SOCIAL MEDIA AND WORD-OF-MOUTH DISPERSION: FACTORS AFFECTING LIKELIHOOD OF DIFFUSION

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ABSTRACT

SOCIAL MEDIA AND WORD-OF-MOUTH DISPERSION:
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This study aims to analyse the factors behind electronic word-of-mouth participation on social network sites, especially on Twitter. For this purpose, the general drivers behind such activity is classified, and other sub-factors were categorised under these drivers were categorised as influencers and determinants. Both individual and environmental factors were studied for a comprehensive analysis about factors increasing or decreasing the likelihood of diffusion of word-of-mouth messages. Besides the hypotheses, more exploratory analyses were conducted with the purpose of investigating the influence of demographics.

In order to test the studied hypotheses, an online survey was conducted and it reached to 372 participants from various backgrounds. A set of statistical analysis methods were used to interpret the collected data; such as factor analysis, descriptive statistics tools, and statistical hypothesis tests. The results indicated that the word-of-mouth

message is critical, not only for its content, but also for its source. Also, product or service has an important role in diffusion. Unexpectedly, source and listener do not have a precise effect in a single direction.

Keywords: Word-of-mouth dispersion, Social network sites, Electronic word-of-mouth

ÖZ

SOSYAL MEDYA VE AĞIZDAN AĞIZA DAĞILIM:
MUHTEMEL YAYILMAYI ETKİLEYEN FAKTÖRLER

Kurşun, Zühal Sinem
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Bu çalışma sosyal paylaşım sitelerinde, özellikle Twitter'da gerçekleşen çevrimiçi ağızdan ağıza dağılımı etkileyen faktörleri analiz etmeyi hedeflemiştir. Bu amaçla, bu tür aktivitenin altında yatan genel etmenler sınıflandırılmış, diğer yan faktörler bunların altında etkileyici ve belirleyici faktörler olarak kategorize edilmiştir. Ağızdan ağıza mesajların muhtemel yayılmasını arttıran veya azaltan etmenlerle ilgili kapsamlı bir araştırma yapmak amacıyla, hem bireysel, hem de çevresel etmenler üzerinde çalışılmıştır. Hipotezlerin yanı sıra, demografinin etkilerini incelemek üzere ilaveten sorgulayıcı analizler yapılmıştır.

Hipotezlerin test edilmesi amacıyla, çevrimiçi bir anket çalışması yürütülmüş, ve 372 katılımcıya ulaşılmıştır. Toplanan very faktör analizi, betimleyici istatistik metotları, ve istatistikî hipotez testleri gibi istatistikî yöntemlerle analiz edilmiştir. Çalışmanın bulguları, ağızdan ağıza mesajın, sadece içeriği değil, aynı zamanda kaynağı ile de

kritik öneme sahip olduğunu göstermiştir. Ayrıca, ürün veya hizmetin de yayılmada önemli bir rolü olduğu ortaya çıkmıştır. Beklenmedik bir biçimde, kaynak ve alıcının tek bir yönde kesin bir rolü olmadığı görülmüştür.

Anahtar Kelimeler: Ağızdan ağıza dağılım, sosyal paylaşım siteleri, Çevrimiçi ağızdan ağza dağılım

To the memory of my beloved uncle, Adnan Tekin

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CHAPTER 1

INTRODUCTION

In his famous classical novel, *The Picture of Dorian Gray*, Oscar Wilde declares that "There is only one thing in the world worse than being talked about, and that is not being talked about." Obviously Wilde did not directly address the word-of-mouth issue, however; his quotation grasps the essence of this concept.

Word-of-mouth is an essential and indispensable part of marketing activities. It can be accepted to exist since the very beginning of consumption society, because consumers have various stimuli to talk about the products and services that they either have truly used or only been a potential customer to. These stimuli vary from simply goodwill to some social drivers. Regardless of what causes the word-of-mouth activity, it has remarkable effects alongside with the marketer-initiated activities on consumers' preferences.

Word-of-mouth could be said to "represent a philosophical breakaway from a one-way, top-down communication model" (Keller, 2007). It exists for a long time and it has been recognized by both companies and academic circles. It is an alternative to the traditional marketing insights that can be used to expand traditional marketing practices. Word-of-mouth activity is generally accepted to be more trustworthy compared to those of marketer-initiated, since it exists between or among individuals rather than being sent from one company-related source to an individual or to masses.

What made word-of-mouth popular and noteworthy recently is the introduction and widespread usage of "social media"; turning word-of-mouth marketing into electronic word-of-mouth marketing. Internet, and particularly Web 2.0, has provided the consumers to get involved in a mass media. Internet, as a mass media, stands alone with its aspect of "interactivity" among other mass media tools. Social network sites, as defined by Boyd and Ellison (2008) are:

> web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system.

Through letting the users to participate in forming and creation of the content, the internet entirely changed the face of word-of-mouth activity, turning it into "viral marketing." Another significance of social network sites is that they enable and enhance communication between total strangers in addition to the continuance of already existing communication between acquaintances.

Among many prevailing and still to be created social network sites, Twitter has the leading role in this research study, and it is supported by Facebook. Actually, Twitter was established later than Facebook, and it is not as popular as Facebook. Nevertheless, it could be said to have the "spirit" of word-of-mouth: A user can write anything he/she wishes about a brand, a product, or a service within 140 characters, it is read by his/her followers, could be potentially read by non-followers; and this "tweet" could be sent to the followers of those followers or non-followers simply by retweeting. All the terminology to be defined later, Twitter has the logic of word-of-mouth by itself, and also the potential to increase the effects of word-of-mouth. Twitter's core competence lays on simplicity. One does not even need Internet connection to send a tweet; a short message sent from mobile phone is enough. Additionally, mobile usage of Twitter is the most user-friendly compared to the other social network sites, which reinforces the declaration of ideas, including word-of-

mouth messages. This feature adds instantaneity to Twitter. Users have the opportunity to share their opinions and feelings about brands, products, or services as soon as they occur. Face-to-face word-of-mouth is probably predominant compared to the word-of-mouth activity in other media; but the instantaneity of Twitter is not ignorable and remarkably important because it provides the chance of measureless diffusion of information about those brands, products, or services right on the moment unlike face-to-face communication.

The supporting social network site is, as mentioned before, Facebook in this research study. Facebook is a breaking point in the history of social media with its aspect of reality. With few exceptions, users reveal genuine information about themselves in their profile in Facebook, unlike former social network sites with nicknames. This feature made Facebook irreplaceable since it provided reality to learn as much as needed about other users while it was virtual enough due to letting users adjust the level of communication (Irak & Yazıcıoğlu, 2012). Also, thanks to the genuine information aspect of Facebook, one advantage of face-to-face communication compared to social network sites disappears: whether the users know the information provider in real life. Most of the Facebook friends are from those users' real life. This unique aspect of Facebook distinguishes it from its equivalents and enables it to possess the logic of traditional word-of-mouth more than any of the remaining social network sites.

As it also could be seen from the literature review following this chapter, even if word-of-mouth is not a brand new subject for the marketing literature, electronic word-of-mouth is. Also, electronic word-of-mouth studies are most of the time limited to the former Internet tools rather than social network sites. Especially for Twitter, the literature has a very few studies in terms of analysing the social network site for its influence and convenience on word-of-mouth and its dispersion. Therefore, this study was conducted to grasp a general understanding of word-of-

mouth activity on Twitter, what affects the likelihood of diffusion, and the specific effects of Twitter as a social network site on electronic word-of-mouth.

Taking all these elements into consideration, this study aims to analyse the factors behind the word-of-mouth activity on social network sites, and to determine, of those factors, which behave in which direction. Until this point, Chapter 1 aimed to give an insight about the word-of-mouth concept in general and the use of social network sites in everyday life and their coherence with the the logic of word-of-mouth. From now on, this research study will continue with the comprehensive literature review that endeavours to contain the previous research on both traditional and electronic word-of-mouth in Chapter 2.

Chapter 3 consists of the research questions that constitutes the core of the study and facilitated the rest of it, while Chapter 4 covers the model of the thesis and the explanation and description of each and every branch of the model. It also provides the hypotheses that will be tested later on within the study.

