

# The Impact of Twitter on Saudi Banking Sectors in the Presence Of Social Media: An Evaluative Study

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## ABSTRACT

*This study aims to analyze the messages of Twitter in the Saudi banking sectors. The strong correlation between Twitter messages and widespread updated information leads us to believe that Twitter data can be a useful resource for promotion, conversation and spreading news among banks' potential clients and these data can be used to promote business. The result provided an empirical investigation that showed strong correlations between aggregated tweets in the Saudi banking sectors. The study also analysis in detail is limited only to two banks. This is the first study aiming to understand social network dynamics of Twitter in the banking sector of the Saudi community.*

**Keywords:** Saudi Banking, Web 2.0, Twitter, KSA

## 1. INTRODUCTION

In the knowledge society in addition to technical skills and access to information technologies, it is becoming increasingly important for people to have diversified and supportive social connections. The social networking service is an online service, platform, or site that focuses on building and reflecting of social networks or social relations among people. A social network service consists of a representation of each user his/her social links, profile, and a variety of additional services. Most social network services are web-based and provide means for users to interact over the Internet, such as e-mail and instant messaging (Hussain, 2013). With the rapid growth of social networks, micro-blogging site Twitter provides a dynamic and powerful social tool for discussing and disseminating various matters. In fact, Twitter has grown vastly in recent years. Alexa.com, the web information company, reports that around 150 million global internet users visits Twitter.com daily. It is a micro blogging service that enables users to post messages ("tweets") of up to 140 characters. This service supports a variety of communicative practices and participants use. Twitter converses with individuals, groups, and the public at large, so when conversations emerge, they are often experienced by broader audiences than just the interlocutors. Twitter connects businesses to customers in real time. Businesses use Twitter to quickly share information with people interested in their products and services, gather real-time market intelligence and feedback, and build relationships with customers, partners and influencers. Twitter is built on open source software, from the back-end to the front-end.

Recently, Twitter has become extremely popular in many Arab countries, especially after the Tunisian and Egyptian revolution. As an evidence, inmid-2011 there were 115,000 Saudi users on Twitter, however in less than a year the number has tripled to exceed 390,000 Saudi users of the service on April 2012 (Dubai School of Government, 2011).The increased

number of Twitter users was also supported by new features targeted to the Arabic language, i.e. introducing Arabic hash tags; this new addition to the service has boomed the usage of Twitter by all ages in Saudi Arabia and in the Arab region.

The large numbers of Arab peoples are using Twitter, yet, there is a clear scarcity of applying social network analysis (SNA) techniques to understand and analyze social networks dynamics in the Arab region. Therefore, the purpose of this paper is to investigate in a pilot study the structure of Saudi political social networks by using Twitter as a source. The paper also aims to understand what the Saudi political activities on Twitter looks like in terms of communication and discourse (Al-Khalifa, 2012).

Twitter messages open a surprising window on the moods, thoughts, and activities of society at large. Researchers can measure public sentiment, follow political activity, and spot earthquakes and flu outbreaks by running the chatter through algorithms, searching for specific words, and locating message origins.

Here are eight things you need to know about twitter and business: (1) In many ways, Twitter is like instant messaging. (2) There is a big difference between Twitter and instant messaging -- Twitter messages go out to the world. (3) Much of Twitter terminology will make you feel like an idiot. (4) The key to understanding Twitter and marketing is not followers, but its folders. (5) Twitter itself as an interface is not very good. (6) Do not expect Twitter to provide moments of classic literature. (7) Do not activate the text message delivery option. (8) If you are using Twitter for business or organizational purposes, tweet with that purpose in mind.

## **1.1 BANKING SECTORS IN SAUDI ARABIA**

Saudi Arabia is one of the world's fastest growing banking markets. Commercial banks that are operating in the competitive environment are likely to be more efficient in near future in the region amid technological developments and government favorable policies. Even in the wake of global financial turmoil, Saudi Arabian banking industry has positive growth results year in year out.

