

Effect of Information Technology on Fundraising for NPOs: A Case Study on Chinese Foundations

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Abstract— Donations are a significant source of funding for nonprofit organizations (NPOs). Enhancing the organizational fundraising capacity is essential to organizational survival and development. This paper analyzed the effect of IT on the fundraising capacity of Chinese NPOs. An empirical analysis was conducted on 390 Chinese foundation organizations. Results show that the Internet has positive influence on the fundraising capacity of NPOs.

Index Terms—Nonprofit Organizations, Fundraising, Internet Technology, Chinese Foundation

I. INTRODUCTION

As a part of organizational IT resources, Internet progressively plays an important role in enhancing mission-related outcomes and boosting the performance of nonprofit organizations (NPOs). An increasing number of NPOs are using websites to provide organizational information and publish operational details, which are two basic ways to build public trust. With the popularity of the Internet, the public increasingly relies on web-based organizational information in making donation and volunteering decisions.

The rise of Web2.0 provides new possibilities for NPOs to communicate with and engage the public through many social media applications[1]. These novel applications allow not only for the rapid dissemination of information but also for the rapid exchange of information[2]. The spread of new media has significantly increased the NPOs' ability to communicate with the core stakeholders and the public. The social media can be used by NPOs to improve their public relationship and to build their organizational community. In addition, NPOs can use social media to engage in advocacy work.

This study focuses on the application of social media in fundraising. On one hand, NPOs can utilize the Internet to conduct public welfare marketing to provide potential

donors the organizational information needed to make donation decisions. On the other hand, this is readily apparent in organizations' growing use of social media applications for their fundraising activities. The Internet has boosted the NPOs' ability to engage large audiences strategically and efficiently while simultaneously attracting new and younger audiences [3]. The Internet has also become an important fundraising platform for NPOs.

Although these issues are of critical importance, our understanding of these concerns remains limited. Specifically, little is known about how the adoption of the Internet affects aggregate donor contributions. To address this question, we developed an explanatory model of aggregate donation determinants on the basis of prior research models. Drawing upon the data collected from 390 Chinese NPOs, we then employed the model to examine the effect of the Internet on the aggregate donor contributions of organizations.

II. HYPOTHESIS AND MODEL

Organizational websites have become web portals that contain a variety of information and links to social media applications for donors' perusal[4]. Having a website is a necessity for NPOs who want to have their mission, work, and fundraising activities known. Websites enable NPOs to attract more donors and raise more funds.

These organizational websites play an important role in sharing information with the public. The amount and accessibility of information provided by the organization directly affect the donors' awareness of the organization[5]. This awareness can influence the willingness of donors to donate. In this information age, donors learn about organizations mainly from information channels, particularly from organizational websites. Therefore, the existence of websites significantly affects the extent of information being spread regarding organizations.

Earlier discussions prove that organizational websites affect aggregate donor contributions; therefore, the following hypothesis can be drawn:

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H1: The presence of organizational website has a positive effect on donor contributions. Organizations with websites can obtain higher amount of donations compared with organizations without websites.

The emergence of social media triggered a number of innovative fundraising models. In China, a large number of social media-based fundraising platforms, such as Sina micro-public platform (<http://gongyi.weibo.com/>) and Tencent public service platform (<http://gongyi.qq.com/>), have been observed. These new social media fundraising applications present communication opportunities that differ dramatically from organizationally supported websites[6]. During a fundraising activity, charitable organizations can engage their stakeholders by allowing them to send information quickly and receive real-time feedback. As of the end of December 2012, Chinese microblog users reached 309 million, accounting for 54.7% of the number of Internet users, whereas the social networking site users reached 275 million, accounting for 48.8% of the number of Internet users. Relying on the wide influence of social media, NPOs can reach more potential donors to improve the coverage of donations[4]. Additionally, prior studies show that in a social media setting, financial resources could accrue to NPOs with a large number of members or fans[7]. People with large social networks are more likely to donate because they receive more solicitations from family and friends[8]. Therefore, we expect that the presence of microblogs and the number of fans positively influence donor contribution.