Thereafter, the data collection procedure, the explanation of the survey, and the description of each question and their related sections of the model are provided in Chapter 5.

Subsequently, Chapter 6 is comprised of the findings and results. These results include both the descriptive statistics, and further analysis consisting of numerous statistical hypothesis testing.

As a final point, the conclusion is made in Chapter 7. This conclusion involves a set of interpretations and discussion of the results of the analysis, directions for future research, and managerial implications that might be useful in practical use.

CHAPTER 2

LITERATURE REVIEW

2.1. Definition of Word-of-Mouth

Electronic word-of-mouth has been a relatively new subject for the literature. Even though word-of-mouth marketing has been one of the most interesting and studied research topics in marketing, electronic word-of-mouth has a past of ten to twenty years at most. Word-of-mouth can be defined as "informal communication between private parties concerning evaluations of goods and services" (Anderson, 1998). In earlier research, a similar definition has been made: "oral, person to person communication between a receiver and a communicator whom the receiver perceives as non-commercial, concerning a brand, a product or a service" (Arndt, 1967b). A more detailed and contemporary definition of word-of-mouth is made by Harrison-Welker (2001): "informal, person-to-person communication between a perceived non-commercial communicator and a receiver regarding a brand, a product, an organization, or a service." Word-of-mouth, indeed, is a form of informational social influence (Grewal, Cline, & Davies, 2003), which is defined as "an influence to accept information obtained from another as *evidence* of reality" (Deutsch & Gerard, 1955). It is an aftermath of customer's interaction experience with brands, companies, organisations, products, or services (Buttle, 1998).

2.2. Word-of-Mouth as an Influence

As the definitions of word-of-mouth contain its influential effects, a remarkable part of the research in the literature has shown that word-of-mouth is a influence by itself, and it is one of the most influential tools in consumer behaviour, too. According to

Katz and Lazarsfeld (1955), word-of-mouth is one of the most influential sources in consumer behaviour and purchasing decision. Successive research supported the influential power of word-of-mouth in terms of information diffusion (Brown & Reingen, 1987; Godes & Mayzlin, 2004; Breazeale, 2008; Cheung, Lee, & Rabjohn, 2008; East, Hammond, & Lomax, 2008; Steffes & Burgee, 2009). Word-of-mouth is known to be the primal method of information dissemination among consumers (Walker, 1995). It is already known that consumers pay less interest on traditional advertising elements (McDonnell, 2005; ACNielsen, 2007). According to Day (1971), word-of-mouth is nine times more effective compared to traditional marketing in terms of changing consumers' negative attitudes towards products or services into positive. Word-of-mouth directly affects the purchasing decision and preference (Leskovec, Adamic, & Huberman, 2007), product adoption level (Trusov, Randolph, & Pauwels, 2009), and the level of demand and the level of sales (Chevalier & Mayzlin, 2006; Liu, 2006; Moe & Trusov, 2011). Bayus (1985) listed the factors influencing each other in purchasing decision as buyers, target market, and other influential groups (such as reference groups). In this study, literature is summarized as word-of-mouth activity existing in the part of the target market that actually made a purchasing decision and evaluated the results of it. Bayus (1985) furthermore claimed that word-of-mouth could also be initiated and managed by the companies as a marketing effort.

2.3. Superior Credibility of Word-of-Mouth

The important element that puts word-of-mouth marketing one step ahead of marketer-initiated communications is credibility (Allsop, Bassett, & Hoskins, 2007). Actually, the efficiency of word-of-mouth activity relies on social networking and trust, as people have a tendency to trust people that are closer to them, such as family, friends, or acquaintances (Jansen, Zhang, Sobel, & Chowdury, 2009). According to Allsop et al. (2007)'s study, the reason behind word-of-mouth activity's credibility is

that it is received and perceived as “unbiased” due to the information exchange between similar people. Lack of commercial bias is emphasised in other research (East, Hammond, & Lomax, 2008). Information provided by word-of-mouth is especially useful since it reduces the level of perceived risk and uncertainty (Murray, 1991). In fact, the perceived level of risk has been proven to be in a positive correlation with the level of word-of-mouth activity (Arndt, 1967b). Consequently, word-of-mouth is comprehended as more trustworthy, inherent, and credible compared to the traditional or marketer-initiated media (Silverman, 2001). Intense effort put on conception, measurement, and management of quality leads to higher satisfaction and repeated purchases; which most probably turn out to be positive word-of-mouth about the company or brand itself, especially in the service sector (Mangold, Miller, & Brockway, 1999).

2.4. Personal Elements Affecting Word-of-Mouth Participation

For word-of-mouth marketing, one of the first studies was made by Dichter (1966), defining a new role for word-of-mouth marketing in advertising. In Dichter’s study, interpersonal influence has proven to be stronger than advertising. Individuals have a tendency to “talk” about product or service experiences for some gratification purposes, either materialistic or psychological. The need for self-presentation could be one reason behind the desire to be joined in word-of-mouth activity (Lau & Ng, 2001). Self-presentation is the motive of talking about interesting stuff, so that people do not seem boring in their social network (Berger & Schwartz, 2011). Self-confidence is another motive of participation in such activity (Cox & Bauer, 1964). Some other researches were based on Five-Factor Model. Individual users with higher extraversion also have a tendency to use more positive emotion words (Pennebaker & King, 1999; Qiu, Lin, Ramsay, & Yang, 2012). In addition, agreeableness, as a characteristics aspect, is in negative correlation with negation words, and openness is in such relation with positive emotion words (Qiu, Lin,

Ramsay, & Yang, 2012). Sociability and being unified with social structures are also in positive relationship with the degree of participation in word-of-mouth activity (Arndt, 1967b; Lawther, 1978). Sociability, indeed, also shows correlation with positive attitude towards and willingness to join to social network sites (Gangadharbatla, 2008). This positive correlation has been proven empirically for both Twitter and Facebook (Hughes, Rowe, Batey, & Lee, 2012). In fact, considering the social use of social network sites, some personal aspects tend to be in a positive correlation with the amount of the use of those social network sites to socialise. For instance, the social use of Facebook is in a significant positive correlation with sociability and neuroticism, while such use of Twitter is in a similar correlation with conscientiousness, openness, and again, sociability (Hughes, Rowe, Batey, & Lee, 2012). Other examples of psychological and individual motives could be listed as social responsibility, attitude towards complaining, attitude towards business in general, and product involvement (Lau & Ng, 2001). One emotional state or the other; people have a tendency to enrich their word-of-mouth messages with depth, intensity, and vividness (Mazzarol, Sweeney, & Soutar, 2007). Gremler (1994) suggests that word-of-mouth messages are more influential if they are conveyed more enthusiastically. Such enthusiasm could be reflected either within the message or adding emphasis on the message (Dichter, 1966; Gabbott & Hogg, 2000).

2.5. Word-of-Mouth and the Well-Being of Participants

What makes the listener involved in the word-of-mouth activity is the anticipation of his/her well-being sought, and assurance of sender's experiences' validity (Dichter, 1966). The "well-being" aspect is what distinguishes word-of-mouth activity from other marketing efforts with no expectation of monetary and other material rewards (Schiffman & Kanuk, 1997). The higher level of word-of-mouth information sender's expertise is proven to be more persuasive and influential on the purchasing decision of the receiver (Bansal & Voyer, 2000). Word-of-mouth is an activity that is initiated

and communicated between two individuals and does not involve marketers and companies (Arndt, 1967a). Therefore, it is accepted to be more reliable and credible compared to other sources of information. Word-of-mouth listener, i.e. message receiver, is more of an information seeker rather than an ordinary accepter of the message sent by the source (Mangold, Miller, & Brockway, 1999). Word-of-mouth information is also likely to be more influential and persuasive if the listener is actively seeking for that specific information (Bansal & Voyer, 2000). People are more likely to seek for a specific kind of information when they have little or no information about a product or a service (Vettas, 1997). Personality traits are also involved with information seeking aspect of social network sites. Need for cognition could be one example with its positive correlation with attitudes towards seeking information on social network sites (Das, Echambadi, McCardle, & Luckett, 2003), especially on Twitter (Hughes, Rowe, Batey, & Lee, 2012). Then again, information seeking activity on Facebook could be interpreted as procrastination; while Twitter has its own utilitarian value and cognitive simulation (Hughes, Rowe, Batey, & Lee, 2012). Still, word-of-mouth seems to be more efficient and effective if listener is more involved and looking for more information and/or less risk (Sweeney, Soutar, & Mazzarol, 2012). The perceived level of risk especially seems to be higher in purchase of services, due to the fact that services are intangible, not standardized, and do not involve warranties (Zeithaml & Bitner, 1996); and as a result, word-of-mouth activity is expected to be more intense in case of services purchase (Bansal & Voyer, 2000).