*The Major Banks of the Kingdom of Saudi Arabia are:*

1. Arab National Bank (ANB) is one of the ten largest banks in the Middle East. ANB was established in 1979 and has about 190 local branches, 42 ladies' sections and one branch in London.
2. Al Rajihi Bank is one of the world's largest Islamic banks in terms of total assets. It also has the largest branch network (over 550 branches), and the largest ATM network in Saudi Arabia.
3. Bank Al Jazira (BAJ) provides customers with innovative Shari'ah compliant financial services.
4. Banque Saudi Fransi (BSF) is a full service commercial bank serving the local and international banking clients.
5. Islamic Development Bank (IDB) was established in pursuance of the Declaration of Intent issued at the Conference of Finance Ministers of Muslim Countries in December 1973. The purpose of the Bank is to foster the economic development and social progress of member countries and Muslim communities in accordance with the principles of Shari'ah.

6. National Commercial Bank (NCB, Al-Ahli Bank) is the first Saudi Arabian bank. NCB is the giant bank in terms of capital in the Arab world and one of the pioneers in Islamic banking.
7. Riyadh Bank is one of the well-known financial institutions in the Middle East. The Bank's network includes over 200 local branches and over 1,500 ATMs, as well as international offices in London, Houston, and Singapore.
8. Samba (Formerly Saudi American Bank) is a giant banking group in Saudi Arabia, established in 1980 with the takeover of Citibank branches in Jeddah and Riyadh. SAMBA is the acronyms for the Saudi American Bank but the name was changed to Samba Financial Group in 2003.
9. Saudi British Bank (SABB) was established in January 21, 1978. SABB formally commenced activities in July 1, 1978 when it took over the operations of the British Bank of the Middle East (BBME) in Saudi Arabia
10. Saudi Hollandi Bank (SHB) is the first bank in the Kingdom of Saudi Arabia and it was founded in 1926. SHB employs over 1,600 people with a Saudization ratio of over 87% and operates 43 branches, 8 Sections for ladies and over 260 ATMs throughout the Kingdom.
11. Saudi Investment Bank (SAIB) is a Saudi Arabian joint stock company established in June 23, 1976. SAIB offers wide range retail and commercial banking products and services in addition to banking investments.

The table 1 shows the total assets of each bank in terms of SAR and US\$ with ranking- where the National Commercial Bank is at the top and Al-Jazira Bank at the bottom in terms of their assets.

**Table 1: Major Banks in Kingdom of Saudi Arabia**

Rank	Company	Total Assets (SAR m, 30/06/2012)	Total Assets (US\$bn, 30/06/2012)
1	National Commercial Bank	320,417.91	85.438
2	Al Rajhi Bank	238,211.90	63.518
3	Samba Financial Group	199,508.90	53.198
4	Riyad Bank	180,637.40	48.166
6	Saudi British Bank (SABB)	151,904.90	40.505
5	Banque Saudi Fransi	147,088.70	39.221
7	Arab National Bank	120,392.00	32.102
8	Saudi Hollandi Bank	61,961.10	16.522
9	Islamic Development Bank	10,351.157 *	14.795
10	Saudi Investment Bank (SAIB)	53,464.00	14.256
11	Al Jazira Bank	47,267.12	12.604

\* In millions of Islamic Dinars. (Source: Annual reports)

**Table 2: Twitter Services in Saudi banking sectors**

Bank	Size (bytes)	Tweets	Followers	Following	URLs
National Commercial Bank	1712	4524	879	354	www.ncb.com.sa
Riyadh Bank	1503	3211	776	231	www.riyadbank.com
Saudi British Bank	2795	4231	653	489	www.sabb.com.sa
Al Jazira Bank	2688	4621	869	333	www.baj.com.sa
Al Rajhi Bank	NA	6211	1011	333	www.alrajhibank.com.sa
Saudi Investment Bank	199272	9541	2321	54	www.saib.com.sa
Al Bilad Bank	505	543	32	-	www.bankalbilad.com.sa

