

The Job-Hunting Wechat Official Account Satisfaction Model Based On CCSI Model

Qiansheng Zhang, Kaixuan Zheng, Hongfa Lu, Xiaolin Zhang, Lingyue Zhang
School of Finance, Guangdong University of Foreign Studies, Guangzhou 510420
Corresponding author: Qiansheng Zhang

-----ABSTRACT-----

Recently, WeChat subscriptions have widely become university students preferred media to get all sorts of information due to its infinite information variety, rapid information push and easiness to share, soon making job researching subscriptions a particularly important channel for university students while collecting employment information. On this background, not only is our research on university student satisfaction with WeChat job researching subscriptions good for college students to get a suitable job information, but also will help the subscription operators come to realize themselves in the WeChat market position, carry forward their strengths, improve their weaknesses in order to improve their competitiveness. On the basis of document analysis and questionnaire, we search for the main factors of university student satisfaction with WeChat job researching subscriptions by constructing the satisfaction model, reliability test, factor analysis and regression analysis and finally provide a reference for healthy development of job researching subscriptions.

KEY WORDS: satisfaction, satisfaction's model, fact, WeChat job researching subscription

Date of Submission: 14-02-2018

Date of acceptance: 03-03-2018

I. INTRODUCTION

1.1 The significance of study

The study of the impact of university students on their satisfaction factors about job-hunting Wechat official account in order to help job-hunting Wechat official account operators understand the satisfaction of university students, the subscriber of official account, to find their own market positioning and to provide the rationalization proposals.

In the end, the operators using internet and mobile terminals as a carrier improves the timeliness and accuracy of information release and reception according to the needs and preferences of users. Many job-hunting university students will get more professional, accurate and high quality information service to better alleviate the employment pressure of university students in this era.

1.2 Foreign studies

The Swedish customer satisfaction index model, also known as satisfaction barometer, was founded in 1989 to study the domestic product or service consumers [5]. It is the number one national customer satisfaction index model in the world. The index model contains a total of five structural variables and six relationships, of which the customer satisfaction as the core research variables, which refers to the customer's the overall evaluation of a particular product or service in the past consumption experience. There are two antecedents of satisfaction: perceptual performance and customer expectations. And the result variables of customer satisfaction are customer complaints and customer loyalty.

The American Customer Satisfaction Index Model based on the Swedish customer satisfaction index model has the widest range of global impact. The index model measures the quality of products and service base on consumer experience[9]. The model has 6 structural variables and 10 relationships. According to Hirschman's (1970) "left complaining" theory, three of the antecedents are perceived value, perceived quality, and customer expectation, and the result variables of customer satisfaction are customer complaints and customer loyalty.

1.3 Domestic research

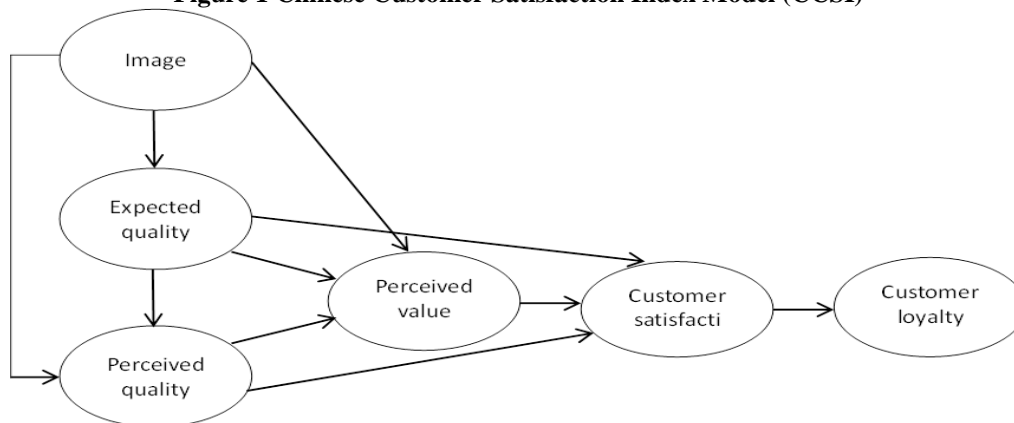
The Chinese customer satisfaction model is based on the US customer satisfaction index model developed latest. The index model contains a total of seven structural variables, 11 relationships. And perceived quality factors of customer satisfaction are perceived value, expected quality, image and perceived value. The result variable is just customer loyalty. The difference between the customer index model in China and the customer index model in the United States is that the core variables of customer satisfaction increase the comparing with the competing brands, and meanings of hidden variables are different.

II. CONSTRUCT SATISFACTION MODEL BASED ON CCSI MODEL

Since target of evaluation is the job-hunting Wechat official account information service provided by the operator, its essence is the same as the physical goods and they are the goods. Therefore, the customers' satisfaction evaluation logic is basically the same. Then the author based on the Chinese Customer Satisfaction Index model (CCSI) established the university students job-hunting Wechat official account satisfaction logic model.

