

Research Article

Popularity Analysis for Saudi Telecom Companies Based on Twitter Data

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Abstract: The aim of this study is to investigate the popularity of the telecom companies in Saudi Arabia by considering their profiles on Twitter. Telecommunication plays a vital role in making the communication possible among individuals at geographically distinct locations. With the arrival and penetration of smartphones as a standard, the job of service providers has not remained limited to provide better messaging and voice quality but has been extended to provide competitive value added service and social connectivity to grab and maintain the customer's pool. This research study, take into consideration three leading telecom operators namely Saudi Telecom Company (STC), Mobily and Zain. The popularity of the telecom companies is evaluated by considering their following on Twitter by confirming the location details and then by executing multi-purpose queries on the verified data to yield interesting results about the popularity of the telecom operators. This study, thus identifies the most popular service provider based on the Twitter following in different regions and cities and based on the provincial data a leading telecom operator in Kingdom of Saudi Arabia is also identified.

Keywords: Mobily and Zain, most popular in Saudi, STC, STC popularity, STC and Twitter following

INTRODUCTION

Social media has proven itself to be a core area of influence in the current era of digital revolution. The conveyance of information has become easy and informal with the emergence of social networks in particular. The number of the social networks is increasing and so is the number of followers but only a few social networks portals have been able to register themselves as popular among the masses. Wilson *et al.* (2009) and Summary (2011) have identified that with the increasing number of profiles on the social networks the network trafficking issue is also common to identify as not having a social profile is becoming increasingly uncommon determines Rogério (2005) and Radicati *et al.* 2011. The social network portals may be seen as a great source of information and many meaningful analysis can be performed on the data accordingly. Duijn and Vermunt (2006) and Santos *et al.* (2007) have identified that social network analysis aims at understanding the network structure by description, visualization and (statistical) modeling. Social network data consist of various elements. It helps to explore and visualize patterns found within collections of linked entities that include people.

The uses of social networking services such as Facebook and Twitter has become a popular and integral part of everyday communication, where young people are particularly enthusiastic users. According to social networking statistics studied in 2011, 47% of online adults use social networking sites and 73% of teens and young adults are a member of at least one

social network. Also, Facebook has more than a billion active users and it has more than 900 million objects that people interact with (pages, groups ,events and community pages). Average user is connected to 80 community pages, groups and events. On average, more than 250 million photos are uploaded per day. John-Paul (2006) determines that more than 350 million active users currently access Facebook.com through their mobile devices. On the other hand, Twitter has more than 24 million unique visitors per month, with 500 million tweets per day. There are approximately 50 million Tweets sent per day, at about 600 tweets per second. In addition, LinkedIn.com has 60+ million professionals worldwide including all Fortune 500 companies. The global average time spent per person on social networking sites is now nearly five and half hours per month. The top referring sites in 2011 were: facebook. com, blogs. nyu. edu, twitter. com, stumbleupon. com and linkedin. com. The Unique visitors per month, as of February 2010: Facebook.com is 133, 623, 529, MySpace.com is 50, 615, 444, Twitter.com is 23, 573, 178 and LinkedIn.com 15, 475, 890 determines (Scott, 1996).

Twitter, in contrast to other social networks is gaining lot more popularity currently and have the better upward moving curve than most of the social networks available. Along with the increasing popularity, the Twitter is more structured to be considered for the data collection and analysis. This study takes into consideration the Twitter accounts of the three leading telecom companies of KSA, namely

STC, Mobily and Zain. For STC, @STC_KSA account is used which has 386,974 followers in total and for Mobily, @Mobily account is used which has 256,137 followers while for Zain, @ZainKSA is used which has 60,686 followers in total.

INTRODUCTION OF THE TELECOM COMPANIES

Saudi Telecommunication Company (STC): STC is considered as leader in the Kingdom's telecom industry. The company started providing the internet services in year 2000 and started providing mobile services in 2002. STC started its operations with two consultants and 10 resource persons initially and now, is the largest telecom company in the Kingdom. As a major landmark STC started providing video call services on 3G in 2006. In 2008, STC achieved one million broadband customers in Saudi Arabia. In 2011, STC launched the cloud computing services and Quicknet 4G LTE service as determined by STC (History of STC, 2013).