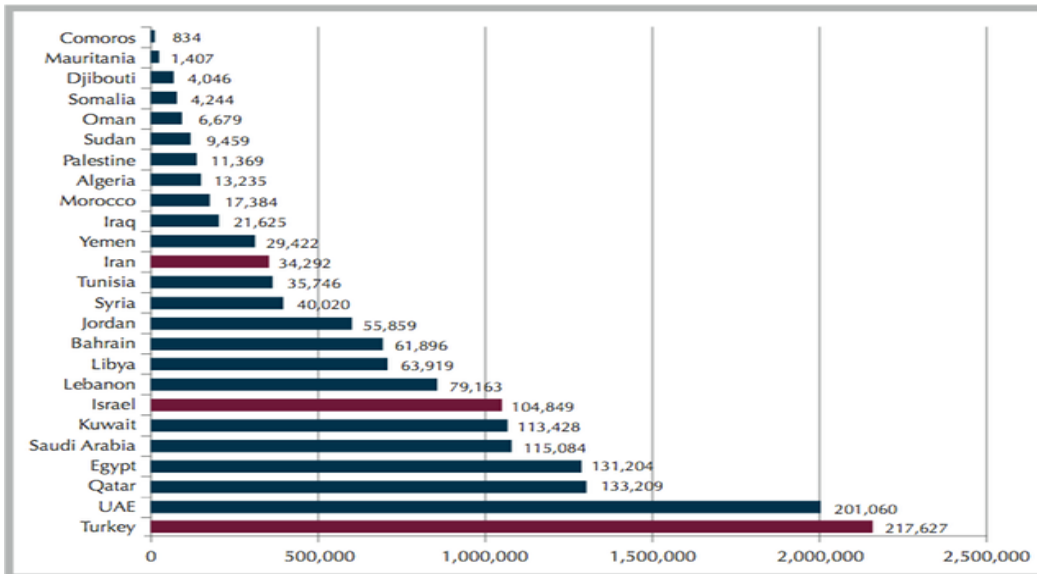
*Source: Banks Web sites as of 30/03/2013*

Twitter facility is available only in seven Saudi banks. The table 2 shows the size in bytes, tweets, followers and following along with the URL of each bank. Short message service such as Twitter is a mechanism of delivery of short messages over the networks. It is a store and forward way of transmitting messages to and fro. The message (text only) from the sender is stored in a central short message center and, later, the message is forwarded to its destination. The characters can be text (alphanumeric) or binary Non-Text Short messages. Messages are plain vanilla in nature. In other words, messages are sent by simple text messages. Out of many texting trends, a system known as Micro Blogging has surfaced, the system consists of a miniaturized blog, inspired mainly by people's tendency to jot down babble and post it.

Tweets are publicly visible by default, but senders can restrict message delivery to their followers only. Users can tweet via the Twitter website and compatible external applications (such as for smart phones). While the service is free, the users can also check the people who are un-subscribing them on Twitter, better known as social networking.

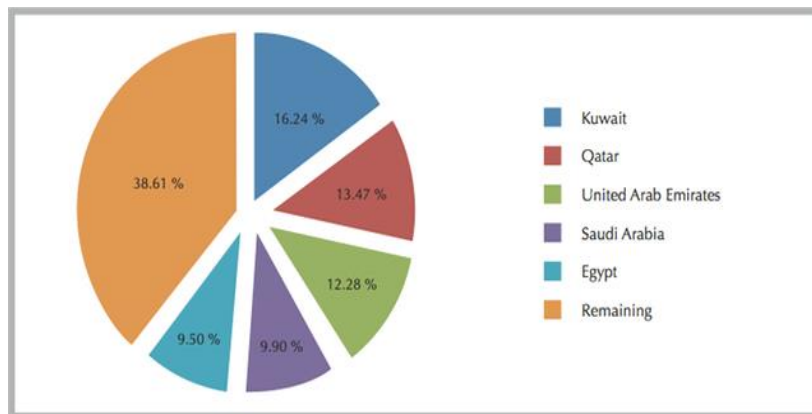
## **1.2 USAGE OF TWITTER IN MIDDLE EAST AND NORTH AFRICA (MENA) REGION**

The term **MENA**, for "Middle East and North Africa", is an acronym often used in academic. The MENA region has vast reserves of petroleum and natural gas that make it a vital source of global economic stability.