2.1 Chinese Customer Satisfaction Index Model Introduction

Figure 1 Chinese Customer Satisfaction Index Model (CCSI)



The CCSI model is constructed on the basis of learning and referring to the American Customer Satisfaction Index model, and then revising the model structure and index system according to national conditions of the country.

The CCSI model contains a total of 6 structural variables, 11 relationships. Customer satisfaction is still the target variable that is looked for. It is analyzed by four observation variables: the customer's total satisfaction with the product or service, the customer's satisfaction with their expectations before consumption, and the customer's Satisfaction with the quality level of a consumed product or service as compared to its competing brand and the customer's actual feeling of satisfaction as compared to their idealized product or service.

The four factors that lead to customer satisfaction are as follows:

1) Perceived quality refers to the customer in the purchase of a product or service on the quality of their true feelings. It is believed to have a positive effect on perceived value and customer satisfaction.

2) Expected quality refers to the customer's expectation of the overall quality level before consuming product or service. It is believed to have a positive effect on perceived quality, perceived value, and customer satisfaction.

3) The image refers to the general image of the business formed by the customer in accordance with the past experience of consuming the product or service or observing the publicity materials about the business. It is considered as perceived value, perceived quality, perceived value as well as customer satisfaction has an important role.

4) Perceived value refers to the perception of the actual degree of benefit perceived by the customer after considering the quality level of the product or service and the price paid for it, which is considered to have a positive impact on customer satisfaction.

In the model of China's customer satisfaction index, there is only one outcome variable of customer satisfaction, which is customer loyalty. When a customer is satisfied with a certain brand product or service, it will have a certain degree of loyalty. In the future loyalty consumer behavior on the performance of the brand products or service is to repeat the purchase. Customer loyalty is measured by two observational variables, the likelihood of repeat purchases by customers, and the degree of customer tolerance for the price fluctuations of the branded product or service. The higher the level of customer satisfaction is, the higher the customer loyalty is.

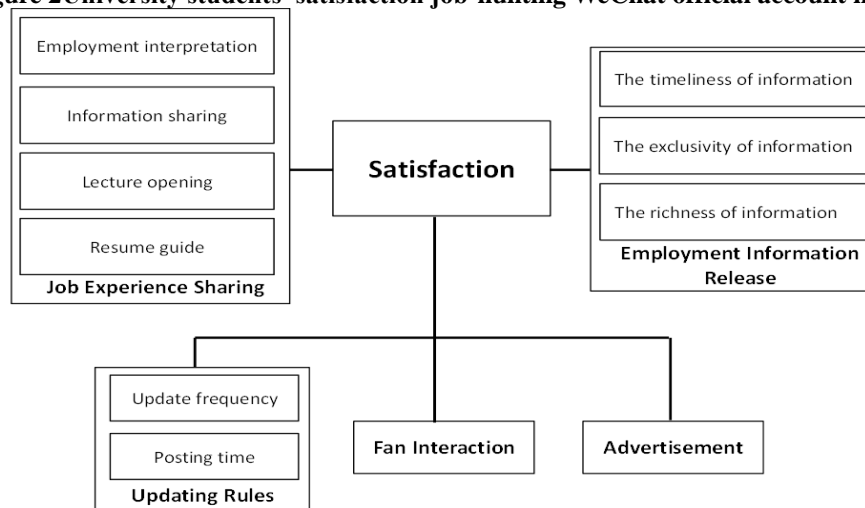
2.2 Adjust model

Based on the CCSI model, the author builds the logic model of university students' satisfaction for job-hunting Wechat official account. However, unlike the physical goods, job-hunting Wechat official account often does not exist in such aspects as the establishment of brand image and product packaging design. They focus on providing information service that meet the needs of users in order to achieve the best perceived quality of the target users produce the highest possible satisfaction. Thus, the industry characteristics of the job-hunting Wechat official account make the image and expected quality, two antecedents, not constitute an indicator of customer satisfaction. At the same time, job information service, as a kind of "soft goods," whose customer loyalty reflects whether users are keeping a constant eye on the official account and reading it directly depends on and fully reflects the satisfaction of the users and therefore does not need many the result variables

"user loyalty." At last, the author removed the three antecedents of "image", "expected quality" and "perceived value" and "customer loyalty" as the outcome variable from the four antecedent of CCSI model, leaving an antecedent "perceived quality" and Core research variable "university students' satisfaction."

Due to the variety of information service products of job-hunting Wechat official account and the quality of each kind of information service, the frequency of pushing information and whether it is pushed by time, the user satisfaction can not be neglected, so the author put "perceived quality The concept of refinement, the integration of employment information release, job experience sharing, fan interaction, advertising, marketing, push the law of time 5 structural variables, built a total of 6 structural variables model, of which the satisfaction of university students is still the core of the model variables (Figure 2)

Figure 2 University students' satisfaction job-hunting WeChat official account model



2.3 The assumptions of model and factor analysis

Employment information release: in the process of job clearance, in addition to job seekers owning hard skills, another magic weapon is to master the employment information. Job seekers tend to be most concerned about corporate road show, recruitment time, place and other information. As a result, job-hunting Wechat official account published employment information timely, exclusive and scarcity of information, information coverage of employment areas and geographical breadth will have the most direct impact on customer satisfaction.

