

Research on User Donation Preference of "Internet + Public Benefit" Project

-- Take Taobao Public Welfare as An Example

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Abstract

With the development of the Internet, "Internet + public welfare" emerges. Different from the traditional public welfare, "Internet + public welfare" has changed in the way of participation, communication channels and other aspects. Accordingly, users have different donation choices. What is the basis of user donation selection? What charitable donation items do users choose? Therefore, it is very important to study the donation preference of "Internet + public benefit" project users. This paper selected 20 "Internet + public benefit" projects on taobao.com as research samples, identified the comment contents of sample projects through text mining, sorted out online comments on high-frequency words with the help of word frequency statistical tools, conducted clustering analysis on the projects with SPSS statistical tools, and made corresponding analysis on semantic relations between high-frequency words. The results show that transparency, feedback mechanism, donation amount and sustainability are the main criteria for users to choose donations. There are differences in users' preference for donation in different categories of "Internet + public welfare" projects. Users of children's relief projects pay more attention to "dream" and "success", while users of environmental protection projects pay more attention to "prevention" and "responsibility".

Keywords

Internet + public welfare; Taobao; Online reviews; Text mining; Donation behavior.

1. Introduction

Public welfare projects refer to projects initiated by charitable organizations and implemented by using private resources to seek benefits for certain groups [1]. The "Internet + public welfare" project refers to the public welfare project based on the Internet. With the advent of "Internet + public welfare" era, everyone can participate in public welfare in the simplest and most convenient way. Now, Taobao has established background to traditional charity shop, every store has a lot of "Internet + public welfare projects, compared with the traditional public welfare project, the organizers of the " Internet + commonweal project to a network sellers, buyers donors to a network, the initial endowment as one yuan mostly, users take want to donate to public welfare donation amount of the process [2]. When traditional public welfare projects are transformed into Internet products, projects need to be designed according to the preferences of Internet users to cater to their donation needs. Therefore, it is particularly important to understand the basis of user donation selection and find out the pain points of users. What are the users' thoughts in the selection and donation decision process? What information characteristics of the project will make the public benefit users choose this project? To explore this problem, this paper use the web crawler software from Taobao public welfare project review content, using the content analysis of the samples obtained high frequency word

analysis, to explore the focus of public users and giving evidence, help to charitable organization design features a distinctive project, attract more funds to promote the development of public welfare undertakings, is a focal point of this article explores.

2. Related Work

Scholars at home and abroad have done some exploration and research on public welfare users' choice behavior. From the perspective of research objects, it mainly focuses on enterprises [3,4,5] and traditional charities [6,7] that fulfill their social responsibilities. Schons et al. [5] found that enterprises that only make donations abroad are more likely to be favored by users; Mcconville[7] found that transparent and open reporting of charitable activities by charities can improve users' trust and potentially ensure users' continuous participation and support. In terms of research methods, qualitative [8] and empirical research [9,10] methods are mostly used for "Internet + public benefit". xiaoping Zhao took 20 volunteers involved in earthquake relief as research objects, conducted in-depth interviews with them, and analyzed users' willingness to participate in public welfare [8].The empirical research results of xinming Deng et al. show that CSR has a direct positive impact on consumers' purchasing behavior [9]. FilizOzbay studies how competition among charities affects individual giving behavior [10].In terms of the application of research methods, the content analysis method is mostly used for the analysis of high-frequency words in tourism, consumer behavior analysis and Weibo public opinion analysis. xintian Wang et al. [11] used crawler software to extract online tourism text content and used content analysis method to obtain the rules of tourists' online tourism decision-making behavior. qinglin Wu [12] used high-frequency words extracted from Weibo topics to quickly cluster Weibo and analyzed the emotional intensity of hot topics. RUSSELL[13] explored the potential influencing factors of consumers' behaviors through content analysis of alcohol information in advertisements.