**Fig.1 Number of Active Twitter users in the MENA region (Average number between Jan. 1 and March 30, 2013)**  
 SOURCE: INTERACTIVE MIDDLE EAST NEWSLETTER, MARCH 2013  
 (<http://interactiveme.com/>)

The UAE (United Arab Emirates) has a clear lead over the Arab countries with the most active users at just over 200K users, (an active user is defined as someone who has tweeted at least once within two weeks. Saudi Arabia ranks 4<sup>th</sup> among the Arab countries.



**Fig.2 Volume of tweets in the Arab region (Jan. 1 and March 30, 2013)**  
 SOURCE: INTERACTIVE MIDDLE EAST NEWSLETTER, MARCH 2013  
 (<http://interactiveme.com/>)

Over 60% of tweets within the first quarter of 2013 were generated by Kuwait, Qatar, UAE, Saudi Arabia and Egypt. These countries have the highest usages. This comes from that the size of a country's active Twitter population correlates with the volume of tweets it generates.

Prince Alwaleed bin Talal bin Abdulaziz Alsaud invested \$300-million Dollars in Twitter in 2011. This investment expanded his media empire into social-media sites and

giving the Saudi billionaire a stake in an online forum that was widely used by activists in this year's Arab uprisings. (2) Saudi Arabia 3.1% page view ranks 7<sup>th</sup> in the worldwide in the Twitter usage (6).

The Communications and Information Technology Commission (CITC) of Saudi Arabia is currently studying the possibility of linking the access to micro blogging sites with the personal identification of social media users. (7)

## 2. REVIEW OF LITERATURE

In concise this study reviews a few studies conducted abroad as well as in Saudi Arabia on the impact of Twitter in the presence of social media in chronological order.

**Sakaki** (2013) investigated the real-time interaction of events such as earthquakes in Twitter and proposed an algorithm to monitor tweets. **Himmelboim** (2013) *studied integrated network and content analyses to examine exposure to cross-ideological political views on Twitter. The study found that more specific topics of controversy had both conservative and liberal clusters, while in broader topics, dominant clusters reflected conservative sentiments.* **Sotiriadis** (2013) studied to develop a conceptual framework for understanding the foundations of digital communication and empirically investigate its validity by examining the factors influencing the tourism consumer behavior. This study adopted a conceptual model of e-WOM and explores the use of Twitter by the tourists. The Findings revealed the factors affecting tourists' decision-making and indicated that this social medium is not a panacea; it is another marketing channel to be wisely used in integrated communications marketing of tourism services.

**Agrifoglio** (2012) investigated the use continuance in the most popular micro blogging service, Twitter. Based on Technology Acceptance Model (TAM) and motivational models, and e developed an integrated research model to explore the motives that lead users to continued Twitter usage. This research advances theoretical development in IS field and use continuance in particular. The research developed an integrated research model combining TAM and motivational models for explaining user behavior in continuing to use Twitter and for contributing to the small amount of academic research aimed at understanding the phenomenon. **Davis** (2012) evaluated the Twitter automated sentiment coding accuracy and misclassification errors of six leading third-party companies for a broad range of comment types and forms. Overall, automated sentiment coding appears to have limited reliability and appears to be accurately accomplished only for very simple statements in which a keyword is used to convey its typical meaning. **Wigand** (2012) studied why and how U.S. government agencies and officials adopt Twitter to expand organizational boundaries and extend communication reach. The Author used a mixed methods strategy to explain the adoption of Twitter in government.