Job Experience Sharing: Job-hunting Wechat official account will often share information about business essay exams, interview and testing experience, advice on resume modification, employment prospect analysis or employment requirement to job seekers and some official account invitation offer people or business H.R. to participate in micro-lectures, to provide fans with dialogue with brilliant individuals, to share exchanges and other accounts. This long-term resource is often helpful for job clearance, so sharing this variable with experience has a profound and far-reaching impact on user satisfaction.

Fan interaction: job-hunting Wechat official account features significant, push content has a strong user-specific, so often interact with fans, such as fans backstage support for customer doubts, to carry out "sharing the information and getting the gift" and other interactive activities Helps to enhance the official account's presence and allows operators to better understand the feedback and response from their fans so that strategic adjustments can be made in a timely manner. Can be seen, the degree of interaction with fans of customer satisfaction can not be ignored.

Advertisement: Even the job-hunting Wechat official account, a seemingly informational official account, has its own commercial purpose for advertising. If the higher the advertising content in the push information, the stronger the marketing atmosphere, the higher the frequency of advertising, the more readers decline reading interest, the degree of trust in the official account will gradually decline.

Updating rules: including the frequency of information updates and posting time:

Update frequency: Relevant data show that 25% of WeChat users open WeChat more than 30 times a day, 55.2% of WeChat users open WeChat more than 10 times each day, and university students are more active than this average. Therefore, facing job seekers Information strong demand, official account Push information update frequency and pace has become an important potential factor affecting the user satisfaction.

Posting time: In general, most WeChat online users have a concentrated trend, and job-hunting official account an important target group of university students work rules and habits is the relative law. Therefore, follow the rules of the target user's work and rest and the rules of using WeChat help to increase the user's satisfaction.

Based on the relationship between the structural variables that the classical satisfaction model has

verified and the knowledge of other disciplines like psychology, the author makes the assumptions about the structural relationship between structural variables in satisfaction logistic model:

Table 3 Satisfaction logistic model related assumptions

Structural variables	Content
Employment information release	The more timely the information release, the more satisfied the users are The more exclusive the information is, the more satisfied the users are The more abundant the information is, the more satisfied the users are The more accurate the information is, the more satisfied the users are
Job experience sharing	The more available the information about interviews and tests is, the more satisfied the users are The more micro-lectures are held, the more satisfied the users are The more services about the improvement of resumes are provided, the more satisfied the users are
Advertisement	The more advertisements, the more satisfied the users are
Fans interaction	The more interactive activities, the more satisfied the users are
Updating rules	The higher the update frequency is, the more satisfied the users are The more stable the posting time is, the more satisfied the users are

III. DESCRIPTIVE STATISTICS ANALYSIS

The results of descriptive statistical analysis of the sample characteristics are shown in Table 4. The male and female students accounted for 33.3% and 66.8% of the total samples respectively. Judging from the learning stage of the samples tested, the proportion of freshmen, sophomores, junior and senior graduates accounted for 3.3%, 14.5%, 68.8% and 13.5% respectively. As students participated in the survey through questionnaires after answering the questions, the uneven distribution of the grades of samples doesn't mean the samples are invalid, but matches the characteristics of the population object for the job-hunting official account service instead.

Moreover, due to the strong desire to practice, many freshmen and sophomores have started to pay attention to job-hunting information through Wechat official account. However, as the non-typical target users of the job-hunting official account, freshmen and juniors took part in the satisfaction and importance assessment, which will give more constructive suggestions for the operation and expansion of the official account.

In terms of the number of the fans who follow the Wechat job-hunting official accounts, 79.5% of interviewees follow 1 to 5 official accounts and 15% of them follow 6 to 10 accounts. More than 5.5% of interviewees follow over 10 accounts. We can draw a conclusion that most interviewees have used various official accounts and had the knowledge about the level of the operation of job-hunting official accounts, which makes the satisfaction assessments more convincing.

In terms of the purpose, more than 70% of interviewees follow the official accounts for seeking the employment information. 52.5% of interviewees consider that they could get job-hunting experience ahead of time. Additionally, nearly half of interviewees are captured by the activities in which they could get useful suggestions on job-hunting and have the micro-lectures by following the accounts.

In terms of the following channels, the survey shows that more than 80% of them follow the accounts through the recommendation by friends or Moments. Meanwhile, there are over half of interviewees follow the accounts on their own for the purpose of job hunting. Also, about 47.5% of them get the information about the job-hunting accounts from portal, Weibo or other WeChat accounts like the Career Guidance Center, indicating that other media do make a difference to increasing the awareness of job-hunting official accounts.

To sum up, according to the distribution characteristics of the sample, despite the uneven distribution of the personal attributes, it basically conforms to the basic attributes and actual conditions of the overall sample. Thus the samples are more representative, which provides a reliable guarantees to the further determination and analysis of university students' satisfaction with the job-hunting official account.