2.6. Negative Word-of-Mouth Message

Arndt (1968), on the other hand, studied the effects of negative word-of-mouth additionally, and emphasizes the importance of interpersonal channels (Arndt, 1967b). Negative word-of-mouth could be defined as: “interpersonal communication among consumers concerning a marketing organization or product which denigrates

the object of the communication" (Richins, 1983). A consumer's potential to commence negative word-of-mouth is in a positive correlation with the level of dissatisfaction and in a negative correlation with the related company's responsiveness to negative feedback (Richins, 1983). Negative word-of-mouth is also more likely to occur under unfair circumstances during complaint processes (Blodgett, Granbois, & Walters, 1993), and under inconvenient situations that management were insufficient to respond to the complaints (Brown & Beltramini, 1989). Certain kinds of emotions are more likely to commence negative word-of-mouth, such as anger, frustration, and irritation (Wetzer, Zeelenberg, & Pieters, 2007). Consumer-generated word-of-mouth activity begins due to dissatisfaction rather than satisfaction (Mangold, Miller, & Brockway, 1999). Cognitive elements step forward in positive word-of-mouth messages due to the satisfaction of the message source about the product or service (Sweeney, Soutar, & Mazzarol, 2012). Negative word-of-mouth potentially has more impact on receivers compared to the positive one (Arndt, 1967b; Engel, Kegerreis, & Blackwell, 1969; Haywood, 1989; Katz & Lazarsfeld, 1955; East, Hammond, & Lomax, 2008; Chevalier & Mayzlin, 2006; Weinberger & Dillon, 1980), mostly due to the reason that it is more available and analytical, i.e. problem-solving, by the individual social network users (Herr, Kardes, & Kim, 1991). As a matter of fact, negative word-of-mouth is more effective and influential than positive word-of –mouth both in terms of general attitude and purchase probability (Podnar & Javernik, 2012). Correspondingly, negative information has been found to be more influential on attitude and cognitive structure (Lutz, 1975). According to a study performed by US Office of Consumer Affairs, an individual is likely to talk about his/her experiences to five people if satisfied; but to nine people if dissatisfied (Knauer, 1992). There is a positive correlation between the intensity of the experience and the tendency to initiate the negative word-of-mouth activity (Sweeney, Soutar, & Mazzarol, 2012). Indeed, word-of-mouth activity increases when strength and concentration of consumers' experiences increases

(Anderson, 1998; Bowman & Naryandas, 2001). The negative word-of mouth message received has a high potential to change the perception of service quality and value in a destructive manner (Sweeney, Soutar, & Mazzarol, 2012).

2.7. Tie Strength and Homophily

Brown & Reingen (1987) brought the subject of tie strength and homophily into discussion of word-of-mouth. In this study, both strong and weak ties are proven to play crucial roles in the word-of-mouth diffusion: weak ties provide the information disseminate across groups in large scale, while strong ties act as more influential referral links. Tie strength is defined as "a multidimensional construct that represents the strength of the dyadic interpersonal relationships in the context of social networks" by Money, Gilly, and Graham (1998). There is a positive correlation between the efficacy of word-of-mouth information and the strength of the tie between the sender and the receiver (Bansal & Voyer, 2000). Brown and Reingen (1987) also found out that homophily was to be in positive relationship with tie strength in the case of word-of-mouth and referral behaviour; and they derived homophily in terms of "demographic" elements. Word-of-mouth behaviour exists either for sharing experiences about new products or services (Dichter, 1966), or talking about existing products. One or the other way, what initiates the word-of-mouth activity is involvement, and an indirect relationship occurs between opinion leadership and word-of-mouth (Richins & Root-Shaffer, 1988). This research study involved not only the opinion leadership factor into consideration, but also the personal experience while analysing the word-of-mouth communication. In addition, all of these factors have increasing effects when there is enduring involvement by the individual user. Comparing goods to services, Murray (1991)pointed out that service purchasers have a greater tendency to get involved in word-of-mouth activity compared to goods purchasers; and also they are more likely to trust such activity.

2.8. Electronic Word-of-Mouth

Word-of-mouth in the online environment differs from real-life word-of-mouth and also it is a relatively new subject for the marketing literature. Electronic word-of-mouth can be defined as: "any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the internet" (Hennig-Thurau, Gwinner, Walsh, & Gremler, 2004). Electronic word-of-mouth has become available with the introduction of communications through computers, allowing people to share information through virtual communities, in the late 1990s (Marsden, 2006). One of the most important implications of online word-of-mouth is that it also has offline impacts; in other words, consumers have the potential to make decisions while offline because of the word-of-mouth activity they participated online (Lee, Park, & Han, 2008; Chan & Ngai, 2011). Information retrieved online plays an important role in purchasing decision since online bonds rely on common interests rather than relationships (Fong & Burton, 2006; Cheong & Morrison, 2008). In addition, online word-of-mouth exceeds the limits that exist with the traditional word-of-mouth due to the restriction of a consumer's individual social circle (Bhatnagar & Ghose, 2004). Reliability issue in electronic word-of-mouth has been studied in previous research, and it has shown that individuals trust online reviews written by people outside their close social network (Duana, Gub, & Whinston, 2008). Being less personal and private may be a drawback of electronic word-of-mouth; still, it has the advantage of being more convenient and accessible compared to traditional word-of-mouth (Hennig-Thurau, Gwinner, Walsh, & Gremler, 2004). Some of the motives for seeking word-of-mouth information online are listed as risk and/or cost reduction, easy information, accident, perception, inspiration from offline inputs, and prepurchase information acquirement (Goldsmith & Horowitz, 2006). Similar to traditional word-of-mouth, electronic word-of-mouth has a higher impact when

negative compared to the positive (Park & Lee, 2009). A study made on microblogs, but specifically on Twitter, has shown that approximately 19% of all tweets mention of a brand or an organization, and 20% of these involve emotion within (Jansen, Zhang, Sobel, & Chowdury, 2009). Especially the introduction of mobile devices and the accessibility of social network sites on those devices made electronic word-of-mouth ubiquitous, i.e. available anywhere, anytime (Balasubramanian, Peterson, & Jarvenpaa, 2002).

2.9. Social Network Sites and Word-of-Mouth

During the recent era, the facet of word-of-mouth activity changed and renewed remarkably: thanks to the introduction of Web 2.0 and "social media". Web 2.0 allows user participation in both content (e.g. text, photo, video, music) creation and the evaluation of the content via comments (Fogel, 2010). Web 2.0 stands for the shift from supplier-generated to user-generated content (Kolbitsch & Maurer, 2006). Social media could be defined as "group of Internet-based applications that build on the ideological foundations of Web 2.0, and that allow the creation and exchange of user-generated content" (Haenlein & Kaplan, 2011). Social media is categorised into different types which are content communities such as YouTube, social network sites such as Facebook, and MySpace, microblogs such as Twitter, and Tumblr, and virtual social worlds such as Second Life (Mangold & Faulds, 2009; Haenlein & Kaplan, 2011). Social network sites are defined by Boyd & Ellison (2008) as:

> web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system. (p. 211)