**Terpstra** (2012) investigated the possibilities of real-time and automated analysis of Twitter messages during crises. The analysis was performed through application of an information extraction tool to nearly 97,000 tweets that were published shortly before; during and after a storm hit the Pukkelpop 2011 festival in Belgium. As soon as the storm hit the festival tweet activity increased exponentially, peaking at 576 tweets per minute. The extraction tool enabled analyzing tweets through predefined (geographical displays, message content filters (damage, casualties) and tweet type filters (e.g., retweets). Important topics that emerged were 'early warning tweets', 'rumors' and the 'self-organization of disaster relief' on Twitter. Results indicate that automated filtering of information provides valuable information for operational response and crisis communication. Steps for further research are discussed. **Zhang** (2011) examined the potential influences of business engagement in online

word of-mouth (WOM) communication on the level of consumers' engagement and investigated the trajectories of a business' online word-of-mouth message diffusion in the Twitter community. The research concluded that the business' engagement in the WOM communication on Twitter enhance the consumers' engagement in the WOM communication.

**Thelwall** (2011) studied of a month of English Twitter posts, assessing whether popular events are typically associated with increases in sentiment strength, as seems intuitively likely. The study concluded that Twitter posts over month gives strong evidence that important events in Twitter are associated with increases in average negative sentiment strength. **Xie** (2011) suggested content updating and reading is a complex process involving intensive interactions among publishers and readers and the results indicated that typical Tweets Reading Probability (TRP) is about 8% and different user behaviors affect TRP differently. **Kwon** (2011) research undertakes an exploratory content analysis, focusing on 44 global brands' Twitter use. The results indicate that marketers try to imbue human personality into their brands by using human representatives, personal pronouns, and verbs in the imperative form.

**Bulearca** (2010) examined whether Twitter is a tool that should be taken seriously by Small and Medium-sized Enterprises (SME) in their marketing strategies, taking the stance of SMEs -- how they perceive, use and see the future of Twitter for their businesses. The Author Concluded that Twitter should not be viewed as the be all and end all for their communications, it is still a critical platform to embark on, especially if companies want a chance to listen to/influence consumers' opinions. **Yardi** (2010) captured 30,000 tweets and analyzed a late-term abortion doctor, and the subsequent conversations among pro-life and pro-choice advocates. It was found that replies between like-minded individuals strengthen group identity, whereas replies between different-minded individuals reinforce in-group and out-group affiliation. Their results showed that people are exposed to broader viewpoints than they were before but are limited in their ability to engage in meaningful discussion. They conclude with implications for different kinds of social participation on Twitter more generally.

### 3. HYPOTHESIS AND METHODOLOGY

The initial hypothesis is that the Twitter is being used by predominantly for self-promotion of the banking sector in the Kingdom of Saudi Arabia. The tweets are trying to push a product, service of the bank or have a distinct "Twitter only offer" of some kind. The study employs simple content analysis to code each of the 140 characters in an excel sheet, as data was small in size (9203 bytes). The result provided an empirical investigation that showed strong correlations between aggregated tweets in the Saudi banking sector. The results revealed that tweets in the native language play an important role.

### 4. DATA ANALYSIS AND INTERPRETATIONS

The data collected by different methods were analyzed and interpreted and presented here in tables and figures.

The study analyzed in detail two banks, namely National Commercial Bank and Al Jazira Bank (table 3). These two banks are well- established, providing customers with innovative financial services and are pioneers in Islamic banking. The data is almost similar in size.