Table 4 Sample characteristics descriptive statistics results

	Sample attributes	Sample size	percentage(%)
Gender	male	133	33.3
	female	267	66.8
Grade	freshman	13	3.3
	Sophomore	58	14.5
	Junior	275	68.8
	Senior	54	13.5

The number of official accounts subscription	1-5	318	79.5
	6-10	60	15.0
	More than 10	22	5.5
The purpose	Get the First-hand recruitment information	297	74.3
	Prepare for job hunting in advance	210	52.5
	Get job-hunting suggestions	197	49.3
	Seize the opportunity to participate in micro-lectures	34	8.5
	Others	4	1
	Recommended by friends	322	80.5
How to know the official account	Find on their own	222	55.5
	Know from other media	190	47.5
	Others	35	8.8

IV. QUESTIONNAIRE QUALITY ANALYSIS

In order to improve the quality of the questionnaire, and then improve the value of the entire study, data preprocessing, the project of questionnaire analysis, the reliability and validity of the questionnaire analysis is an important link in the research process.

4.1 data preprocessing

In the face of the collected questionnaire, before the data entry, we first review questionnaire information and relevant data, the questionnaire which have obvious mistakes and contradictions, or the problem of the selected project was carried out in accordance with the regularity (e.g., selection an option), shows that respondents didn't answered seriously, the provided information is not credible, therefore took the questionnaire as invalid questionnaire.

After preliminary treatment of the questionnaire, we began to code the questionnaire, divided the questionnaire according to the school classification, different letters of different schools, and then labeled under each school. Big classification on a questionnaire, and then used the SPSS software data entry rules for the various questions and answers in the questionnaire encoding, data entry, including multiple choice type with two classification methods.

4.2 project analysis

Questionnaire individual topic determination of value - CR, CR is also called critical ratio, the critical ratio is based on grouping test scores distinguish between high and low group, to calculate the mean difference of each item between high and low group. The aim is to test whether each question should be left on the questionnaire. First, the total score of the scale was calculated, and all the subjects scored the total scores of all the items in the scale, so as to find out the total score of the subjects on the scale. According to the number of scores in ascending order, and 27% of the data, set to low, high grouping. Finally, the differences in each item were examined by independent sample t test. Items that do not pass the test should be deleted. After inspection, all item's (the questions 7 - 20) Sig. are less than 0.05, the average scores of group have significant differences, namely every problem through the analysis of the project (CR) test.

4.3 reliability analysis

Reliability refers to the degree of consistency of the results obtained by repeated measurements of the same object in the same way.

The basic methods of reliability analysis mainly include four kinds, namely the retest reliability method, the restoration reliability method, the semi-reliability method and the alpha reliability coefficient method. In the reliability analysis method, the alpha reliability coefficient method is most commonly used, and in a large number of empirical study, this method is suitable for the attitude, opinions questionnaire (scale) of the reliability analysis and the effect is superior to other methods, therefore, in this questionnaire, we adopt Cronbach alpha reliability coefficient method.

The formula of Cronbach reliability coefficient is:

$$\alpha = \frac{k}{k-1} \times \frac{1 - \sum S_i^2}{S_T^2} \quad (2)$$

Where: k is the total number of items; S_i^2 is the variance of the points in the number i. S_T^2 is the variance of the total score of all items. The specific formula is as follows:

$$\sum S_i^2 = \sum (x_i - \bar{x})^2 \quad (3)$$

$$S_T^2 = (x_i - \bar{x})^2 \quad (4)$$

According to the common methods of academic circles, the critical value of the Cronbach coefficient is set to 0.7, when the value of the internal consistency coefficient is greater than 0.7, it can be considered that the reliability of the scale is better. As for the fixed total project correlation coefficient threshold selection, in this paper, the author in the comprehensive reference the other scholar's research results at home and abroad (Lederer, Zhigang guo, Shaohong Wu), the basis of the critical value is 0.4.

Table 5 Reliability analysis results (1)

latent variable	Number of observed variables	Cronbach's alpha
Employment information release	3	0.629
Job experience sharing	4	0.772
Total reliability of questionnaire	26	0.774

Table 6 Reliability analysis results (2)

Observed variables	Revision total project correlation coefficient	Delete the value after this item
Timeliness	0.428	0.547
Exclusivity	0.498	0.449
Richness	0.393	0.590
Employment interpretation	0.551	0.731
Information sharing	0.631	0.688
Lecture opening	0.538	0.736
Resume guide	0.580	0.715

The following conclusions can be obtained from data analysis:

- (1) The Cronbach coefficient of the whole questionnaire exceeds the critical value of 0.7, indicating that the whole questionnaire is more reliable.
- (2) The internal consistency coefficient of Employment information release is more than 0.6, which is acceptable. Four observation variables corresponding revision total project correlation coefficient is close to or more than 0.4, at the same time reducing any observation of a variable does not make Cronbach coefficient increased significantly, therefore retain all the observed variables of Employment information release.
- (3) The internal consistency coefficient of Job Experience Sharing is more than 0.7, which is more reliable. Four observation variables corresponding revision total project correlation coefficient is more than 0.4, at the same time reducing any observation of a variable does not make Cronbach coefficient increased significantly, therefore retain all the observed variables of Job Experience Sharing.