"Internet + public interest" as the focus of a new public welfare model, but the existing research object to fulfill the social responsibility of enterprises and more traditional charity, rare "Internet + public welfare project users against the subject study, therefore, for the "Internet + public welfare "research remains to be further explored. Under the influence of the Internet, public welfare users have made new changes in their choice of public welfare projects. Therefore, it is of great significance to study the donation choices of "Internet + public welfare" project users. The research on "Internet + public benefit" mainly adopts qualitative and empirical research methods. There is a certain error in the selection of research studies by users of "Internet + public benefit" project, so it is necessary to effectively measure the donation behavior of users of "Internet + public benefit" project. This paper selects 20 public benefit projects on Taobao, USES web crawler software to obtain their online comment information, and adopts content analysis method to objectively, systematically and quantitatively analyze the characteristics of public benefit projects, so as to explore the donation behavior preference of public benefit users on Taobao. Firstly, this paper USES the text mining method to extract the high-frequency words in the comments of "Internet + public benefit" project. Secondly, it carries out content analysis on the high-frequency words to obtain the basis and degree of preference of users in choosing donations. Finally, it analyzes the selection preference of users in different types of public benefit projects.

3. Data Analysis

3.1. Date Collection

In 2018, Taobao's public welfare platform has attracted over 430 million people to participate in public welfare, and the amount of public welfare baby donation has increased by 47% over the previous year. Taobao's rich categories of public welfare projects and the widest public

welfare audience make it an excellent data source for studying the donation behaviors of public welfare users in China. This study through the "public interest" keyword search Taobao page (<https://www.taobao.com/>), according to the sales of the top 20 ranking selection in Taobao interface "Internet + public welfare projects, each project involves the area wide, the direction of public areas, public welfare and benefit, the benefit object are different, so as to ensure the diversity of data. Firstly, 10,813 pieces of online comment information were obtained by using information collection software. Clean the data, delete the same user's repeated comments, eliminate automatic praise, meaningless symbol information and comment template. The result was 8,489 valid online comments. Secondly, ICTCLAS system of Chinese academy of sciences was used to process the obtained text data set. Update the stop list to eliminate words with obscure meanings. Examples of text comment segmentation are shown in table 1. Finally, word frequency statistics are performed on the text content to obtain the high-frequency words in the first 100 bits.

Table 1. High-frequency word sets of "Internet + public benefit" project (part)

The high frequency word set									
Support	physical	ability	positive	energy	growth	full	students	good	
Slender	health	lifetime	dream	helps	supervise	efforts	participate	continue	
useful	Everyone	needs	area	thanks	protection	job	punching	expensive	
Responsibility	hope	really	poor	life	Thanksgiving	trust	drop	shopping	
follow	business	indeed	that's ok	learn	New Years	poor	eliminate	tradition	

3.2. High Frequency Word Content Clustering Analysis

Project nature reflects the main attribute of public projects, including health services, educational, environmental protection, etc., in order to divide the public welfare project types, determine the high frequency words in the frequencies of different public welfare project, the SPSS23.0 software is adopted to 20 Taobao public welfare project for clustering analysis, for public welfare projects clustering analysis spectrum diagram, as shown in figure 1. According to the sample comments, "Internet + public welfare" projects are classified into six categories: children's relief projects, elderly people's relief projects, environmental protection relief projects, major disease relief projects, education projects in poor areas and celebrity appeal projects. The frequency and frequency performance of high-frequency words in various items are shown in figure 2. As can be seen from figure 1, the most frequent occurrence is the child relief project. Children, disease and education are the most interesting topics for Internet donors, according to the 2019 China Internet charity report. However, the frequency of high-frequency words in different categories of public welfare projects indicates that public welfare users have different preferences and different public welfare projects, but the overall difference is not significant.

