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## Research on marketing website key elements model based on the buyer's perspective

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### ABSTRACT

In order to explore marketing websites with what key elements could be approved by buyer party and provide guiding suggestions for e-commerce enterprises to build marketing website, basing on referring to tremendous literature initially, the article summarized the basic elements of marketing website from the users' point of view. Then by the method of exploratory factor analysis and confirmatory factor analysis, integrating the questionnaire to the buyer party, using statistical analysis software, the article constructed key element model of marketing website and carried out test and verification.

### KEYWORDS

Necessity element; Confirmatory factor analysis; The method of questionnaire.



## INTRODUCTION

In order to determine the evaluation elements of marketing website, the method of literature analysis is used, past literatures as the research object, striving to collect all evaluation elements which are the study basis for this paper from the past literatures. The literature analysis is a scientific knowledge method which refers to collect, identify, organize and study the past literatures. It is an economical and efficient information gathering method by a systematic analysis of the existing literature on work-related information<sup>[1]</sup>. Generally it is used to collect raw information, and to prepare the preliminary draft of task list. It is also a systematic, objective and quantitative description method to clarify dissemination contents, which is applicable to every valuable literature that can be recorded and saved. It is an undisturbed research method, by using other researchers' information collected by other research purposes, in order to achieve own purpose and which variable extracts and attribute classifying are carried out on the basis of the existing literatures.

### THE STEPS OF DETERMINING NECESSITY EVALUATION ELEMENTS BASED ON LITERATURE ANALYSIS

To consider as much as possible to expand the selection and as far as the basic elements, in the process of basic elements selected, China Journal "electronic technology and information science" and "economic management", "marketing type" website evaluation, website optimization, internet marketing, buyer & Evaluation keyword retrieval. Read these abstracts to determine network marketing website evaluation related 65 articles. After reading these 58 articles one by one, screening in accordance with the following principles:

(1) network marketing website evaluation related; (2) the specific evaluation criteria or affect the elements of the site evaluation; (3) Referred to the Website Without Making an Industry Distinction.

After screening we got 26 domestic literature and summed up 93 elements for website evaluation by weight and complement each other. By five experts to further evaluate the importance of the elements of these 57 subjective judgments, weeding out the unimportant items. Excluding elements based on the following reasons<sup>[2]</sup>:

(1) it is not a direct perception from the buyer's point of view to the elements; (2) it is not on the basic elements of the site evaluation; (3) it is distant for the evaluation of marketing-based website. Finally, we got 26 impact factors. All 26 elements constitute the basic elements of the marketing-type website evaluation, such as, the site whether is direct way of communicating or not, whether the site open speed is quick or not.

### CONSTRUCTING THE NECESSITY EVALUATION ELEMENT MODEL OF MARKETING WEBSITE

#### Exploratory factor analysis and confirmatory factor analysis

Exploratory factor analysis is not known of the impact factors in advance, fully relies on the information and data to certain principles of factor analysis, the last of the process gets factors, and its main purpose is to find out the impact factor of the observed variables number, as well as the degree of correlation between the various factors and observed variables. Confirmatory factor analysis is the full use of prior information in the case of known factors assumed structure effect testing collected datum, which tests predefined factor model to fit the actual datum. In this paper, a common combination of exploratory factor analysis and confirmatory factor analysis is applied. First, the exploratory factor analysis is used to model and then confirmatory factor analysis is used to verify the model.

#### Questionnaire design and data acquisition

Obtain data in this article uses the form of a questionnaire survey with a low cost, simple operation, easy controllability. The questionnaire contains 26 influencing factors analyzed earlier survey questions using Likert scale forms, which is about the necessity of the basic elements of the site evaluation from 1 score to 5 score: complete unnecessary, necessity not obvious, general necessity, comparative necessary, very necessary.

The survey first pre-survey of 30 users. For a more comprehensive test data, 10 of the 30 users are selected from the group consisting of E-commerce and Internet marketing researchers. 10 from E-commerce professional students, the rest 10 is no or very little contact with the E-commerce, in order to facilitate a more comprehensive evaluation of the pre-test questionnaire<sup>[3]</sup>. After the test completed, the questionnaire is amended in part:

(1) The elements adjustment: remove some obscure necessity factors (average necessity degree of less than 3) and merge too trivial elements;

(2) Improving the terms: rewrite too specialized words to adapt ordinary respondents answer.