4.4 validity analysis

Scholars Dai Haiqi Zhang Feng and Chen Xuefeng have suggested that the size of the structure validity depends on the psychological traits of theory that has presupposed, which means the structure validity of inspection test of score can reflect the extent to which a structure or characteristics of psychology theory, a kind of testers have in common. Therefore, in this study, we use factor analysis to measure structural validity.

Using factor analysis method to check the validity of the questionnaire, this study is to adopt the factor analysis module of SPSS19.0 to analysis , using the principal component method to extract the influence factors, using the correlation coefficient as the basis of factor extraction, Bartlett spherical analysis can be used to test whether the correlation coefficient is greater than 0, significant spherical inspection according to correlation coefficient to meet the requirements of the factor analysis. The KMO coefficient represents the ratio of all correlation coefficients related to that variable and the net correlation coefficient. The larger the ratio indicates the correlation is better, and the KMO statistics need to be greater than 0.5 to be suitable for factor analysis. Therefore, KMO and Bartlett spherical tests are performed before the factor analysis is carried out.

Because once validity analysis found in the factor loading matrix, employment information richness of Job Experience Sharing is not in conformity with the requirements, so eliminating the item to improve rolling effect, validity analysis to get the table below:

Table 7 KMO and Bartlett test

KMO test		882
Bartlett test	The approximate chi-square	1332.016
	Df	55.000
	Sig	0.000

The total amount of tables' KMO value is 0.882, so factor analysis is appropriate, Bartlett F value is 0, so the sample data is from the multivariate normal distribution, the correlation matrix is not an identity matrix,

so factor analysis is appropriate.

V. MODEL ANALYSIS BASED ON MULTIPLE REGRESSION

5.1 determination of the satisfaction index based on factor analysis

As can be seen from the above, the KMO value is 0.882, which means that factor analysis can be used to determine the satisfaction index. Therefore, spss20.0 is used to analyze the following:

Table 8 Principal component analysis-all explained variance

According to the above table, the cumulative variance is 73.075%, which is in line with the principal component

variables	Initial Eigenvalues			Extract into the sum of squares			Rotate into the sum of squares		
	total	var%	cumulative %	total	var%	cumulative %	total	var%	cumulative %
1	4.440	40.366	40.366	4.440	40.366	40.366	2.271	20.644	20.644
2	1.292	1.745	52.111	1.292	1.745	52.111	1.883	17.118	37.762
3	0.852	7.744	59.855	0.852	7.744	59.855	1.416	12.872	50.634
4	0.781	7.097	66.953	0.781	7.097	66.953	1.340	12.181	62.815
5	0.673	6.123	73.075	0.673	6.123	73.075	1.129	10.260	73.075
6	0.619	5.627	78.702						
7	0.555	5.045	83.747						
8	0.531	4.824	88.571						
9	0.464	4.219	92.789						
10	0.404	3.670	96.459						
11	0.390	3.541	100.000						

analysis requirement, and thus the five factors are obtained, indicating that the five main factors provide 73.075% of the information in each indicator. As can be seen from the table, the cumulative contribution rate of the main components 1 and 2 is larger, which can be explained as factor 1 and factor 2 May be the most influential indicators of satisfaction. According to the above analysis, SPSS statistical software is used to calculate the factor loading diagram of the specific axis of rotation, and the load coefficient of the display factor is greater than 0.5.

Table 9 Rotating component matrix a

	1	2	3	4	5
Employment interpretation	0.706	0.096	0.233	0.021	0.315
Information sharing	0.797	0.144	0.194	0.139	0.020
Resume guide	0.680	0.360	0.115	0.212	0.002
Lecture opening	0.533	0.069	0.032	0.559	0.264
Update frequency	0.182	0.851	0.138	0.051	0.029
Posting time	0.128	0.773	0.297	0.089	0.117
The timeliness of information	0.153	0.295	0.790	0.118	0.159
The exclusivity of information	0.265	0.150	0.745	0.063	0.301
Fans interaction	0.112	0.142	0.128	0.893	0.136
Advertisement	0.166	0.109	0.045	0.226	0.895

Therefore, these five factors can be used as the indicators of users' satisfaction to the job-hunting WeChat official account.

The names of these five factors are:

Factor 1:Job experience sharing factor, this factor includes information sharing, resume guidance, employment interpretation, and four variables in the lecture. This factor is mainly reflected in the user's satisfaction with the experience sharing of the job-hunting WeChat official account, this several factor loading is above 0.5, shows its high reliability, is quite reasonable.

Factor 2:Updating rules factor,this factor includes two variables for update frequency and push time. This factor is mainly reflected in the users' satisfaction with the push time rule of the job-hunting WeChat official account. The factor load of these items is above 0.5, indicating that its reliability is very high and reasonable.