H2: The presence of an organizational microblog has a positive effect on donor contributions. Organizations with microblogs can obtain more donations compared with organizations without microblogs.

H3: The number of fans has a positive effect on donor contributions. NPOs with more microblog fans receive more charitable contributions than NPOs with fewer fans.

The proposed model in the current paper is based on prior studies. The traditional model considered the effects of organizational strategy, organizational capacity, and organizational governance on organizational fundraising. The following hypotheses are proposed according to existing research:

H4: Organizations with more fundraising expenditures receive more charitable contributions than organizations

with less fundraising expenditures do[7].

H5: Organizations with more total assets receive more charitable contributions than organizations with less total assets do[9].

H6: More efficient organizations receive more charitable contributions than less efficient organizations do[7].

H7: The degree of information disclosure is positively related to the amount of charitable contributions[10].

On the basis of the fundraising qualification, foundations in China are divided into public-raising foundation and nonpublic fundraising foundation. Foundations are divided into national foundation and regional foundation according to the scope of areas. These two variables are likely to affect the level of organizational fundraising. Therefore, this paper includes the foundation type and foundation scope in the proposed model as control variables.

III. RESEARCH METHODOLOGY

A. Data collection and operationalization of variables

Our sample comprises organizations from China Foundation Center. Data were gathered from multiple sources, including China Foundation Center, Chinese microblogging platforms, and organizational websites. After filtering organizations that lacked the necessary data, we obtained a total sample of 390 organizations.

By using publicly available data on Chinese foundations from China Foundation Center, we measured three variables, namely, fundraising expenditure, organizational total assets, and organizational efficiency. Fundraising expenditure (*FundraisingExp*) is measured with the total expenditure costs. The organizational total assets (*TotalAsset*) are measured as net total assets, and organizational efficiency (*Efficiency*) is measured as the proportion of total expenses devoted to programs (program expenses/total expenses). We measured *WebsitePresence* and *MicroblogPresence* through a comprehensive search on Chinese microblogging platforms and organizational websites. The binary variables 0 and 1 indicate the adoption of a website or a microblog by an organization, respectively. *MicroblogFans* is measured as the number of fans in an organizational microblog. *DisclosureIndex* is measured by using the China Foundation Transparency Index (FTI), which is an evaluation system for foundation

transparency standards. A higher FTI means a higher transparency degree.

Two control variables, namely, *Type* and *Scope*, can be measured by using the data obtained from China Foundation Center. *Type* is measured with the discrete values 1 and 0, where 1 stands for public-raising foundation and 0 stands for nonpublic fundraising foundation. *Scope* is

measured with the discrete values 1 and 0, where 1 stands for national foundation and 0 stands for regional foundation.

TotalDonation is a dependent variable and is measured by the total dollar amount of charitable donations each NPO receives. The descriptive statistics for the variables in the dataset are shown in Table 1.

Table 1 Descriptive statistics of variables

Variable	Mean	Std.Dev.	Value range
WebsitePresence	0.45	0.50	0 or 1
MicroblogPresence	0.09	0.28	0 or 1
MicroblogFans	2,305.63	57,850.90	0 to 2,272,491
FundraisingExp	59,953.13	908,454.96	0 to 25,403,858.04
TotalAsset	36,087,699.94	133,173,936.1	0 to 3,064,916,348
Efficiency	0.90	0.36	0 to 1
DisclosureIndex	59.88	18.83	20.8 to 129.4
Type	0.49	0.50	0 or 1
Scope	0.08	0.27	0 or 1
TotalDonation	15,683,153.46	58,495,351.06	0 to 1,047,011,399

B. Empirical model

This paper uses logic regression to analyze the data. The regression model is proposed as follows:

$$\ln(\text{TotalDonation}) = \beta_1 \text{WebsitePresence} + \beta_2 \text{MicroblogPresence} + \beta_3 \ln(\text{MicroblogFans}) + \beta_4 \ln(\text{FundraisingExp}) + \beta_5 \ln(\text{TotalAsset}) + \beta_6 \text{Efficiency} + \beta_7 \text{DisclosureIndex} + \beta_8 \text{Type} + \beta_9 \text{Scope} \quad (1)$$

Robust regression procedure was employed to estimate the model[11]. None of the between-variable correlations

are larger than 75%. Thus, multicollinearity is not much of a concern in our analyses.