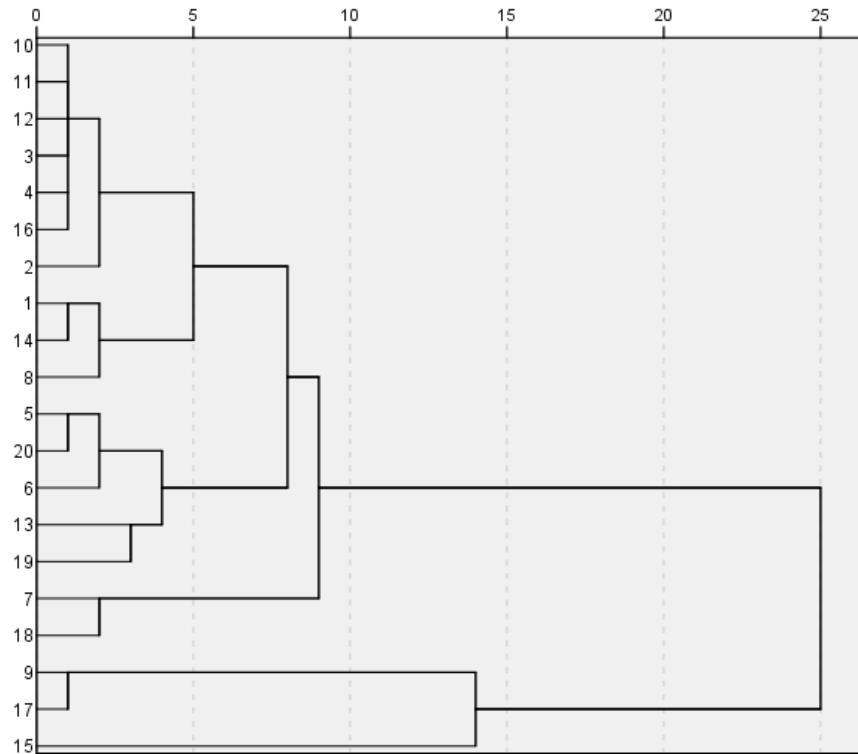


Figure 1. Pedigree of public welfare project cluster analysis

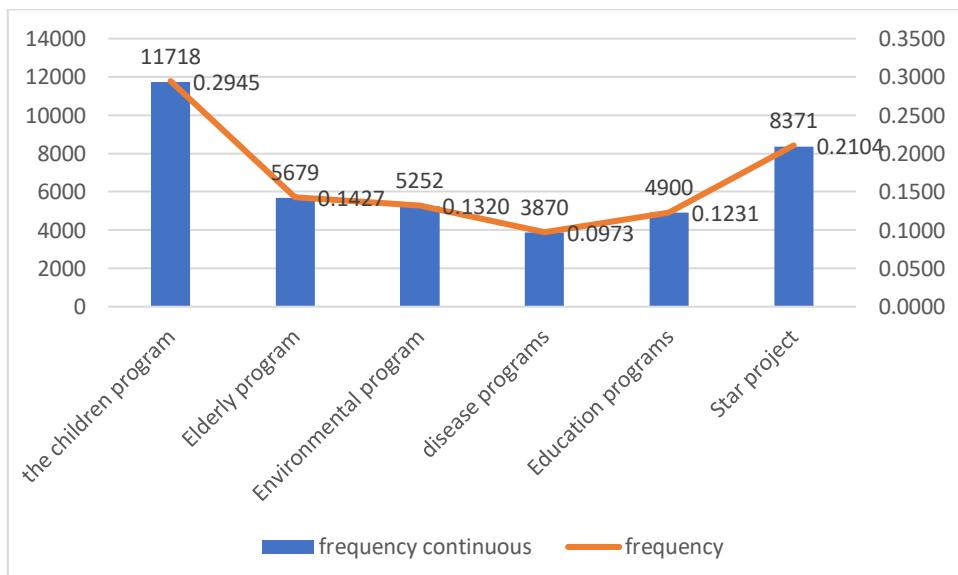


Figure 2. Frequency and frequency of high-frequency words in different types of public welfare projects

According to the results in figure 1, the "Internet + public benefit" project is classified. The data objects within the category are of high similarity, while the data objects between the categories are of great difference. The classification results are shown in table 2.