Factor3:Employment information release factor, this factor includes two variables for exclusivity of employment information and information release timeliness. This factor is mainly reflected in the satisfaction

with the employment information distribution section of the job-hunting WeChat official account. The factor load of these items is above 0.5, indicating that its reliability is very high and reasonable.

Factor4:Advertisement factor,this factor is mainly reflected in the satisfaction with the advertisement of the job-hunting WeChat official account. The factor load of this item is above 0.5, indicating that its reliability is very high and reasonable.

Factor five: Fan interaction factor. This factor is mainly reflected in the satisfaction with the fan interaction of the job-hunting WeChat official account. The factor load of this item is above 0.5, indicating that its reliability is very high and reasonable.

The five factors contain the overall satisfaction of the users to the job-hunting WeChat officialaccount, the experimental data conclusion is consistent with the thesis model.

5.2 establishment of multiple regression equation

Select job-hunting WeChat official account’s overall satisfaction as dependent variable, remember to y, selected by the influence of above five important influence factors of overall satisfaction of job-hunting WeChat official account as independent variables, assume that the regression relationship between the dependent variable y and the five independent variables, can be expressed in a linear function approximation, so the sample regression function is as follows:

$$y = \alpha_1 + \alpha_2x_1 + \alpha_3x_2 + \alpha_4x_3 + \alpha_5x_4 + \alpha_6x_5 + \mu \tag{5}$$

y stands for the overall satisfaction of job-hunting WeChat official account. x_1 represents the job experience sharing factor; x_1 stands for updating rulesfactor; x_4 represents the employment information release factor; x_5 represents advertisement factors; μ represents fan interaction factor; H stands for random error term; $\alpha_1, \alpha_2, \dots, \alpha_6$ represents the overall regression coefficient.

5.3 model estimation process

For all of the independent variables x_1, x_2, \dots, x_5 , comparing them according to the size of their contribution to the Y, and through F test, select partial regression quadratic sum significant variables into the regression equation, each step is only the introduction of a variable, and a partial regression equation is established. When a variable is introduced, tested partial regression square sum of the variables that have been introduced to the regression equation one by one. If the variables that have entered the equation become non-significant by introducing new variables, they are removed from the partial regression equation in time. After introducing two independent variables, the variables that need to be removed are considered. Only when all the independent variables in the regression equation have significant impact on Y without the need to eliminate, considering the independent variable that has never been elected to the equation, select new variables that has a significant effect on Y into the equation. Whether you introduce a variable or not, it's a step. Repeat this process until you can't eliminate the variables that have been introduced, and you can no longer introduce new independent variables, the regression process end.

By the above algorithm process, through the regression analysis of spss20.0, results in the following table. Job experience sharing, Employment information release, Updating rules, Fan interaction, and Advertisement accounted for 11.7%, 31.7%, 18.7%, 12%, 9.4%.

Table 10 Regression coefficient result

	Unstandardized coefficients (B)	Standard error	Standardized coefficients (BETA)	t	Sig
Constant	5.53E-16	0.046		0	1
Job experience sharing factor x_1	0.117	0.046	0.117	2.539	0.012
Employment information release factor x_2	0.317	0.046	0.317	6.901	0
Updating rulesfactor x_3	0.187	0.046	0.187	4.083	0
Fan interactionfactor x_4	0.12	0.046	0.12	2.605	0.01
Advertisementfactor x_5	0.084	0.046	0.094	1.923	0.049

5.4 Model Test

5.4.1 Absolute deviation degree test

In addition to the regression coefficients, the variance of random error term σ^2 is an important part of the unknown parameters, σ^2 of multiple linear regression model uses the residual sum of squares divided by their degrees of freedom to estimate the accuracy of the regression equation. The calculation formula is as

follows:

$$S^2 = \frac{\sum e_i^2}{n-k} \quad (6)$$

n is the number of sample observations, k is the number of regression coefficients, $\sum e_i^2$ is the sum of squares of residuals. S^2 is the unbiased estimate of σ^2 .

The calculation results are as follows:

$$S^2 = 0.842 / (400 - 6) = 0.002$$

S is also called regression estimate of standard error, and the smaller the S, the stronger the representation of the sample regression equation.

5.4.2 Goodness of fit test

Goodness of fit test is one of the data in test from overall its distribution is consistent with some theoretical distribution statistics, by using the standard deviation of determination coefficient and regression, to test model for The fitting degree of the sample observation value. In the multivariate regression analysis, the determination coefficient of the modified degree of freedom \bar{R}^2 is usually used to evaluate the fitting degree, \bar{R}^2 is as follows:

$$\bar{R}^2 = 1 - \frac{\sum e_i^2 / (n-k)}{\sum (y_i - \bar{y})^2 / (n-1)} = 1 - \frac{n-1}{n-k} (1-R^2) \quad (7)$$

n is the sample size, k is the number of regression coefficients. (n - 1) is the total dispersion squared sum, (n - k) is the degree of freedom of the sum of squares of residuals.