They allow preservation of relationships by keeping one another in the contact list until intentionally ended by one side, unlike real life relationships which fade away if not kept in touch (Enders, Hungenberg, Denker, & Mauch, 2008). According to a

web-based report, Facebook is the most popular social network site with 157.2 million visitors per month since May 2011, followed by MySpace with 34.9 million visitors per month, LinkedIn with 33.4 million visitors per month, and Twitter with 27.0 million visitors per month (Lipsman, 2011). Founded in 2004, presently Facebook has 584 million daily active users by September 2012; and one billion monthly active users by October 2012 (Facebook Newsroom, 2012). Twitter and Facebook are two of the most popular social network sites. Facebook is popular for online socializing (Hughes, Rowe, Batey, & Lee, 2012) while Twitter's main use is sharing opinion and/or information (Kwak, 2012). One of the main discrepancies of Twitter from Facebook is that it allows anonymity, i.e. an individual user does not have to post real-life information about him/her while using Twitter (Huberman, Romero, & Fang, 2009). Therefore, the social circles in two social network sites may be different from each other. In fact, previous research has shown that people have a tendency to form their online social networks from unfamiliar individuals in their real life (Dellarocas, 2003). This aspect results in the reinforcement of Twitter users to share their opinions and feelings, and seek information in a larger network than in real life and Facebook (Java, Song, Finin, & Tseng, 2007 August). Hughes et al. (2012) suggests that individual users prefer either Twitter or Facebook to seek and spread information. According to Qiu et al. (2012), Twitter is a social network site that encourages the individual users to reveal their opinions and feelings occurring in their daily lives. Moreover, Qiu et al. (2012) adds that usually people enjoy "tweeting" about the new experiences they had, and the discoveries they have made; so that they would create an image of being open to new experiences. Most of these tweets about the users' discoveries or new experiences could be interpreted as word-of-mouth messages. Furthermore, Twitter is sort of a microblog, allowing users to share and receive small materials like short texts, photographs, or links of audio or video contents (Haenlein & Kaplan, 2011). Microblogs stand for providing high degrees of self-presentation and self-disclosure among other social network sites,

compared to their lower levels of media richness (Kaplan & Haenlein, 2010). These facets of microblogs result in ambient awareness among Twitter users, which occurs due to each user's continuous status updating so that even in different locations, each user is aware of others' physical and psychological conditions as if they were in real-life contact (Haenlein & Kaplan, 2011). Microblogs are important for word-of-mouth because they provide convenience and users of these microblogs could reach others' ideas about brands, products, or services anytime, anywhere with the availability on various devices (Jansen, Zhang, Sobel, & Chowdury, 2009). Microblogs are so convenient that they could be in use even during the purchasing decision, therefore being one sted ahead of other social network sites in terms of word-of-mouth (Barton, 2006). The shortness of textual content in microblogs, which is approximately close to the headline and subtitle of a newspaper, makes those content easy to be both produced and consumed (Milstein, Chowdury, Hochmuth, Lorica, & Magoulas, 2008). All in all, the content of microblogs, including Twitter, are instantaneous, pervasive, and accessible (Jansen, Zhang, Sobel, & Chowdury, 2009). Facebook, on the other hand, is more of an interaction-based social network site (Nadkarni & Hoffmann, 2012). The use of Facebook depends on the individual user's demographic elements, such as gender, race, parental educational background (Hargittai, 2007; Hargittai & Hsieh, 2010a; Hargittai & Hsieh, 2010b). Nevertheless, Facebook is commonly used "to stay connected with friends and family, to discover what's going on in the world, and to share and express what matters to them" (Facebook Newsroom, 2012). Facebook provides people with the opportunity to build public profiles and commence and maintain connections and relationships with the people in their social network (Boyd & Ellison , 2008). According to Ellison, Steinfeld, and Lampe (2007), Facebook allows individuals to prolong or empower current offline connections rather than starting new connections.

CHAPTER 3

RESEARCH QUESTIONS AND METHODOLOGY

The main aim of this research study is to reveal the drivers of electronic word-of-mouth activity. The results of this study are expected to find out the factors that prompt an individual to participate in electronic word-of-mouth. The factors from smallest to largest are to be analysed, either environmental or inner to individual. As the study is narrowed down to Twitter and Facebook for the sake of measurability and comparison, the effects of these social network sites on electronic word-of-mouth participation will also be measured. In addition to all these, this study is expected to yield some results that compare electronic and traditional word-of-mouth activites as well.

This research study works on the retweeting likelihood of Twitter users because the model is formed upon the assumption that retweeting is the core of word-of-mouth activity on Twitter. Writing a tweet about a product, a service, a company, or a brand is also accepted as word-of-mouth, however; we can never confidently accept that all followers of one user reads all tweets of one user. Twitter is a microblog beyond being a social network site, which underlines the dynamic spirit of the website: the users declare their ideas about anything that happens right out on Twitter (Irak & Yazıcıoğlu, 2012). Most of the time, these ideas are not filtered or altered, but written as they came up to one's mind. Due to this dynamism, all tweets of all the users one follows appears on the "timeline" of the user in a reverse-chronological order. Considering the frequency of tweeting and the number of users followed, it would be unhealthy to think that a user reads all the tweets appearing on his/her timeline. Therefore, writing a tweet could not be accepted as the equivalent of word-of-mouth

activity on Twitter. Instead, retweeting is accepted as the core of word-of-mouth in this research study, simply because a Twitter user retweets a tweet after reading it. There are many reasons behind retweeting, such as supporting the idea in the tweet, or just finding the tweet interesting or funny. The reasons that affect the word-of-mouth aspect will be discussed in this study later.

The study also involves Facebook, and "sharing" on Facebook is accepted as the word-of-mouth activity. Sharing on Facebook is the equivalent of retweeting on Twitter. Facebook is included in the study because even Twitter has the "soul" of word-of-mouth in itself; while Facebook is the leading, major, and most widespread social network site and it is the closest social network site to the traditional word-of-mouth logic. Including Facebook in the measurement and the model is also important in terms of assessing whether the word-of-mouth tendency of the user is specific to Twitter or common to social network site usage.

Considering word-of-mouth activity as a continuum from the beginning to its never-ending dispersion, this study accepts sharing as the happening of word-of-mouth. As mentioned before, one can never be sure if a tweet or a Facebook status update is received, understood, and absorbed by another user. Indeed, this is the drawback of social media in terms of word-of-mouth. Sharing, however, implies that a user has understood and recognised the content that is shared through the social network to him/her. Even if it is assumed that no one has seen the content that this specific user shared again, it is certain that the word-of-mouth message has reached him/her and completely appreciated by this user. Consequently, sharing, i.e. retweeting on Twitter or sharing on Facebook is accepted as the exact point of word-of-mouth in this research study.

CHAPTER 4

CONCEPTUAL THEORY DEVELOPMENT AND HYPOTHESES

In the light of the research questions, a model was formed to construct a backbone of the study and cover each and every case about electronic word-of-mouth, especially on Twitter. The study is based on this model that is formed by determinants, influencers, and drivers; all of which lead to the retweeting likelihood. During the forming of the model, the researches in the literature about many aspects of the word-of-mouth activity, either traditional or electronic, were benefited. For example, Jansen et al. (2009) concentrated on the knowledge and relationship with a brand and the related behavioural outcomes about those factors. Okazaki (2009), on the other hand, studied the electronic word-of-mouth concept with the focus on social intention, social identity, opinion leadership, and inherent novelty-seeking concepts. Brown and Reingen (1987) formed their model taking the diffusion structure into consideration, while another research had a word-of-mouth model considering the network effects in the dispersion (Katona, Zubcsek, & Sarvary, 2011). When analysing the word-of-mouth message, Chung and Austria (2010) had a model that contained the entertainment, interaction, and information aspects of the message. The interaction was analysed through another model in the study in terms of its influence by putting the attitude towards the product and purchase probability (Podnar & Javernik, 2012). In a more general model, Allsop et al. (2007) studied the dimensions of word-of-mouth influence: media, advertisements, public relations, personal experience, employee judgement, credibility, and the attitude of participants. Negative word-of-mouth and its effects on the diffusion of word-of-mouth message had also some models in the literature. One of them was, for example, prepared by Lau and Ng (2001), covering the individual and attitudinal factors prompting negative

word-of-mouth dispersion, and also the situational factors and product motivators, and measured the likelihood of repurchase through the model. Along with these impressions, the general concepts about the word-of-mouth concept, such as reliability, were also added to the thesis model to cover each and every condition related to electronic word-of-mouth and its diffusion likelihood.