It is observant that the company possesses consistent and successful history, strong market position, operating in growth markets, innovative solution delivery, strategic approach to costs and strong balance sheet with healthy cash flow as determined by STC (History of STC, 2013). The company vows for the "Product Fit customer needs with good Price". The social media department is very active and the feedback from social media helps in the decision making after the thorough analysis.

Mobily: Mobily operates with the objective "Enriching your life by continuously leading and innovating in communications services". The company Mobily (2011) was launched in year 2005 and met the massive success in the beginning and announced the one million subscribers in the first three months (Mobily Media Relations, 2013). In 2006, GSM Mobile Association described Mobily as the fastest growing mobile operator in middle east. The company strives for three objectives, i.e.:

- To provide the best working environment for the employees
- To be number one at delighting the customers
- To maintain leadership in data applications and services

Zain: Zain (2013) is the new telecommunication company has recently started its operations in KSA. The company is focusing to achieve and maintain excellence in voice, messaging, multimedia, call management, data and other telecom services. As a

telecom service provider, Zain, gives high value to readiness, emotions and belonging.

EXPERIMENTS AND DATA ACQUISITION

The sample used in the statistics is 386,974 records for STC_KSA followers, 256,137 records for Mobily followers and 60,686 records for ZainKSA followers. The geographical locations of the followers are identified based on the information provided by them.

For STC, the locations details could be established for 56,989 out of the 386,974 records which is 14.73% of the total number of followers. The location details for the rest 85% were either not present or not clearly readable. Identification process was conducted by considering both: Arabic and English language (English Fact Sheet about STC, 2013).

For Mobily, the locations details could be established for 46,341 out of the 256,137 records which is 18.09% of the total number of followers. The location details for the rest 82% were either not present or not clearly readable. Identification process was conducted by considering both: Arabic and English language. For Zain, the locations details could be established for 10,734 out of the 60,686 records which is 17.69% of the total number of followers. The location details for the rest 82% were either not present or not clearly readable. Identification process was conducted by considering both: Arabic and English language.

The study specific code was developed to collect data from Twitter by using the Twitter API by using their respective accounts. The followers detail includes the screen name, account id, profile address, location and language details against each account.

DEMOGRAPHIC VERIFICATION AND ANALYSIS

The data is analyzed considering the following objectives:

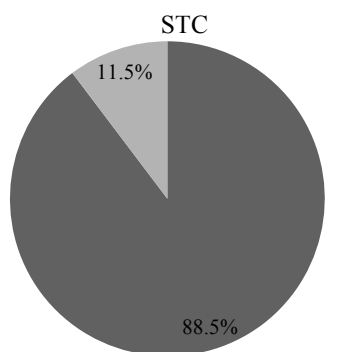
- To identify the respective strength areas for STC, Mobily and Zain
- To identify the relative popularity of STC, Mobily and Zain in cities and province
- To identify the leading trust bearer for the expatriates
- To identify the most popular service provider in Kingdom of Saudi Arabia.

Expatriates users: The number of locatable followers for all there service providers have been identified in the previous section. We call a follower as locatable if his/her location details are confirmed.

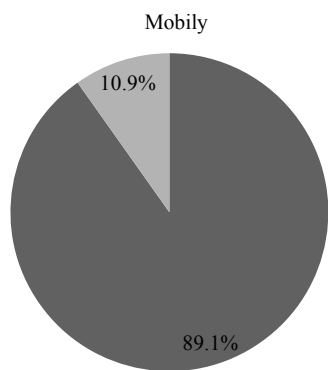
The number locatable followers who are following STC and have their locations to countries other than

Table 1: Locatable followers for STC, Mobily and Zain

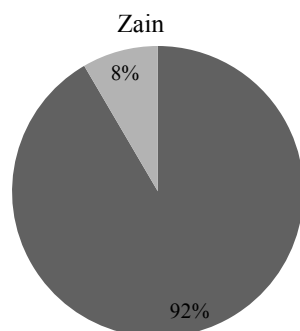
	STC	Mobily	Zain
Total followers	386,974	256,137	60,686
Locatable followers	56,989	46,341	10,734
Percentage of locatable followers	14.73	18.09	17.69
Number of foreign followers	6542	5044	990
Percentage of locatable foreign followers	11.48	10.88	9.22



■ Locals ■ Expatriates ■ ■



■ Locals ■ Expatriates ■ ■



■ Locals ■ Expatriates ■ ■

Fig. 1: STC, Mobily and Zain: Local to expatriates ratio

Saudi Arabia is 6,542 out of the 56989 locatable records which is 11.48% of the location verified followers.