Table 11 Model test analysis summary

Model	R	R ²	\bar{R}^2	Standard error of estimate
successive steps	.812			
regression	a	0.66	0.64	0.046231

From the above results, it can be seen that R² = 0.66, because the determination coefficient of the freedom of correction R² = 0.64 is closer to 1, it can be considered that the model fit well.

5.4.3 Significance F test based on the sample general

Significance test is refers to the overall distribution parameters of random variables or form in advance to make an assumption, and then use the sample information to judge whether the assumptions or the alternative hypothesis is reasonable, so as to determine the overall situation if there is a significant difference with the original hypothesis. The specific methods are as follows:

Assuming the overall regression equation is not significant, there are:

$$H_0 : a_2 = a_3 = \dots = 0$$

Then, the analysis of variance :

Table 12 Variance analysis parameter calculation formula table

	Sum of square	Degrees of freedom	Variance
regression sum of square	$SSR = \sum (y_i' - \bar{y})^2$	k - 1	SSR / (k - 1)
residual sum of squares	$SSE = \sum e_i^2$	n - k	SSR / (n - k)
sum of squares total	$SSJ = \sum (y_i - \bar{y})^2$		

Calculate the F statistic according to the above results:

$$F = \frac{SSR / (k - 1)}{SSE / (n - k)} \quad (8)$$

According to the corresponding degree of freedom and significant level given, refer to theoretical critical value F_α of F distribution table, when $F > F_\alpha$, the original hypothesis is not established, the linear relation of the total regression equation is significant. When $F < F_\alpha$, the original hypothesis is established, the linear relation of the general regression equation is not significant, so the established regression model is meaningless, the independent variable selection is not reasonable, need to select or change method.

The results are as follows:

Table 13 Analysis of variance table

	Sum of square	Df	Sum of square	F	Sig
Sum of square	67.929	5	13.586	16.168	0
Residual error	331.071	394	0.84		

Total	399	399
-------	-----	-----

- a. prediction variables: (constant), Employment information release, Job Experience Sharing, Fan interaction, Advertisement, Updating rules
 - b. dependent variable: overall satisfaction
- Therefore, it can be seen that, under the significance level of 5%, the combined effect of the combination is significant for y, and the linear regression between the variables and the dependent variables is significant in the overall regression function.

5.4.4 Significance T test based on regression coefficient

The significance test of regression coefficients in the multivariate model is usually applied to t test, and the calculation method of t statistic is as follows:

$$t_{a_j} = \frac{a_j}{S_{a_j}}, j = 1, 2, \dots, k$$

a_j is the estimate of the regression coefficient, the standard deviation of S_{a_j} . The absolute value of t is larger, the smaller the possibility of a_j is 0, explain the influence of the independent variable on the dependent variable corresponding more significantly, by querying the corresponding degree of freedom under the t distribution table, we can determine the significance of the independent variables affect, and to choose the independent variables.

Table 14 Significance t-test result

	Unstandardized coefficients (B)	Standard error	Standardized coefficients (BETA)	t	Sig
Constant	5.53E-16	0.046		0	1
Job experience sharing factor x_1	0.117	0.046	0.117	2.539	0.012
Employment information release factor x_2	0.317	0.046	0.317	6.901	0
Updating rulesfactor x_3	0.187	0.046	0.187	4.083	0
Fan interactionfactor x_4	0.12	0.046	0.12	2.605	0.01
Advertisementfactor x_5	0.084	0.046	0.094	1.923	0.049

Under the significance level of 5%, the parameters of each independent variable can meet the t test of 5% significance level, so the regression coefficients of each variable are significant.

VI. CONCLUSIONS

The research shows that the satisfaction of fans to job-hunting Wechat official account can be divided into five dimensions: job-sharing experience, updating rules, employment information release, advertisements, fan interactions. The hermeneutic shows respectively 11.7%, 18.7%, 31.7%, 9.4% and 12%, which means all these factors have a significant impact on the satisfaction. At the same time, the linear regression of each factor to satisfaction is significant.

Therefore, these factors should be focused by of job-hunting Wechat official account operators. They should actively explore the specific implementation plan to improve the satisfaction, and retain those valued fans. We suggest that the operators can improve customer satisfaction in the following aspects: ensuring the timely release and effectiveness of employment information, arranging the posting time for information scientifically, focusing on the interaction with fans, enhancing the qualities of shared job-seeking experience, and adding advertisements properly.

Secondly, the sample size is small. Due to the limited manpower and time, only the students from Guangzhou Higher Education Mega Centre were selected as samples to complete paper questionnaires, which may result in the universal problems of the conclusion, meaning that the validity of the logistic model needs further examinations through larger organizational surveys if it's applied to the university students all over China.

In the end, taking the job-hunting Wechat official account as an example to explore the factors of the satisfaction of its operations, the article presents us with the operating mechanism and development of the job-hunting Wechat official account, which makes it worth studying in the future.

ACKNOWLEDGEMENT

This paper is supported by the Natural Science Foundation of Guangdong Province, China under Grant 2017A030313435, the Innovative School Project in Higher Education of Guangdong, China under grant GWTP-GC-2014-03.

