Analyzing the usage of Twitter by Non-Profit Organizations in KSA

Yousef Mubarak Salem Baoom
King Abdulaziz University
Faculty of Computing & Information Technology
Information Systems Department

Abstract:- Twitter is a micro-blogging service that has quickly become the most popularity social media service used in strategic communication campaigns. 95% of a Non-Profit Organization (NPO) in Saudi Arabia used Twitter which makes Twitter in the top social media used. Awareness of causes, recruiting a volunteering, fundraising, and communication with stakeholder's patterns of usage Twitter by NPOs. Despite the features approaching by Twitter, limited studies discuss NPOs usage of this tool, and limited studies have introduced the factors that encourage NPOs to use this platform. This paper explores how NPOs in KSA use Twitter furthermore analyzing their posting behaviour based on their tweets of at least more than one month. We hope at the end of research to provide a framework to new or existing NPOs to adopt using Twitter as well as helping NPOs to recognize and see their impact of social media.

Keywords:- Twitter, Arabic, Short texts, NPO's, Category, Information, Action, Community.

I. INTRODUCTION

Nowadays, NPOs in Saudi Arabia face many operational challenges such as fundraising, communicating with stakeholders, recruiting volunteers and event attendees, besides demands placed on NPOs forming the non-profit sector to contribute to raising the Gross Domestic Product (GDP) from less than 1% to 5% according to "2030 Vision".

The presence of NPOs in the social media has become an urgent need. Social media, when used properly, can have a great impact on the work of NPOs, as many surveys and studies explained. Two-thirds of the world's Internet users have visited a social network and have spent time on these sites. This has almost tripled the rate of overall Internet growth (Nielsen, 2009).

A study carried out by revealed that Twitter has become the social media network mostly used in official communication, advertising and digital marketing campaigns. (Stelzner, 2011) Twitter was launched in October 2006 and depended on a short message or micro-blogging application that enables users to broadcast real-time messages (started with maximum 140 characters than 280 characters) to the entire Twitter society. There are 313 million active monthly users on Twitter and the growth rate of Twitter users from 2015 to 2016 was 50% compared to 23% for Facebook. (Aaron Smith, 2018)

A survey was conducted on 478 NPOs in KSA that revealed that 95% of NPOs have a Twitter account. This is considered the highest rate among all social media networks in Saudi Arabia. And the SA has an 11 million active user in twitter platform and 663,000 using Twitter by the Arabic language

The study will analyze these NPOs within a few months. Among the expected results of the study is a platform for new or existing institutions that explain how Twitter is used, as well as helping non-profit organizations learn about the impact of social media on their work, the critical factors to focus on, and how interested users can know how to think NPO and how to handle the Twitter. (Rowena L. Briones a, 2011).

II. RELATED WORK

Twitter is a micro-blogging service that has quickly become the social media service that is most often used in strategic communication campaigns. It is considered a fundamental resource of big data problems. At the end of 2011, Twitter and Facebook respectively generated 7 Tbytes and 10 Tbytes of data daily (Tan, et al., 2013).

He proposed three major functions to use Twitter by non-profit organizations. National professionals should understand these functions to enhance their use of Twitter accounts. Categorize these functions in information, community, and work. Information includes dissemination of information about the organization's activities and anything that may interest the followers. But this study focused on English tweets and language, it did not support Arabic in any way. (Lovejoy, Saxton, 2012)

The American Red Cross uses social media to communicate with key public figures. (Briones, et al., 2011) discuss the usage of Twitter and Facebook to build relationships. They mention the increasing importance of social media channels and provide insight into building relationships using social media. The majority of NPOs reveal that organizations are more likely to use one-way communication models despite the potential for dialogue through (two-way) channels and community building through Twitter. That was proven in the paper through content analysis of 200 top fundraising NPOs in the United States. (Waters & Jamal, 2011).

Provides evidence of how a larger online community and those with smaller institutions are more interested in Twitter as one or two communication strategies. In addition, they suggested guidance to better understand how Twitter created greater opportunities for registration, and to promote interest and support for the non-profit sector. (Gálvez-Rodríguez, et al., 2016).