(1) Children relief programs. Items 10, 11, 12, 3, 4, 16 and 2 are classified into one category, with a large proportion of children's assistance programs. Due to the text data of project 4 (charity donation to rescue stray cats and dogs snack chicken breast, meat jerky, sausage and small fish dried pet food), users called stray cats and dogs "fur children", so the project was classified as a children's rescue project.

- (2) Assistance programs for the elderly. Project 5 is related to projects 20 and 6, and the donation objects are elderly people with disabilities and poor elderly people.
- (3) Environmental relief projects. Items 7 and 18 are related to environmental protection. Item 7 is to save the finless porpoises and item 18 is to combat desertification.
- (4) Major disease relief programs. The distribution of high-frequency words in item 1 and item 14 is less different, and they are classified into one category. The object of item 1 is children with leukemia, while the object of item 14 is children with liver disease.
- (5) Education projects in poor areas. Items 13 and 19 are classified into one category, mainly children care programs and children education programs, and the user groups of donation are the same. The donations are for children who cannot afford to go to school. The goal is to help rural students go to school, inspire their minds and help them realize their educational dreams.
- (6) Star call project. Items 9, 17 and 15 are all about star power. However, since project 17 and project 15 are two projects called by different stars, the online comments are quite different, so the overlap degree of high-frequency words in the figure is not high.

Tab 2. "Internet + public welfare" project category table

classification	Project number	classification	Project number
	10		7
	11	Environmental program	18
	12		1
the children program	3	disease programs	14
	4		8
	16		13
	2	Education programs	19
	5		9
Elderly program	20	Star project	17
	6		15

4. Conclusion and Significance

Based on the "public Internet +" project as the research object, using the web crawler, grab Taobao public welfare projects online reviews the contents of the project by content analysis of clustering analysis, carried on the corresponding analysis of high frequency and the analysis of the long tail, receive an "Internet + public welfare projects donated the main selection basis, and users of different categories of public welfare projects donated preference.

(1) there are common points in the selection of user donations for the "Internet + public benefit" project. Taobao's public benefit transparency, feedback mechanism, donation amount and sustainability are the main criteria for users to choose. In terms of project selection, users are more inclined to choose "Internet + public benefit" projects that express positive emotions, which is also in line with the cultural needs of current Internet users. Compared with suffering emotions, consumers prefer positive emotions.

(2) there are differences in user concerns among different types of "Internet + public benefit" projects. Users of the children's aid program focus on "dream" and "growth", while users of the environmental protection program focus on "prevention" and "responsibility". Therefore, it is

necessary to design "Internet + public welfare" projects that reflect different users' public welfare preferences according to the types and characteristics of "Internet + public welfare" projects to stimulate users' willingness to donate. Differentiated donation needs have become an important part of "Internet + public welfare" projects in China. Subdividing project types can help charitable organizations determine target markets and define target users, so as to achieve differentiated development and avoid too many public welfare projects of the same type.

This paper USES content analysis method to make a comparative analysis of public benefit projects in Taobao, providing a quantitative perspective for the study of user donation behavior, and contributing to scientific interpretation of user donation concerns and selection differences, and further helping charitable organizations optimize project design. This paper suggests that public welfare organizations should highlight the concept of differentiation in project design to meet the needs of different public welfare users. The "Internet + public welfare" project needs to find its own characteristics and break through single public welfare forms, such as targeted public welfare projects such as veterans of the Anti-Japanese War and caring for girls. Users can clearly see the public welfare products within the scope of their ability to choose, according to their own ability to bear and donation will lock the target. Truly realize the "Internet + public welfare" cause let a hundred flowers bloom.