REFERENCES

- [1]. Zhu Jianping, Fang Kuangnan, Zhang Guijun. SPSS Statistical analysis and application[M]. Beijing:Capital University of economics business press, 2013.
- [2]. Feng Li. Regression analysis method principle and SPSS practical operation[M]. Beijing:China Financial Publishing House, 2004.
- [3]. Wang Hua, Jin Yongjin. Statistical data quality assessment - error effect analysis and user satisfaction evaluation[M]. Beijing:China Statistics Press, 2010.
- [4]. Robert S Pindyck, Daniel L Rubinfeld. Microeconomics[M].Beijing: Tsinghua university press,2010:95-96.
- [5]. Zhang Lujing. Analysis of the construction and influencing factors of college students' satisfaction model[D]. Beijing:Capital University of Economics Business, 2010:1-70.
- [6]. Wang Yingjie. Research on customer satisfaction and price elasticity of take-out O2O platform - based on the sampling survey data of southwestern university of finance and economics[J]. Market Forum, 2015(4):66-68.
- [7]. Huang Can. A study on the motivation of users to pay attention to WeChat public account[J]. Modern Intelligence, 2015, 35(8):28-34.
- [8]. Hu Ping, Cui Wentian, Xu Qingchuan. Applied statistical analysis teaching practice case set[M]. Beijing:Tsinghua University Press, 2007.
- [9]. Lin Hui. Research on causality test of ACSI model[J].Statistics and Decision, 2005(2):22-23.
- [10]. Jiang Hangling. Research on WeChat public platform based on use and satisfaction theory[J]. legality Vision, 2016(4):27-28.
- [11]. Li Xue. Research on the influence factors of students' satisfaction on WeChat public platform in universities -- an empirical study based on the model of structural equation[J]. Journal of Beijing university of posts and telecommunications (JCR Social Science Edition), 2016(4):08-11.
- [12]. Yao Lifen, Li Qingchen. A study on marketing satisfaction of WeChat based on IPA: a case study of HebeiTourism, a public account of WeChat[J]. Hubei Agricultural Sciences, 2015(18):10-20.
- [13]. Li Tao. Reliability and validity test model of customer satisfaction[J]. Science Mosaic, 2007(4):106-10.
- [14]. Xu Xiaohong, Jia Hai, Chen Yu. A preliminary study on customer satisfaction index of guangzhou supermarket[J]. Mathematics in Practice and Theory, 2009(14):12-18.
- [15]. Cai Hui. Study on the reliability and validity of questionnaire design[J]. World Sci-tech, 2010(4):548-550.
- [16]. Li Cuiping. The construction and evaluation of college students' satisfaction index model in local colleges and universities[D]. Hebei University of Technology, 2010:1-57.
- [17]. Wang Lin. Empirical study on the influencing factors of customer satisfaction of online group purchase[D]. Huazhong Agricultural University, 2013:1-65.
- [18]. Wang Zuocheng, Gao Yulan. Questionnaire design and optimization in satisfaction survey[J]. market research, 2015(3):39-41.
- [19]. Wang Zongyu, Wu Bailin. The design and application of fuzzy data questionnaire[J]. Economic Research Guide, 2010(14):174-178.
- [20]. Adili.Nuer. A brief discussion on the techniques of questionnaire design [J]. Tatistical Science and Practice, 2012(6):54-56.
- [21]. Zhang Weijian. The transmission mechanism and effect analysis of WeChat public platform[J]. Journal of social science of Harbin normal university, 2015(2):148-150.
- [22]. Huang Chuxin, Wang Dan. The present situation, type and development trend of WeChat [J]. News and Writing, 2015(7):5-9.
- [23]. Vincent Omachonu, William C. Johnson, Godwin Onyeano. An empirical test of the drivers of overall customer satisfaction: evidence from multivariate Granger causality [J]. Journal of Services Marketing, Vol.22 , 2008
- [24]. Ali Turkyilmaz, Asil Oztekin, Selim Zaim, Omer Fahrettin Demirel. Universal structure modeling approach to customer satisfaction index [J]. Industrial Management & Data Systems, Vol.113 ,2013
- [25]. Biljana Angelova, Jusuf Zekiri. Measuring Customer Satisfaction with Service Quality Using American Customer Satisfaction Model (ASCI Model) [J]. International Journal of Academic Research in Business and Social Sciences, Vol.1 ,2011
- [26]. Saif Ullah Malik. Customer satisfaction, Perceived Quality and Mediating Role of Perceived Value [J]. International Journal of Marketing Studies, Vol.4 ,2012
- [27]. Atila Yuksel, Fisun Yuksel, Yasin Bilim. Destination attachment: Effects on customer satisfaction and cognitive, affective and conative loyalty [J]. Tourism Management,2010 (31):274-284

Qiansheng Zhang."The Job-Hunting Wechat Official Account Satisfaction Model Based On CcsiModel " The International Journal of Engineering and Science (IJES) 7.2 (2018): 50-60