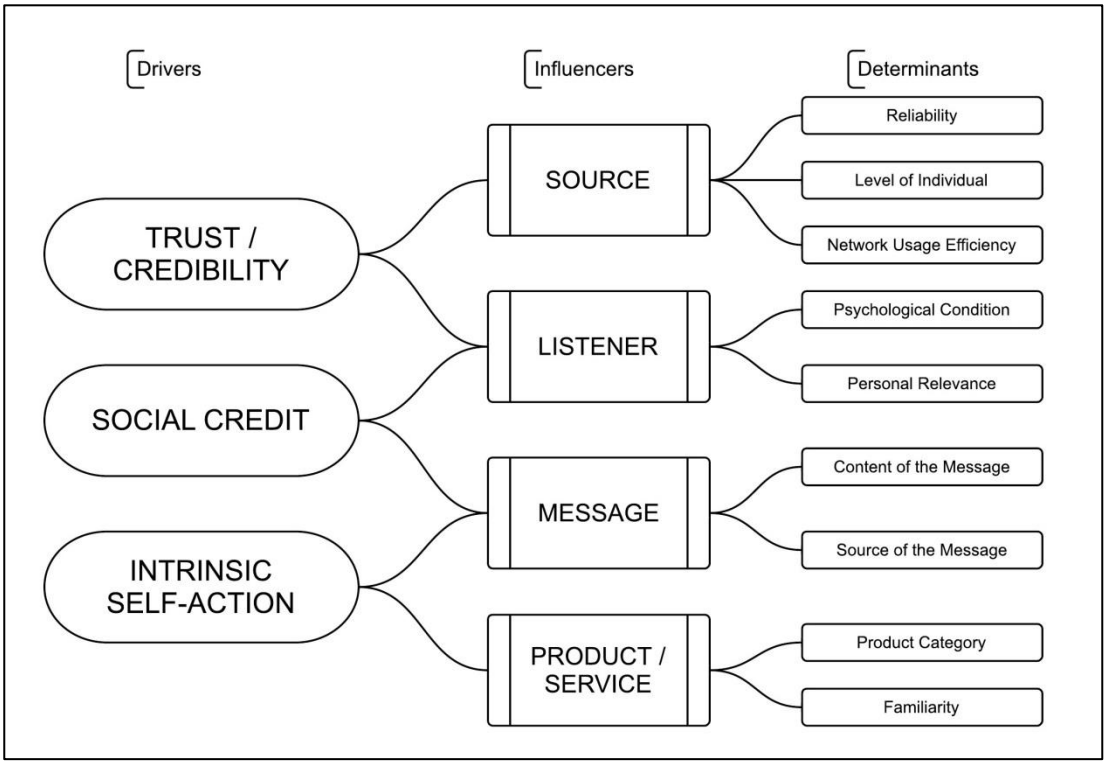

Figure 1: The Model of Retweeting Likelihood

As the thesis study measures an electronic word-of-mouth message's likelihood of being retweeted, the model breaks into first the drivers, which are the elements that prompt the primitive intentions of sharing a word-of-mouth message. These drivers are stimulated by the four basic influencers defined by the study that directly affects the retweeting likelihood, one way or another. Influencers also have determinants as sub-elements, which scrutinise the conditions in the electronic word-of-mouth and social network site environment.

4.1. Drivers

As retweeting or sharing is the core of word-of-mouth on social network sites, this study measures the likelihood of it. What is the likelihood of sharing/retweeting, which drivers affect this likelihood at first, what are the influencers that form these drivers are some key questions that helped establishing the model.

To measure the likelihood of sharing, first of all, the drivers of sharing should be analysed. These drivers are the fundamental elements that motivate an individual to get involved in the sharing action. Such drivers could be from the individual's environment, or they could exist in the inner-self of the individual. Either way, these drivers are the most basic elements of the model since they trigger the sharing action for an individual.

In the preceding research studies, there are numerous drivers initiating the word-of-mouth process defined. However, this study is concerned with a single spot of word-of-mouth process; as mentioned before, the crucial point is the sharing moment. In other words, the moment when the receiver decides to share the same message is essential for this research study. Through this appreciation, this model attempts to grasp an individual both as a receiver, and as a sender of the word-of-mouth message; considering the word-of-mouth process between senders and receivers. Therefore, the number of drivers that involve receiver also as a sender are minimised to three: trust and credibility, social credit, and intrinsic self-action.

4.1.1. Trust and Credibility

Trust is one of the most crucial and compulsory elements for a relationship between two or more individuals. For an individual to rely on another individual, he/she must be certain that the other is reliable, trustworthy; and this other individual is looking for his/her well-being. In addition, reliability must be reciprocal for an effective and

healthy relationship to exist between two or more individuals. Such conditions apply to the word-of-mouth process between individuals. Either in traditional word-of-mouth, or in electronic word-of-mouth activity on social network sites, trustworthiness is the most vital element that facilitates the functioning of a word-of-mouth message.

In general, word-of-mouth messages are perceived as more reliable compared to marketer-initiated advertising (Allsop, Bassett, & Hoskins, 2007; Silverman, 2001). Beyond the well-being issue, another important reason for word-of-mouth to step forward is the experience of the message sender. An information seeker gets involved when he/she is certain of the sender's sufficient experience with the product (Dichter, 1966), and beyond information seeking, source's expertise is also important in the purchasing decision (Bansal & Voyer, 2000). This is simply because one individual's review is more favourable than a company's promises in an advertisement.

The topic of trust changes its facet when it comes to social network sites and Web 2.0 in general. As mentioned before, the social circle of an individual in his/her real life is most probably not the same as the one in social network sites. Therefore, the factors explaining trust issue in real-life relationships are not exactly the same with the factors of trusting in social network sites and online interactions, even though there may be a few similar.

4.1.2. Social Credit

Beyond trust and credibility, another factor may act as a driver to get involved in the word-of-mouth activity: the willingness to receive social credit. Individuals do not always share their information about a product, a brand, or a service since they seek the well-being of the people around them. In a remarkable part of the cases, people want to receive some social credit for having and diffusing that information (Lau & Ng, 2001).

This social credit is generally known to be valid in real-life situations; it even gains more importance when the subject comes to social media. In most social network sites, an individual user simply creates a profile and exists to be known and appreciated for what he/she shares on that profile, obviously through having more followers in Twitter and friends in Facebook. Nowadays, even the companies share their Facebook or Twitter page to the customers; not their own official website. Sports clubs or artists are in a competition with each other in terms of follower numbers in Facebook, Twitter, and other media. Connecting on social networks is replacing the communication through e-mail (Qualman, 2012). An average individual would lose too much nowadays, compared to the past, due to not being on *any* social network site. Reciprocal existence and communication in one or more social network site is replacing the communication through mobile phones or e-mail (Balasubramanian, Peterson, & Jarvenpaa, 2002).

4.1.3. Intrinsic Self-Action

Besides trust and credibility, and social credit; another driver matters in the word-of-mouth spot: intrinsic self-action. Individuals not always participate in word-of-mouth action due to the trust environment, or due to the need for some social credit. The knowledge, perception, or feelings about brands, products, services, or the word-of-mouth message itself also have the potential to lead the individual to participate in the word-of-mouth action, i.e. sharing the received message.

Intrinsic self-action can be defined as the inner motivators prompting the individual to get involved in word-of-mouth. In this category, inner motivators are studied rather than sender-related (trust and credibility) or environmental (social credit) factors. In some cases, individuals choose to participate in word-of-mouth due to the need to talk about their experiences about products, services, or brands. Also, in some other cases,

the word-of-mouth message and its characteristics lead the individual to talk about and share it.