5. Deficiencies and Prospects

The results of this study have a good reference and inspiration for online reform of charity organizations, optimization of the design of public welfare projects, help public welfare organizations to make good decisions, and promote the development of public welfare undertakings.However, this study still has the following shortcomings:

First, this paper only discusses one form of public benefit - donation.However, there are now "behaviors" such as volunteering and walking donation.However, this paper does not discuss it in depth, so in the future research, the "Internet + public benefit" project can be further subdivided to study the characteristics of user donation behavior differences in different forms of public benefit projects.

Second, this paper only analyzes the characteristics of users' donation behavior through the comment data of taobao public welfare projects.However, "Internet plus public welfare" mode includes social welfare, alipay public welfare, video public welfare and so on.This is a more innovative "Internet + public benefit" model, which has research significance.Therefore, in the next step of the research, we can expand and add other aspects of public welfare to carry out multi-angle and multi-aspect research.

Thirdly, the high-frequency words in this paper are ambiguous in expression, recognition is not clear, and the characteristics of user donation behavior are not clear.Using high-frequency word analysis to study users' charitable donation behavior may lead to ambiguity. In the following research, text data should be coded, classified and extracted for more accurate comparative analysis.

References

- [1] Wei-an Li, guang-ju Jiang, jian-shi Lu, do donors care about charity projects -- an empirical study based on rational choice theory [J]. Nankai management review, 2017, 20 (4): 49-61.
- [2] Yidan Chen, China Internet public welfare [M]. Beijing: ren min university of China press, 2019. 49-60.
- [3] Chia-chi Chang, Po-Yu Chen. Which maximizes donations: Charitable giving as an incentive or incentives for charitable giving? [J]. Journal of Business Research, 2019, 97: 65-75.

- [4] Ryan Langan, Anand Kumar, Time versus money: The role of perceived effort in consumers' evaluation of corporate giving [J]. *Journal of Business Research*, 2019, 99: 295-305.
- [5] Schons Laura Marie, Cadogan John, Tsakona Roumpini, Should charity begin at home?An empirical investigation of consumers' responses to companies' varying geographic allocations of donation budgets[J]. *Journal of Business Research*, 2015, 9 (8): 1-18.
- [6] Sasaki S, Majority size and conformity behavior in charitable giving: Field evidence from a donation-based crowdfunding platform in Japan [J]. *Journal of Economic Psychology*, 2019, 70: 36-51.
- [7] Mcconville, Danielle, New development:Transparent impact reporting in charity annual reports-- benefits, challenges and areas for development[J]. *Public Money&Management*, 2017, 37 (03): 211-216.
- [8] Xiaoping Zhao, Weijing Lu. Research on the relationship between public interest participation and public spirit shaping from the perspective of the third sector incentive theory [J]. *Journal of Tsinghua University (PHILOSOPHY AND SOCIAL SCIENCES EDITION)*, 2014, (05): 165-176
- [9] Xinming Deng, ting Zhang, yang Xu, research on the influence of corporate social responsibility on consumers' purchase intention [J]. *Journal of management*, 2016, 47 (02): 1019-1027.
- [10] Filiz Ozbay Emel, Uller Neslihan, Demand for Giving to Multiple Charities: An Experimental Study [J]. *Journal of the European Economic Association*, 2019, 17(03):725-753.
- [11] Filiz Ozbay Emel, Uller Neslihan, Demand for Giving to Multiple Charities: An Experimental Study [J]. *Journal of the European Economic Association*, 2019, 17(03):725-753.
- [12] Xing-tian Wang, lei Wang, intelligence analysis of online tourism buzzwords based on text mining - a case study of ctrip [J]. *Intelligence theory and practice*, 2017(11):109-113.
- [13] Wu qinglin, zhou tianhong. Analysis of weibo public opinion based on topic clustering and emotional intensity [J]. *Information theory and practice*, 2016,(1):109-112.
- [14] Russell, Cristel Antonia, D. W. Russell, "Alcohol Messages in Prime Time Television Series." *Journal of Consumer Affairs*, 2009, 43(01): 108-128.