After adjustment, a questionnaire contains 18 questions, for convenient statistics, questionnaire 18 elements denoted Xi (i = 1, 2, ..... 18). Then questionnaire adds six individual survey option, which is the formal questionnaire.

In October 2014, using simple random sampling facing the college student consumers of online shopping experience, the first survey was carried out. To guarantee the validity of the data analysis, the sample size is 265. In this survey, I issued 180 written questionnaires to the Hebei Normal University of Finance and Economics College students and also 97 questionnaires were collected through the professional survey website. Screening questionnaire and 265 valid questionnaires obtained, 175 were copies of the written questionnaire, 90 of the electronic questionnaire.

**TABLE 1 : The necessity elements of the marketing website in the questionnaire**

| Element number | Element Description  |
|----------------|--|
| X1             | Can communicate lively on line via QQ  |
| X2             | can access the destination webpage easily by navigation                          |
| X3             | can found needed information quickly by internal searching engine of the website |
| X4             | the system of the website is steady and reliable                                 |
| X5             | can select logistics with good reputation  |
| X6             | there are multiple interfaces for on-line payments                               |
| X7             | My personal information is protected   |
| X8             | Not be forced to install plug-ins and toolbars                                   |
| X9             | The title and the content of the web pages are highly pertinent                  |
| X10            | The comments on commodities can be reviewed.                                     |
| X11            | The content of the website is updated in time.                                   |
| X12            | The queries and complaining from the customers can be responded in time.         |
| X13            | Changing and refunding is guaranteed.  |
| X14            | Convenient off-line experience stores are set.                                   |
| X15            | Valuable integrated services are provided.                                       |
| X16            | Personalized needs can be customized.  |
| X17            | Appropriate key words are set in the web pages.                                  |
| X18            | Personalized needs can be satisfied.   |

In order to ensure respondents fully understanding the marketing websites, respondents were asked to have the shopping experience more than 3 times. In order to avoid the shopping experience of the respondents distinguished from psychological feeling affecting the outcome, the distinguish about whether the shopping experience or not was by the appropriate option in the questionnaire for screening, which resulted valid questionnaires less.<sup>[4]</sup>

The personal information from the questionnaire can be learned that the survey participants have an average net age of 3.76 years, the average time spent online per week is 13.76 hours, that the more skilled network applications are able to better understand the questionnaire involved the meaning of the issues and options.<sup>[5]</sup>

The questionnaire results carry out reliability analysis, and Cronbach's alpha coefficient is 0.876, which is a very good scale reliability ( $\alpha > 0.8$ ), so the reliability of the study is very good.<sup>[6]</sup>

### Data analysis and modeling

The questionnaire datum analysis uses SPSS19.0 software, applying exploratory factor analysis method. Which factors extracted using principal component method, factor eigenvalues greater than 1; the factor rotation using varimax method, factor score over 0.5. The datum test sufficiency before extracting factors. The sample adequacy KMO test coefficient is 0.845, the sample distribution Battlett spherical test card party value is 3597.012, the significance level of 0, prove to be suitable for factor analysis. Obtain 6 factors through factor analysis. After rotation get as follows (see Table 2):

Five factors in the table 2 check consistency. Factor 1 to factor 5 alpha coefficients are higher than 0.7, which can be considered to have high internal consistency, and they are acceptable. Factor 6 coefficient is small, the lack of internal consistency.

### The necessity factor model of the marketing website

18 basic elements divides into five factors through exploratory factor analysis.

From table 2, factor 1 contains X4, X7, X8 and X13 four options, corresponding to the specific problem of four options: X4: the system of the website is steady and reliable; X7: the queries and complaining from the customers can be responded in time.; X8: not be forced to install plug-ins and toolbars; X13: changing and refunding is guaranteed. four options related to a common theme is "A website should not add an extra burden of psychology or system security to customers". Therefore this factor names as "security"<sup>[7]</sup>.