There are numerous cases that prompt intrinsic self-action. However, in general, two influencers lead to intrinsic self-action: the message, and the product or the service. Putting environmental factors aside, individuals still has the basic need to talk about the products that they are familiar with (Dichter, 1966). Enjoying or appreciating the content of the message could be a reason to set off the intrinsic self-action. Furthermore, intrinsic self-action is affected differently from different type of products and the user's experience with those (Podnar & Javernik, 2012). Consumers have different tendencies to talk about each category of product depending on their demographic characteristics such as age, or gender, or their personality traits. In addition, familiarity with a product, service, or a brand could result in participating word-of-mouth action; new products could be the subjects of conversations, as well as extremely familiar products.

Intrinsic self-action is also the purest reason of word-of-mouth participation. This is the only driver in the model that operates without any outer factors. Therefore, it has a crucial role in the model. Besides, intrinsic self-action includes product and service as an influencer in the model.

4.2. Influencers

As described above, this study is interested on the word-of-mouth spot when sharing happens. The study's model has three drivers that prompt the sharing moment. These drivers are further analysed through the influencers. The "influencers" of the model help the study measure the word of mouth, i.e. sharing or retweeting likelihood in different cases.

Influencers are the key of the model of the study. In the model, the four main influencers basically explain why individual consumers enter into word-of-mouth action, why they decide to share the message coming to them, why they retweet a tweet, or share a Facebook status about a product, a service, or a brand. A change in one of the influencers in this model results in the retweeting likelihood's reverting to the contrary.

In a generic word-of-mouth case, there are numerous influencers and it would be more difficult to limit those into four like in this model. However, this research study is particularly interested in the word-of-mouth in social media and especially in Twitter. Considering the specific field of the study and narrowing the word-of-mouth topic to social network sites and Twitter in detail, these four influencers become more prominent: the *source* of the message, the *listener* of the message, the word-of-mouth *message* itself, and the *product or service* as the subject of the word-of-mouth conversation.

4.2.1. Source

The source of the word-of-mouth message is one of the influencers of the model (Arndt, 1967a). The source plays a crucial role in the model and its efficiency since it can be perceived as the milestone of the word-of-mouth process. For this study, word-of-mouth is accepted to happen right at the moment of sharing. Source is the prominent influencer among all influencers of the model to stimulate sharing the received word-of-mouth message. As described before, sharing the received word-of-mouth message is the accepted word-of-mouth moment in this study. Sharing the message from the source makes the receiver a source for the subsequent receiver, or receivers.

In classical word-of-mouth, reliability is all that matters. The conversations, either containing word-of-mouth-related subjects or not, happen between acquaintances.

Thus, for a word-of-mouth message to be taken seriously and perceived as reliable, reliability also has to exist between the two sides of the conversation (Haywood, 1989). On the other hand, electronic word-of-mouth does not completely reflect the reliability characteristics of classical word-of-mouth (Breazeale, 2008). Most of the time, except for the people the individual already knows on real life, the source is either completely unknown or unfamiliar to the listener. In some cases, the source is known or familiar, but the roots of the relationship lies again on the social network site, not real life. Therefore, the relationship between those two individuals does not comprise the same reliability as between two people who met and maintain their relationships in real life.

Here, in social network sites, and electronic word-of-mouth, the source's level in a given social network site, and the efficiency of using that site delineates reliability. Certain levels exist in real life, considering a large scale from business or academic environments to simple families and kinship, or friendship. In social network sites, level of an individual matters even more as it is the only concrete thing that could be observed in first glance. It directly affects crucial decisions in social network sites; before word-of-mouth, it affects the basic decision: whether or not to follow a user on a social network site. With small number of followers, beyond being unreliable, one user may even be seen as a fake or spam account.

Network usage efficiency is also an important element that determines the reliability of the source for a word-of-mouth message in online conversations (Qualman, 2012). Individual users, who use social network sites efficiently are more prone to get higher number of followers, get their messages shared, and consequently to be perceived as more reliable compared to the average. Beyond all these efficiency in the network usage, even having a profile picture (instead of the picture added by the social network site automatically) matters to other individual users who are already followers, or followers-to-be.

All these real life and social network site aspects make source a dominant influencer in the word-of-mouth subject, and in the model of this study. What makes source crucial is that unlike some other influencers, real-life habits are still valid in social network sites when it comes to assessing source. Away from all these factors implying the reliability of source, there is a "simple instinct" that plays a huge role in the evaluation of the source. Still, the essence of this influencer did not change when classical word-of-mouth transformed into electronic word-of-mouth. In either case, an individual evaluates the source in terms of reliability by analysing his sentences, conversation style, attitude etc. in real life (Dichter, 1966; Pennebaker & King, 1999); or tweets, Facebook statuses, follower or friend numbers etc. in social network sites.

Source is an irreplaceable influencer both for electronic and classical word-of-mouth. A word-of-mouth model without source is out of question, as source has the potential to alter all results about the model only by itself. It is also one of the most recognised and studied influencers of word-of-mouth subject in the marketing literature.

4.2.2. Listener

Listener is another important influencer of the model of this research study. Even if the rest of the influencers of the model are prompting the word-of-mouth activity, if listener is refusing to receive the word-of-mouth message; then word-of-mouth activity will not happen.

Listener is more of a determinative factor rather than a simple influencer. It is not one of the main influencers of this research, but still it is recognised as a very significant influencer of electronic word-of-mouth concept and word-of-mouth research for this study and for marketing literature in general. Considering other influencers in the model, all of them have to pass through the listener. Listener's persuasion is the key for the efficiency and effectiveness of the word-of-mouth activity.

Psychological condition of the listener is an important factor that motivates listener to participate in the word-of-mouth activity and share the received message to his/her followers. If the psychological circumstances of the listener can be interpreted as positive, than we can simply conclude that the retweeting tendency increases (Dichter, 1966). Being in a good mood as a listener is important; because if the listener is not in such mood, disseminating the received message is not guaranteed.

However, this research study focuses on the beneficial feelings and interest-seeking tendencies rather than the mood of the listener. As the study's main interest is on electronic word-of-mouth rather than classical, the psychology of individual users on social network site is what matters most. Also, measuring and assessing the mood of each user is not easy and will not provide exact and reliable results. This study additionally assumes that the mood of the user in real life does not directly affect the social network site usage in the same vein. People do not reflect their real life and feelings vis-à-vis on the social network sites. There are various dimensions of psychological factors influencing word-of-mouth in both real life and social network sites; but what concerns this study is the effort to gather a larger audience; i.e. more followers or retweets on Twitter; more friends or likes on Facebook.

Another motivating factor that prompts listener influencer to participate in the word-of-mouth activity is personal relevance. With personal relevance, this study refers the sentimental bond between the consumer and the brand. Personal relevance may come from childhood, long periods of usage habits, using by the whole family, or personal habits, and so on. The important point here is that personal relevance relieves a preference tendency beyond the tangible benefits of the brand and its products or services, which arises from the bond between the individual and the brand (Jansen, Zhang, Sobel, & Chowdury, 2009).

Personal relevance makes listener more involved in the word-of-mouth talk. With higher personal relevance, individual users become more participative and more prone to disperse the received word-of-mouth message. Brands should try to establish and take advantage of such bonds. An important issue about personal relevance is the brand's availability to create bonds between individuals and brands; such as baby products or cars.

4.2.3. Message

The influencers that have been discussed in this study were related with the two parties of word-of-mouth: source and listener, and the relationship between them, or transformation of one of them. All these, especially the parties are, crucial and irreplaceable for this model and word-of-mouth research study models in general. Yet again, message, as an influencer, is neither less important, nor replaceable for this model.

All the parties of a simple word-of-mouth model are replaceable indeed. A source –if too willing to talk, may find another listener; a listener may encounter several messages from several sources. But the message is unique and special to the conversation it takes place. If the source talks to a different listener, the content or style of the message may change. Each word-of-mouth message is inimitable and special to its conversation. This research study is based upon the assumption of word-of-mouth happening right at the moment of sharing the received message –and this assumption, by itself, clearly underlines the importance of message as an influencer.