In this study mentioned above, are the locations of the studies and the languages of the tweets. proposed a framework which they tested on Pakistani journalists as a targeted community in order to identify community members and their opinions about particular events.

III. METHODOLOGY

This section presents the approach for statistics of Arabic short texts by using twitter platform to the Non-profit organizations. It reports the detailed steps of the statistics process which include: collect data of Arabic tweets by using Twitter API to NPO's. of the content.

During the data collection, the diversity of the geographical scope of the non-profit organizations was in our consideration as shown in Table 1. The domain of the activity and the task carried out by the organization have been carried into account. The statistical of NPOs by domain done depending of report published by ministry of labor and development society.

Region	NPOs Number	Percentage
Riyadh	129	26.82%
Makkah	101	21.00%
Eastern Province	58	12.06%
Qassim	57	11.85%
Asir	38	7.90%
Madina El Monawara	24	4.99%
Hail	17	3.53%
Northern borders	14	2.91%
Najran	12	2.49%
Al-Baha	11	2.29%
Jazan	8	1.66%
Tabuk	8	1.66%
Jouf	4	0.83%
sum of All	479	

Table 1. The organization's geographic distribution

Twitter is an online information and social network service. Where people communicate in tweets – short messages restricted to 280 characters. Twitter produces daily more than 200 million tweets. Twitter Application Programming Interface (API) offers access to that corpus of data. Each API allows developers to create and extend applications upon it in new and creative ways. (Twitter, 2018).

Our dataset is collected from 479 NPOs twitter accounts in Saudi Arabia, the average number of tweets for each account is approximately 2205, the average number of followers for each account is approximately 15234. These accounts are created from 2009 to 2016, 50% of these accounts were created in 2012 or before, In Figure 1. present the creation years of the NPOs twitter accounts, where most accounts are created between 2011 to 2013 – almost 79.3% of total Twitter accounts in our datasets. About 85% of NPOs are verified twitter accounts. Most NPOs accounts location is set in Riyadh and Makkah almost 47.8%. Maximum average of followers for Grant Foundation Organizations, "Alwaleed Foundation" get maximum numbers of followers (527386 followers) on another hand we can notice that Society Organizations get maximum numbers in followers in total which is reach to more than 2 million followers.

In this study, the selected samples had a special relationship with the non-profit organization. Within this context, we used uniform random sampling to select 4585 original tweets.

We start by collecting related tweets using a Twitter API containing the ids of non-profit organizations needed in Saudi Arabia. We asked two experts to label 4585 tweets to determine the tweet subject that can be classified into three categories: information, community, and action.

The dataset was a set of 479 NPO's twitter accounts and. The short tweets were 4585 tweets for our statistical approach. The source of the gathered data are tweets which are published by Non-profit organization in Saudi Arabia like, Civil society, culture & Education, health & medical and other. For the assessment of reliability, we run our statistical approach over the dataset and recorded the results which consisted of a set of terms, from the input text. We claim that there are no previous efforts existing in Non-Profit organizations tweets in Arabic domain. We formulated a dataset of 4585 short texts (Tweets) to assess the approach than the results compared to human subjects' opinion results.
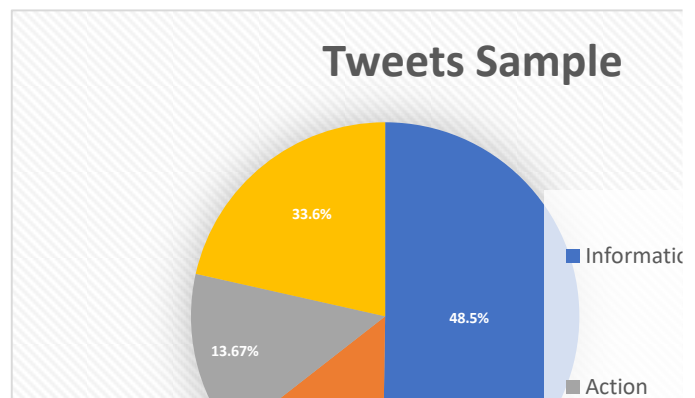

Fig 1:- Distribution of classification tweet sample

IV. EXPERIMENTAL AND RESULTS

The results of seven types of non-profit organizations

in Saudi Arabia have been used. Nearly 5458 tweets have been published for 479 organizations on the Twitter platform, and it has been concluded that 100% of these organizations publish information about themselves in the Twitter platform more than any tweets type. And also, all organizations in all regions of the same type deal with the same method of publishing on Twitter. It has been noted that there are some types of these organizations that publish community-based tweets, such as culture & education, grant foundation and health & medical. These types of organizations publish community tweets more than 50% from actions.