Factor 2 contains the X1, X10 and X12 three options, the corresponding specific issues of the three options: X1: can communicate lively on line via QQ; X10: the comments on commodities can be reviewed; X12: the queries and complaining from the customers can be responded in time; the three options related to a common theme is "user interaction through the website with the Purchaser". Therefore this factor names as "interactivity "

TABLE 2

| Extracted factors | Questionnaire Options | The Explanation strength (%) | The Cumulative explanation strength (%) | $\alpha$ Coefficient |
|-------------------|-----------------------|------------------------------|---|----------------------|
| Factor1           | X4                    | 38.387                       | 38.387                                  | 0.826                |
|                   | X7                    |                              |   |                      |
|                   | X8                    |                              |   |                      |
|                   | X13                   |                              |   |                      |
| Factor2           | X1                    | 20.356                       | 58.743                                  | 0.817                |
|                   | X10                   |                              |   |                      |
|                   | X12                   |                              |   |                      |
| Factor3           | X14                   | 13.125                       | 71.868                                  | 0.792                |
|                   | X16                   |                              |   |                      |
|                   | X18                   |                              |   |                      |
| Factor4           | X2                    | 9.369                        | 81.237                                  | 0.789                |
|                   | X3                    |                              |   |                      |
|                   | X9                    |                              |   |                      |
|                   | X11                   |                              |   |                      |
| Factor5           | X5                    | 8.272                        | 89.509                                  | 0.736                |
|                   | X6                    |                              |   |                      |
|                   | X15                   |                              |   |                      |
| Factor6           | X11                   | 2.79                         | 92.299                                  | 0.523                |
|                   | X17                   |                              |   |                      |

Factor 3 contains X16, X18 and X18 three options, corresponding to the specific issues are: X14: convenient off-line experience stores are set; X16: personalized needs can be customized; X18: Personalized needs can be satisfied. the three options related to a common theme is " purchaser's personalization needs could be satisfied" Therefore this factor names as" personalization ". The third option which repeats the previous two options should be removed.

Factor 4 contains X2, X3, X9 and X11 four options, the corresponding four options: X2: can access the destination webpage easily by navigation; X3: can found needed information quickly by internal searching engine of the website; X9: The title and the content of the web pages are highly pertinent; X11: the content of the website is updated in time. The common theme of the three involves " website should provide a nice function of searching information", and the name is "retrieval "[8].

Factor 5 contains X5, X6 and X15 three options, the corresponding four options: X5: can select logistics with good reputation; X6: there are multiple interfaces for on-line payments; X15: valuable integrated services are provided " The third option which repeats the previous two options should be removed. So this factor was named as " extensibility ".

Factor 6 contains X11 and X17, the corresponding two options: X11: the content of the website is updated in time; X17: appropriate key words are set in the web pages. Because the subjects of the inquiry are purchasers who care more about how to better find the information of commodities, and communication and security issues. The purchasers care less about the key word set by the website, or the content of the website if which are updated in time. website set appropriate keywords". Since the object of the investigation is more oriented buyer, for the buyer more concerned about is how to find product information, how to do the buyer exchanges as well as security problems. Whether the website properly sets keywords or not, which is not cared much about by the buyers. The five factors explained 89.509% of the total variance, which can be considered to explain the more information. Thereby the five factors model of marketing website evaluation of the buyer's view can be built (see Table 3)

## VERIFYING NECESSITY ELEMENT EVALUATION MODEL

### The second questionnaire

The marketing website factor model from buyer's view is defined, in order to validate the model, once again preparing questionnaire investigation. The questionnaire contains 14 issues options as well as 6 individual information option. 12 options are the table 2 that contain the basic elements of the model shown. The number of questionnaires for statistical options is  $Y_i$  ( $i = 1,2,3 \dots 12$ ) (see Table 4). Found by the last survey, the network valid response rate to the questionnaire is high, so this issued questionnaires are all over the network.

Questionnaires completed are released by a professional questionnaire website, 136 copies received of valid questionnaires, 23 invalid questionnaires, and the effective rate is 85.5%. After analysis of the results reliability of the questionnaires, Cronbach's coefficient is 0.896, greater than 0.8, it is acceptable, so that the survey reliability is very good.