Message has its importance initially in terms of diffusion. Word-of-mouth message's characteristic of diffusion is an issue that is studied a lot in the marketing literature. Numerous factors affect the diffusion, how quickly it spreads, and to how many people it reaches (Sweeney, Soutar, & Mazzarol, 2012); such as its content. For instance, many studies have proven that negative messages outrank positive ones in

terms of number of people reached (Arndt, 1967b; Engel, Kegerreis, & Blackwell, 1969; Haywood, 1989; Katz & Lazarsfeld, 1955; East, Hammond, & Lomax, 2008; Chevalier & Mayzlin, 2006). But in terms of diffusion speed, the focus of this study is on the "electronic" aspect of word-of-mouth. By its nature, electronic word-of-mouth carries the potential to deliver one message to multiple times more number of recipients. In traditional word-of-mouth, a source must find a listener to deliver the word-of-mouth message. Such need refers to a reciprocal structure. However, in electronic word-of-mouth, an individual leaves the word-of-mouth message at any time; the recipient does not have to be ready at that moment. There is the option to read the message later and also share it later, the messages flow in the "timeline" at Twitter and the homepage at Facebook –ready to be read when the listener receives them. Moreover, instead of telling each listener or group of listeners one by one; social network sites allow telling all the individuals in a network at once. Such convenience of electronic word-of-mouth enables it to spread much quicker than traditional word-of-mouth, regardless of the message's content. However, it should be noted that the diffusion speed of a word-of-mouth message in an electronic milieu and its comparison to the diffusion speed of a traditional word-of-mouth message will not be analysed by this research study, since it involves a greater scale of research that requires the follow-up of the diffusion of both the traditional and electronic word-of-mouth message for a much longer period of time.

Yet again, content is also important. Each individual is sensitive to a different type of content in word-of-mouth messages. Consumers get exposed to plentiful word-of-mouth messages, knowingly or unknowingly. One of the most important factors that make this messages worth of spreading to their network is the content of the message (Gremler, 1994; Woerndl, Papagiannidis, Bourlakis, & Li, 2008). This research study analyses the word-of-mouth message contents in three categories: advisory content, humorous content, and diffusion-aimed content. A word-of-mouth message is either

positive or negative in these categories; it is advisory or not advisory, humorous or not humorous, and diffusion-aimed or not diffusion-aimed. The content of the message or the emphasis on the content increases the diffusion effects (Dichter, 1966; Gabbott & Hogg, 2000). These content characteristics will be further explained later in the study, in the determinants section.

Another important determinant of the message influencer is the source of the message. Even if source, as an influencer, is analysed throughout the study; as the message is the main focus of this study with deeper analysis for itself, specific sources are defined for specific messages in the survey and the effects of these sources on each type of "content" will be analysed deeply. Therefore there is a difference as source as an influencer of the electronic word-of-mouth activity and the source of a unique message. Again, these sources will be defined and explained further in the determinants section of the study.

4.2.4. Product or Service

Product or service is also an important influencer of the model. Product or service is the subject of the word-of-mouth conversation. It is indeed the essence of word-of-mouth activity in general (Woerndl, Papagiannidis, Bourlakis, & Li, 2008). Consumers' experiences with product or service, or brands, are the source of word-of-mouth talk; they are why word-of-mouth exists (Richins, 1983). A message source uses or benefits a product or service, feels the urge to brag about it, and find one or more listeners and start the word-of-mouth process. The word-of-mouth process enters into an endless circle as each listener shares the received message. Filtered or modified; what matters is the conveyance of the message. Product or service is the key, the milestone of word-of-mouth as a process.

Apparently, not each word-of-mouth talk is similar considering the range of products and services. For the rationality of the study, product or service will be examined by

categories, not by cases. There are basic categories of products or services; and each product or service will fall into one of them –one way or another. Individuals are unique by their nature. Each individual reacts differently to each product or service (Sweeney, Soutar, & Mazzarol, 2012); even if they have the same demographic aspects, have similar families and educational backgrounds, and so on. This research study is interested in the gender and age effects on the reactions to different product or service categories. This interest will be discussed further in the motivating factors title.

In view of the "product or service" influencer, analysing only the product or service itself would be a shallow move considering the depth of word-of-mouth issue. There are many other factors about the product or service affecting the word-of-mouth participation of an individual; one of them in this study is the individual's familiarity with the product or service. Some other factors could be involved in the study such as the environmental conditions during the use of a product or service, but the difficulty in measuring and analysing such factors is understandable. Such measurement and analysis would contradict with the measurement methods of the study and would require a more tête–à–tête, interview included method, decreasing the number of participants, which is unfavourable considering all other influencers and determinants.

Familiarity's existence and absence has remarkable effects on word-of-mouth participation tendency (Trusov, Randolph, & Pauwels, 2009). Its absence is not directly related with this research study, since it leads to "seeking" information about the unfamiliar product or service. This study's main focus is on a listener who shares the received word-of-mouth message on online social networks, rather than a listener seeking for the related information about a brand new product. If a listener receives a word-of-mouth message about a product or service that is familiar, then he/she would be more likely to retweet and share that message to his/her followers; apparently

provided that the individual agrees with the content of the message. One of many uses of retweeting is declaring complete agreement with the content of the tweet; in other words, the individual who retweet feels that he/she would have written just the same tweet about that issue if not written by someone else. This is maybe one of the main uses of retweeting, and word-of-mouth is no different than those of other issues. Agreeing with the content of a tweet about a product or a service requires adequate level of familiarity with it.

4.3. Determinants

4.3.1. Reliability

Reliability is the first determinant explaining the first influencer, source. An individual's likelihood of retweeting increases with a higher reliability of the source, i.e. more reliable the source is, more likely a listener is to get involved in the word-of-mouth activity on Twitter through that sources' messages. In Twitter terms, we can put "source" as the accounts followed by an individual, either individual or corporate accounts. Putting the corporate accounts aside, one thing that matters for an individual in social network sites about reliability is that if the source is familiar to the individual in real life (Cheong & Morrison, 2008). As the familiarity is the key to the traditional word-of-mouth activity, it is expected to have a direct effect on social network sites and electronic word-of-mouth activity, too (Duana, Gub, & Whinston, 2008; Fong & Burton, 2006). The analyses will be made to see if there is an increasing participation in electronic word-of-mouth with the real-life knowledge of the source (Jansen, Zhang, Sobel, & Chowdury, 2009). Likewise, the reliability is expected to increase with a celebrity as a source. Apart from family members and close friends, celebrities are perceived as reliable sources in real life, and this reliability is also eligible for word-of-mouth activities. Therefore, further analysis

will be made to measure the reliability perceptions of individuals, putting celebrities as sources in general.

Trust and credibility is probably the most important and inflexible driver of word-of-mouth activity and source, as an influencer, is the first element that triggers an individual to get involved in such activity. Therefore, the reliability of the source is crucial to word-of-mouth activity and an individual simply measures it by two conditions: whether the source is interested in the well-being of him/her (East, Hammond, & Lomax, 2008), and whether that source has substantial amount of experience and knowledge about the product or service that is subject of the word-of-mouth message (Dichter, 1966). These conditions are questioning the intention of the source; to share an experience and be helpful to the individual, or to take monetary advantages by spreading that message.

According to the cognitive response theory, persuasion depends on two separate elements: involvement of the recipient, and credibility of the communicator (Hass, 1981). Beyond taking the message sender as the source of word-of-mouth activity, the social network should also be seen as part of the "source" influencer. The credibility of Twitter especially demonstrates itself in the corporate accounts (Jansen, Zhang, Sobel, & Chowdury, 2009). Firms' Twitter accounts are helpful tools of communication between customers and firms; a very popular method indeed, maybe currently just as popular as call centres. Through sending a tweet to the corporate account, a customer can convey opinions and suggestions, or deliver complaints. Nowadays, firms even provide feedback through calling the customer who communicated via Twitter (by asking for their personal communication information, obviously). One must notice that firms publish their social network accounts, especially Twitter and Facebook, in their advertisements for the last few years; unlike the previous years when they shared their official website address. This is a small but crucial detail that underlines social network sites' importance in everyday life, in

customer services, in public relations, and in many other areas. Subsequently, the hypothesis is that: As the credibility of Twitter increases from the recipient's point of view, the likelihood of tweeting about a product or service, or retweeting such a tweet increases; i.e. word-of-mouth activity increases.