In the third category, organizations that publish action tweets are more than 30% of a community type and are categorized as follows: Islamic Education (Dawa), Charity and teaching Quraan. Figure 2. show the distribution of all results which related with the type of organizations and type of then tweets.
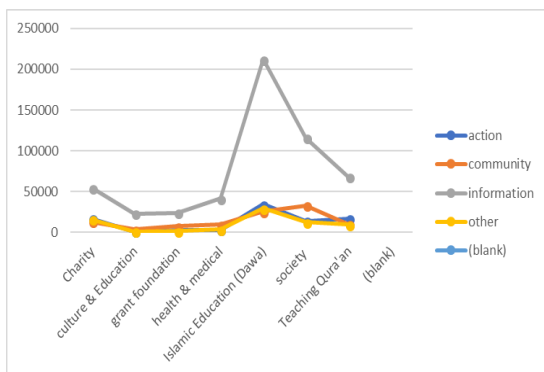

Fig 2:-The distribution of all results which related with the type of organizations and type of then tweets.

The table show an example to categories

Category	Tweet
Information	قال ابن القيم : من أعظم أسباب ضيق الصدر الإعراض عن الله، وتعلق القلب بغيره Ibn al-Qayyim said: One of the greatest causes of chest constriction
Action	بدعمكم يستمر المشروع .... ﴿وقف الدعوة بحاجه ماسه لدعمكم﴾ ساهم With your support, the project continues
Community	@sunyellow_sun شكرأ # #thanks

Table 2. Example of categories

90% of the non-profit organizations deal with social media fluids for information about the General work of the organization, and 6% of the texts consider events and actions, and 4% community texts for community development and awareness.

We note that the organization interested in the tweets

of the texts of the declaration and it information exceeds 50% of its tweets, that this institution is a documented and verified organization, and there is a significant increase in the number of followers and also the number of lists. We notice that unverified organizations have fewer followers, fewer lists, and most of their tweets are general information. The relation between information and follower's positive relationship, when the account of followers increases the number of information tweets increase, and the count of action and community tweets almost equals.
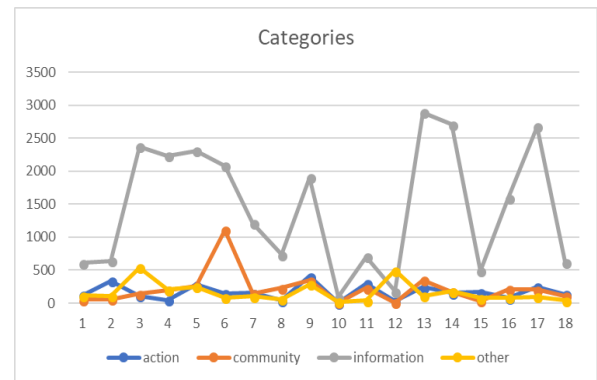

Fig 3:- The tweets distribution

V. CONCLUSION

In this thesis, we have developed a statistical approach for unstructured Arabic texts by using Twitter in Arabic as a source of knowledge related to NPO's Twitter accounts. Given the short text of the input, the approach looks at the content of the NPO's Twitter accounts, which describes the best terms in the text. The statistical approach was evaluated over a dataset of 479 NPO's accounts and short texts gathered online from Twitter accounts. Our work depends on the techniques used in the efforts of counterparties that dealt with the English language of non-profit organizations and tried to adapt them to the Arabic version of NPO. We have proposed an in-depth evaluation of our statistical approach and explore the potential shortcomings and strengths of each particular process.

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