises should create social benefits for male customers, and create special treatment benefits for female customers, respectively. The last preference relationship benefits created are confidence benefits, male and female customers have the same preference.

Enterprises should distinguish different relationship benefits to have impact on customer satisfaction and customer loyalty. Confidence benefits can generate more customer satisfaction among male than female. Social benefits, special treatment benefits, and identity-related benefits can bring more customer satisfaction and customer loyalty among female than male.

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Mingli Zhang is a professor of marketing in the School of Economics and Management at BeiHang University in P. R. China. Mingli Zhang received his Ph.D from Harbin Institute of Technology in 2003.

His areas of research are services marketing, customer value, customer satisfaction and customer loyalty. His current research center on the relationship benefits.

Qingmin Kong is a doctoral candidate of marketing in the School of Economics and Management at BeiHang University in P. R. China. Qingmin Kong received his master degree from Guangxi University in 2008.

His areas of research are services marketing, relationship marketing, customer satisfaction and customer loyalty. His current research center on the relationship benefits.