IV. RESULTS

Table 2 shows the results of the regression analysis. The model fitted the data appropriately, with a highly significant likelihood ratio ($p < 0.000$) and an adjusted R^2 of 0.5960.

Table 2 Regression output

Variable	Coefficient	Std.Dev.	t value	Sig.
(Constant)	-1.7612	4.4164	-3.9880	0.0001
WebsitePresence	2.1024	3.6731	5.7237	0.0000
MicroblogPresence	1.2329	4.5374	2.7172	0.0067
MicroblogFans (Ln)	0.0340	3.1591	2.3776	0.0175
FundraisingExp (Ln)	0.6570	2.5391	4.0044	0.0000
TotalAsset (Ln)	0.0180	4.1522	6.5971	0.0000
Efficiency	0.4613	2.6378	1.7487	0.0805
Disclosure Index	0.0310	0.0673	4.6042	0.0000
Type	-0.1290	1.8775	-0.6871	0.4921
Scope	-0.4069	2.2769	-2.7871	0.0741

Notes: F = 6.4790; sig. = 0.0000, $R^2 = 0.5960$

H1, which predicted a positive relationship between the presence of website and donor contributions, received support. The variable *WebsitePresence* ($p < 0.0000$) is statistically significant, and the coefficient (2.1024) is positive.

From Table 2, H2 and H3 were supported. *MicroblogPresence* ($p < 0.0067$) and *MicroblogFans (Ln)* ($p < 0.0175$) both obtained positive and significant coefficients in Model 1, indicating that the presence of organizational microblogs and the number of microblog fans both have positive effects on donor contributions.

H4 posited a positive relationship between fundraising expenditure and donor contributions. As expected, the variable *FundraisingExp (Ln)* obtained a positive and significant coefficient in Model 1. Thus, H4 is supported. H5, positing a positive relationship between organizational total assets and donor contributions, is also supported.

H6 and H7 are concerned with organizational efficiency and information disclosure, respectively. As expected, the variables *Efficiency* and *DisclosureIndex* yielded significant and positive coefficients in Model 1, indicating that the organizational efficiency and the degree of information disclosure positively influence donor contributions.

V. DISCUSSION AND IMPLICATIONS

This paper studied the effect of IT on the fundraising capacity of Chinese NPOs. An empirical analysis was conducted for 390 Chinese foundation organizations. As expected, the results show that the presence of website, the presence of microblog, and the number of microblog fans have positive influence on the donor contributions of NPOs. These conclusions indicate that NPOs should positively adopt IT to improve their organizational fundraising capacity. Although the traditional website needs plenty of funds and personnel to construct, the cost of new media continuously decreases, thus allowing organizations with insufficient resources to create their own website.

This paper verified the existing research conclusions. The organizational strategy, organizational capacity, and organizational governance also affect the organizations' ability to raise money. Organizations with more fundraising expenditures, more net total assets, higher efficiency, and

better information disclosure receive more donor contributions than organizations with less fundraising expenditures, less net total assets, lower efficiency, and poorer information disclosure do.

Our study contributes to both theory and practice. From a theoretical perspective, this paper provides an extensive theoretical framework to understand the fundraising capacity of NPOs by considering the effect of IT on donor contributions. As a result, our findings extend the literature on fundraising research.

Practical implications are observed for operating NPOs and grant-making and community-based "capacity-building" organizations. Specifically, this study contributes to an understanding of the factors that influence successful fundraising of operating organizations and sheds light on the areas wherein NPOs need help.

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