Definitions of these categories are:

**Promotion** is conveying the message about a product or a service to potential customers, e.g. publicity, a sales campaign, TV commercials or free gifts. (8)

**News** (previously known as information) is a report of recent events having a specific influence or effect. (9)

**Babble** is meaningless confusion of words or sounds and a continuous low and murmuring sound, as flowing water, idle or foolish talk and chatter. (10)

**Conversation** is a form of interactive, spontaneous communication between two or more people who are following rules of etiquette. It is a polite give or take of people thinking of talking with each other about the company. (11)

**Spam** is most often considered to be electronic junk mail or junk newsgroup postings. Some people define spam even more generally as any unsolicited messages. (12)

**Table 3: National Commercial Bank and Al Jazira Bank**

Category	National Commercial Bank	Al Jazira Bank
Spam	7.35%	6.93%
Promotion	27.04%	31.62%
Conversation	37.24%	36.35%
NEWS	17.95%	17.32%
Babble	10.42%	7.78%
Total	100%	100%

#### 4.1 The Results

The results were interesting, and not in the order that we anticipated. For instance, we thought that both Spam and Promotion percentages would be much higher. We were also surprised how Conversation was in the top percentage position.

Also, we thought the News category would have more weight than being last, since this seems to be contrary to Twitter's position of being the premier source of news and events.

#### 4.2 Language:

Mostly 97.55% of Tweets are in the Arabic language since it is the native and official language in Saudi Arabia.

#### 4.3 Tweets by Time of Day

To conduct this study, researcher randomly sampled the public timeline Saturday through Wednesday, every 60 minutes for two week (10 days in total). Therefore, we took an average sample from the timeline for a total sample data set.

The table 3 indicates what times of the day customers might expect certain types of tweets in the two banks. What was interesting was that the news tweets were most prevalent at 12: 00 PM, with another spike between 4:00. The bank promotion showed high in all times of the day. The highest tweets are highlighted for each category.



**Table 3: National Commercial Bank and Al Jazira Bank**

Category	National Commercial Bank									
	9.00	10.00	11.00	12.00	1.00	2.00	3.00	4.00	5.00	
Spam	2	4	5	4	3	2	2	3	2	
Promotion	14	12	10	5	8	8	8	9	9	
Conversation	8	5	7	7	9	7	9	12	9	
News	9	7	8	11	9	5	5	10	7	
Babble	5	3	3	2	3	2	1	1	1	
Category	Al Jazira Bank									
	9.00	10.00	11.00	12.00	1.00	2.00	3.00	4.00	5.00	
Spam	2	2	4	3	3	2	1	3	1	
Promotion	13	12	11	7	8	7	6	9	8	
Conversation	9	7	8	8	9	9	11	12	9	
News	9	8	9	13	10	12	5	10	9	
Babble	4	3	4	2	2	2	2	1	1	

**4.4 Tweets by Day of Week**

The table 4 shows a correlation between the type of tweet and what day of the week tweets occur more frequently. Highest occurrence of tweets for the day of the week in terms of percentage for the day are highlighted (or underlined). For example, tweets happen most often on Mondays, while news tweets on Tuesdays. The category with the largest gap between the highest occurrence and the second-highest occurrence was promotion.

**Table 4: Tweets by day of week**

<p><b>National Commercial Bank</b> <i>% for day</i></p>
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Day of Week	Spam	Promotion	Conversation	News	Babble
Saturday	7.22%	27.55%	36.77%	17.44%	10.02%
Sunday	6.99%	26.32%	37.05%	16.89%	12.75%
Monday	7.77%	29.07%	39.09%	17.33%	6.74%
Tuesday	7.03%	27.65%	36.55%	18.33%	10.50%
Wednesday	6.33%	25.33%	36.32%	17.32%	14.70%
Thursday	7.32%	26.05%	35.66%	17.87%	13.11%
Friday	6.91%	24.05%	35.04%	16.32%	18.68%