Table 2: City-wise following for STC, Mobily and Zain

Cities	STC	Mobily	Zain
Riyadh	24740	17885	3937
Jeddah	12201	11820	2912
Dammam	2896	2437	559
Makah	2821	2988	719
Khobar	2261	1904	348
Madina	956	944	255
Jubail	1111	877	206
Hail	901	661	167
Abha	755	568	157
Taif	775	554	165

Table 3: Four cities with highest following

	STC	Mobily	Zain
Riyadh	44	39	37
Jeddah	21	26	27
Dammam	5	5	5
Makah	5	6	7
Total	75%	76%	76%

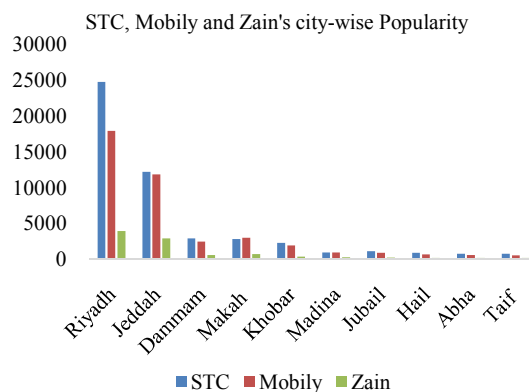


Fig. 2: City-wise following for STC, Mobily and Zain

The number of locatable followers who are following Mobily and have their location to countries other than Saudi Arabia is 5,044 out of the 46341 records which is 10.88% of the location verified followers. While the number of locatable followers who are following Zain and have mentioned their locations to countries other than Saudi Arabia is 990 out of the 10734 records which is 9.22% of the location verified followers (Fig. 1).

City-wise popularity: The city wise popularity is measured by decomposing the follower's data of the companies to the geographical location of the followers. The Table 1 demonstrates that the STC leads everywhere except the Makkah city, where Mobily is slightly more popular.