**TABLE 3 : Buyer's view marketing website constitutes necessity elements**

| Impact Factor   | Basic elements  |
|-----------------|---|
| Security        | The system of the website is steady and reliable.<br>The queries and complaining from the customers can be responded in time.<br>Not be forced to install plug-ins and toolbars.<br>Changing and refunding is guaranteed  |
| Interactiveness | Can communicate lively on line via QQ<br>The comments on commodities can be reviewed.<br>The queries and complaining from the customers can be responded in time.   |
| Personalization | Convenient off-line experience stores are set.<br>Personalized needs can be customized  |
| Retrieval       | Can access the destination webpage easily by navigation.<br>Can found needed information quickly. by internal searching engine of the website<br>The title and the content of the web pages are highly pertinent.<br>The content of the website is updated in time. |
| Extensibility   | Can select logistics with good reputation<br>There are multiple interfaces for on-line payments.  |

**TABLE 4 : The second survey involves the necessity elements of marketing website**

| Number | Basic elements   |
|--------|--|
| Y1     | The system of the website is steady and reliable                                 |
| Y2     | My personal information is protected   |
| Y3     | Not be forced to install plug-ins and toolbars                                   |
| Y4     | Changing and refunding is guaranteed.  |
| Y5     | Can communicate lively on line via QQ  |
| Y6     | the comments on commodities can be reviewed.                                     |
| Y7     | The queries and complaining from the customers can be responded in time.         |
| Y8     | Convenient off-line experience stores are set.                                   |
| Y9     | Personalized needs can be customized.  |
| Y10    | can access the destination webpage easily by navigation                          |
| Y11    | can found needed information quickly by internal searching engine of the website |
| Y12    | The title and the content of the web pages are highly pertinent                  |
| Y13    | can select logistics with good reputation  |
| Y14    | there are multiple interfaces for on-line payments                               |

#### Data analysis

In order to detect whether the above model fit the datum, comparing the reproduction covariance matrix and the difference of the sample covariance matrix is needed. This difference is one that can be indicated by a fitting index. Based on the complete reflection of the model fitting degree, this paper selects RMSEA, CFI,  $\chi^2/df$ , three indices.

This is because: Since this collected data sample of smaller capacity, the CFI index just by the system impact of the sample size is small, its value above 0.9 is appropriate; the index  $\chi^2/df$ , degrees of freedom can be taken into account, at the same time also has a relatively small sample size, as long as its value is less than 3; RMSEA also consistent with this reality, less affected by the sample size, its value is not more than 0.1 to meet the requirements. By analysis software AMOS17, with Table 4 Model analysis, the following results are obtained (Table 5):

**TABLE 5 : The model fitting performance statistics**

| Fit Measure | RMSEA | CFI   | $\chi^2$ | df | $\chi^2/df$ |
|-------------|-------|-------|----------|----|-------------|
| Your Models | 0.078 | 0.926 | 158.345  | 83 | 1.907       |

From Table 5 data RMSEA value of 0.078 is less than 0.1, the CFI value 0.926 is greater than 0.9,  $\chi^2/df$  value of 1.907 is less than 3, so the necessity element model of marketing website from buyer's view is acceptable.

## CONCLUSIONS

In truth analysis method based on summary, analysis and testing the paper constructed the necessity element factor model of marketing website in terms of purchaser, this model provide some guidance for internet marketing enterprises to construct marketing websites. I give the following recommendations based on the research of the paper:

(1)The security of marketing websites are still concerned emphasized by customers, no matter payment security, information security or the stabilization were always concerned in high priority. So marketing website must pay more attention to security issues, which could make the customers to use reassured. The website operators should fully take the security consideration and the psychological features of users into account, they should try their best to enhance the steadiness of website so that the users could be disturbed at least, especially they can not compulsorily install the plugin or tool bar to users' computers.<sup>[9]</sup>

(2) Marketing enterprises should fully utilize the interactivity feature of the internet to make conditions for the good communication between the purchaser and the enterprises, make full use of live information communication tools, pay more attention to the online complaining of buyers, feedback in time, set relatively perfect FAQ, provide services for buyers based on good communication between the buyers and sellers, and thinking highly of the buyers.

(3)Paying attention to providing personalized services. with the developing of technology and maturing of external conditions, it is possible for personalized needs. it is getting more obvious that the customers are trying to obtain more needs basing on satisfaction of their basic needs.<sup>[10]</sup>

(4)Providing purchaser extended integrated services. Via marketing websites E-commerce enterprises not only sale products but also provide more convenient services for clients, such as logistics tracking and online payments.

(5)The websites should try their best to make users to locate the target they searched. The users login marketing websites in order to get some products and services. The "web site navigation" and "in website search" can help users locate the information they wanted, moreover the high interaction between the webpage title and the content is very helpful for users's accurate-orientation and direct finding what they need, which reduces the users's trouble of multiple filtering the targets.<sup>[11]</sup>

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