**Al Jazira Bank**

*% for day*

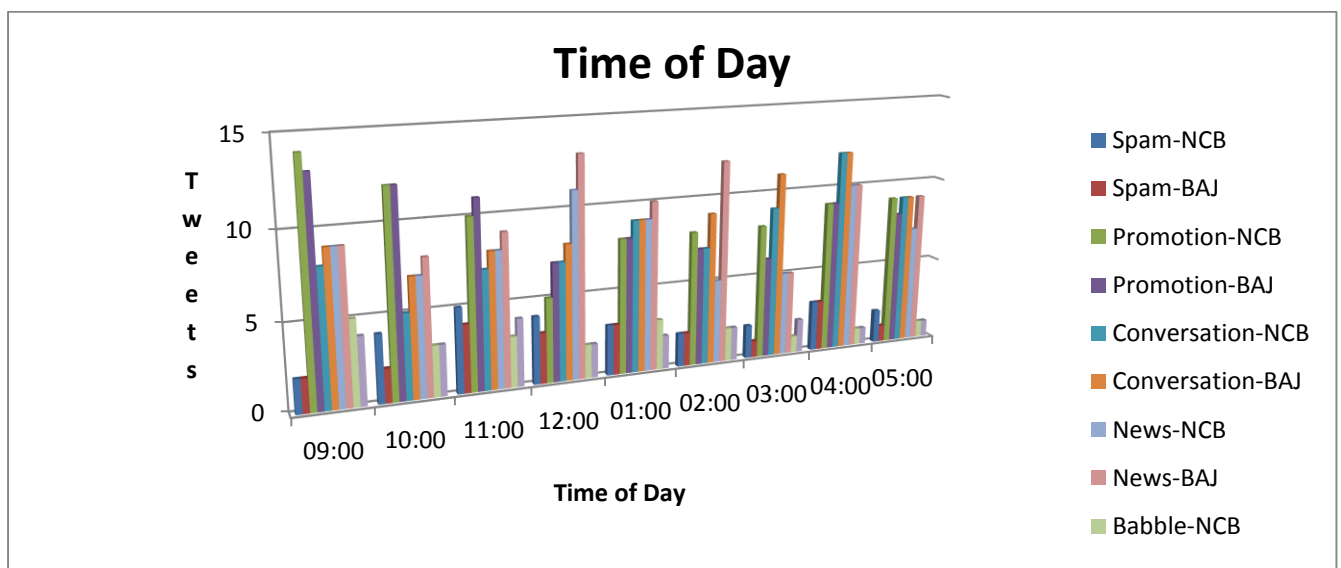
Day of Week	Spam	Promotion	Conversation	News	Babble
Saturday	7.21%	24.55%	37.07%	17.99%	13.18%
Sunday	6.11%	26.02%	37.15%	16.01%	14.71%
Monday	7.97%	30.07%	40.09%	18.03%	3.64%
Tuesday	7.33%	27.15%	34.55%	17.31%	13.66%
Wednesday	6.13%	25.03%	34.99%	16.31%	17.54%
Thursday	7.54%	24.05%	36.61%	18.81%	12.99%
Friday	6.01%	23.05%	36.01%	16.02%	18.91%

The investigator has found the following are some of the main user intentions on Twitter:

- Daily Chatter most posts on Twitter talk about daily routine or what people are currently doing. This is the largest and most common user of Twitter
- Conversations in Twitter, since there is no direct way for people to comment or reply early adopters started using the@ symbol followed by a username for replies. About one eighth of all posts in the collection contain a conversation and this form of communication was used by almost 21% of users in the collection.