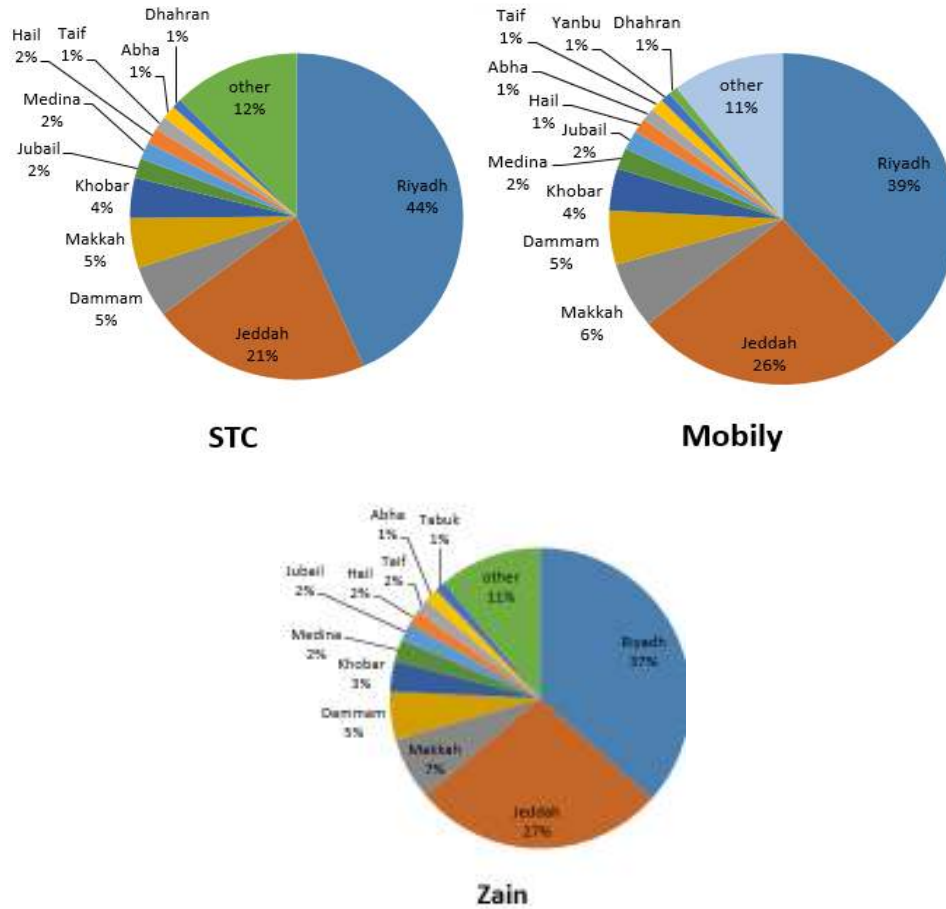


Fig. 3: Following percentage of STC, Mobily and Zain in leading cities

Table 4: Province-wise following for STC, Mobily and Zain

Province	STC	Mobily	Zain
Riyadh	25578	18436	4014
Makkah	15950	15476	3833
Eastern province	8118	6906	1484
Qassim	2998	2001	383
Madinah	1601	1657	442
Hail	912	670	167
Tabuk	535	375	128
Asir	394	258	80
Northern borders	394	259	79
Jizan	315	186	89
Najran	104	60	22
Bahah	90	57	13
Jawaf	120	86	18

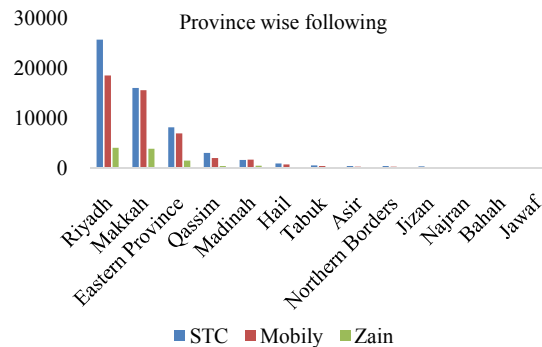


Fig. 4: Province-wise following for STC, Mobily and Zain

Cities with major following: For all three companies, it is observed from Table 2 and 3 that most of the following lies in the four cities of KSA, namely: Riyadh, Jeddah, Dammam and Makkah, which covers more than 75% of the total following of the total following for any company. Identifying similarities, it can be observed that all three companies have their highest following in the Riyadh, where STC has 44% of its followers belonging to Riyadh while Mobily and Zain follow with 39 and 37% respectively. Among its proportionate following, Zain has highest following in Jeddah as compared to STC and Mobily with 27%

following, who follow with 21 and 26% respectively from their proportionate following. It can also be observed that all three companies have more than 64% following in two cities, i.e. Riyadh and Jeddah. Figure 2 and 3 demonstrate the city-wise following.

Province-wise following: The providence-wise following demonstrate the following of once specific service provider in one provinces. The provinces contain small and large cities. The providence-wise following is shown in Table 4 and Fig. 4.

RESULTS

The study takes into consideration three leading telecom operators namely Saudi Telecom Company (STC), Mobily and Zain by collecting data from their Twitter accounts. Following findings have been established after performing detailed analysis.

- Riyadh hosts 44% of STC, 39% of Mobily and 37% of Zain's total followers
- 64% followers of Mobily, Zain and STC live in Jeddah or Riyadh
- More than 75% of the followers for Mobily, Zain and STC, live in four major cities (Riyadh, Jeddah, Makkah and Dammam)
- STC is a leading trust bearer for expatriates
- STC outnumbers Mobily in popularity, in 12 out of 13 provinces in KSA except Madina
- STC is more popular than Zain and Mobily in all cities except Makkah
- STC is more popular than Mobily and Zain in KSA
- STC's followers are more popular and influential as compared to Zain and Mobily

CONCLUSION

It can be concluded that the Saudi Telecom Company (STC) has a leading role in the telecommunication sector of the country. The company has observed exceptional growth in profits and the market shares. This prominence has been achieved by the quality of services that it provides with notable zeal to lead the initiatives. The findings of the study suggest that STC is more popular in 12 out of the 13 provinces of Saudi Arabia and has proved itself to carry the trust of individuals: both local and foreign, to a larger extent. Mobily is a close follower to STC. Although STC is more popular as compared to Mobily, yet the difference in following in different cities and provinces is not huge. It can be noted that in most cities the popularity difference between STC and Mobily is less than 20% while Zain is far behind in gaining the massive popularity.

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