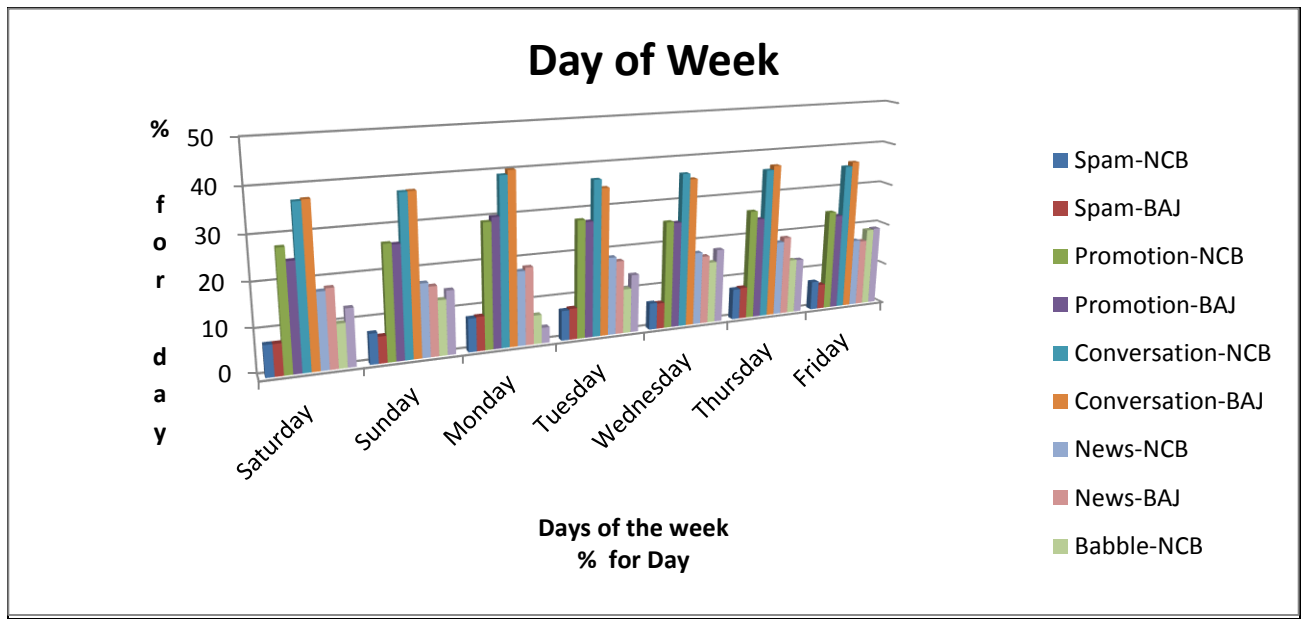
#### 4.5 Comparison

The comparative analysis between National Commercial Bank (NCB) and Al-Jazira Bank (BAJ) in terms of timing of the day shows that news predominates and peaks at 12.00PM. NCB shows progressive increase compared to Al-Jazira Bank in terms of conversation and promotion. There is no major change with different timings. Fig.3 shows in details.



**Fig.3 Time of day**

The comparative analysis between National Commercial Bank (NCB) and Al-Jazira Bank (BAJ) in terms of the day of the week shows that conversation predominates and peaks on Monday. This is, perhaps, because Monday comes after a two-day weekend. NCB shows progressive increase than Al-Jazira Bank. There is no major change with the other days of the week. Below chart shows in detail:



**Fig.3 Week of day**

## 5. CONCLUSION

One of the reasons social media sites are popular is because they have relatively low barriers to entry. At little or no cost, users can simply create an account and start sharing their content. The sites encourage users to experiment with their technologies, and if they find that the technology doesn't fit into their "lifestyle," they can move on with no strings attached. However, the story is different for the institutional user. Half-used accounts trailing an institution's name across the web are as capable of damaging an institution's brand as promoting the institution's brand, especially if users are trying to interact on that particular platform. Twitter offers a great opportunity to build bridges between the bank and its users.

As Twitter continues to evolve, not only as a brand but from a user's perspective, it is likely that the usage patterns will change. The Communications and Information Technology Commission (CITC) in Saudi Arabia is currently studying the possibility of linking the access to micro blogging site with the personal identification of social media users, the usage pattern in the Kingdom of Saudi Arabia may also change.

In this paper, we provided an empirical investigation that showed high correlations between aggregated tweets in the Saudi banking sector. The results revealed that tweets in Arabic as a native language play an important role. Strong correlation between Twitter and awareness leads us to believe that Twitter data can be a useful resource for promotion; conversation and spreading news among the banks' potential clients in order promote business.

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