Social network sites are also an important facet of electronic word-of-mouth. They are the milieu that the messages and the sources exist, therefore they change the whole dynamics of the word-of-mouth processes. These sites "facilitate the creation and sharing of knowledge, information, media, ideas, opinions and insights, and allow people to actively participate in the media itself" (Diffley, Kearns, Bennett, & Kawalek, 2011). Social network sites enable people to reach other people and information that they would not be able to without the use of these sites. With this increased accessibility and ease of opinion exchange, word-of-mouth activities have an increased effect on buying decision since they spread faster and to more number of people with the help of social network sites. Social media also empowers the customer in the current marketing environment, compared to the traditional marketing, by allowing them to participate in the diffusion process (Kozinets, 1999).

There are two concepts that are helpful in explaining the importance of social network sites during the transformation of word-of-mouth from traditional to electronic: Homophily and tie strength. Homophily, in its classical existence, could simply be defined as the "similarity of individuals". The conditions for homophily are not limited to a certain category, however, they generally consist of demographic elements such as age, gender, or education (Rogers, 2003). On the other hand, homophily in the social networks arise due to shared group interests rather than individual-level similarities (Brown, Broderick, & Lee , 2007). In other words, consumers tend to have homophily with social network sites whose content seize their attention and serve their best interest. In such networks, like Twitter, the information is more important than precisely who provides that information.

Therefore, social networks keep one step ahead of individuals who are members of those sites.

The effects of social network sites on tie strength are similar to homophily. Tie strength is defined as the "closeness of the relationship between information seeker and the source" (Brown, Broderick, & Lee , 2007). Taking the word-of-mouth interactions from their regular environment to online networks, the individual-level elements lose their importance. In real life, interpersonal word-of-mouth activity and trust increase with stronger tie strength. In viral marketing, the case converts from interpersonal to "between user and the social network". People tend to strengthen ties with specific social network sites, instead of other people. Stronger ties promise more frequent interaction and more information exchange (Brown & Reingen, 1987). The tie strength between an individual and a social network arises because of the "information source" identity of that social network (Brown, Broderick, & Lee , 2007). An individual no longer seeks for another single individual to enter into word-of-mouth interactions. Instead, they look up for the information they need in the entire social network, with which they have strong ties. Using this assumption in the viral marketing case, stronger ties lead to visiting the social network with stronger ties more frequently. Consequently, an individual is likely to enter into word-of-mouth actions and likely to trust information from such sources if that individual has stronger ties with a social network. In addition, due to this frequency of interaction, people with stronger tie strength tend to influence each other more than the ones with weaker tie strength. Also, decreasing tie strength between an individual and a social network site may cause third-person effect to arise; which is the belief that media always influences the others around them, more than themselves. In other words, according to third-person effect theory, people have a tendency to perceive media to affect each one at different levels; and they are always influenced less (Zhang & Daugherty, 2009). There is obviously some immersion of ego and perception of

oneself as more knowledgeable than others. Third-person effect makes individuals rely on that they are less prone to accepting information as it comes.

The homophily and tie strength concepts, even if they arise from and match with the word-of-mouth logic in traditional sense, are still useful in explaining the same logic for electronic circumstances. Along with the source's reliability, the social network site also plays a crucial role in word-of-mouth participation. And in the light of these concepts, reliability of social network sites will also be analysed in the study. An increasing electronic word-of-mouth participation with the increasing reliability of the social network site is expected to exist. The measurements will be made for Twitter, Facebook, and through the comparison of each to see the reliability of Twitter by itself and to see if the comparison has an effect.

4.3.2. Level of Individual in a Social Network

"Not all social networks are equal, and not all individuals in a given social network have equal influence" (Allsop, Bassett, & Hoskins, 2007). Considering the social networks, we can easily suggest that the more frequently used and the more popular a social network is; more prone to an individual would trust to the word-of-mouth messages from that social network. Similar to Facebook, Blogger, or LinkedIn; Twitter can also be accepted as such a trustable social network nowadays.

The hypothesis about the level of individual in a social network is that, the diffusion of a word-of-mouth message would be higher and faster with a higher level in a given social network. As the proportion of the "number of accounts followed by a single user" to "number of followers of a single user" decreases; the level of that specific user increases (Fogel, 2010). In other words, following fewer accounts compared to the average, and being followed by higher number of accounts again compared to the average is more prestigious in Twitter, instinctively. Subsequently, with higher levels in Twitter, an individual's word-of-mouth messages would be more convincing to its

followers; therefore spreading faster and to more people, compared to a word-of-mouth message of a lower-level Twitter user.

In addition, level of an individual in a social network could possibly be also determined by the demographic elements, especially in a given subject. Forum-like networks, rather than Twitter, are more prone to have individuals' levels determined by demographic variables because of the common subjects discussed in such networks. Specifically gender differences stand out among all demographic elements, when it comes to those demographic elements' effects on specific topics, such as vehicles, computers, personal care, or nutrition (Allsop, Bassett, & Hoskins, 2007). This will be further discussed in the "Product Category" factor.

4.3.3. Network Usage Efficiency

Social networks are founded for different reasons in detail, but in general, each of them aims to bring people together. Even though most of the social network sites' theme is different from each other, in all of them people communicate with other people they already know and meet new people according to their fields of interest. In Twitter, individuals declare their opinions, and share some news maybe in 140 characters and an individual user may follow the people and accounts he/she is interested in; and see their tweets on his/her timeline. In Facebook, individuals become "friends" by connecting their accounts, share photos, links, life events such as graduation, a new job, weddings, even tattoos. Adding people already known in real life or adding new people and meeting them online is an option up to the user. LinkedIn is a good example to the classification of social network sites in terms of shared interests. LinkedIn provides the users the chance to connect with all of their previous and current associates, and also the possibility to make new career connections and set up new networks in their business environments.

As mentioned before, this research study focuses on the listener's sharing moment as the word-of-mouth spot. To prompt the listener to get involved in word-of-mouth, the source's network usage must be convincingly efficient. Going back to traditional word-of-mouth, more sociable people, or people who are seen more frequently tend to be trusted more by the listeners. The case is no different in electronic word-of-mouth. A source using his/her social network site profile more efficiently tends to be more reliable and his/her tweets are more likely to be retweeted. Social networks, as sources of information or word-of-mouth messages, are prone to be recognized as credible when the website itself is perceived to be trustworthy, and when the actors' (i.e. users) expertise about the website and competency about the information they provide increases (Brown, Broderick, & Lee , 2007). Especially in Twitter, it is important to tweet in some regular frequency (Jansen, Zhang, Sobel, & Chowdury, 2009). An individual user who appears in the timeline in equivalent intervals would be positioned in a relatively reliable place in his/her followers' mind holding all other factors constant. Aside with frequency in tweeting, higher number of followers is also an important factor increasing the listener's likelihood of retweeting. Comparing two users writing more or less the same tweets; the one with more followers would be perceived more reliable and a more efficient user of the network. High number of followers creates an image of "tweeting so good that followed by such high number of followers have already followed this user." All in all, the hypothesis about network usage efficiency is that, a more efficient network user is more likely to be retweeted.

4.3.4. Psychological Condition

When psychological condition is mentioned, the psychological condition of the listener is meant in this study. As the retweeting, i.e. sharing moment is accepted as the word-of-mouth spot, psychological condition of the listener matters more than the one of the source. Also, social network sites allow word-of-mouth messages to stand longer times and reciprocity becomes redundant. Therefore, at the moment of

listener's receiving the message, the source had already wrote the message and moved on. The listener can see the message right at the moment of sharing or even months later.

According to Dichter (1966), "role of intention" plays a very important role for the psychological condition of the listener. The three main categories of these intentions which arises the buying decision are: "disinterested" friendliness, community of consumership, and commercial authority. In the *"disinterested" friendliness* category, listener knows that the source is free from material benefits for sending the word-of-mouth-message, and seeks to improve the conditions of the listener. *Community of consumership* is formed through possessing the same product or receiving the same type of service. *Commercial authority* can be defined as the sales people that take advantage of their position to build an authority on the ordinary listener. Disinterested friendliness is the core of word-of-mouth and also of electronic word-of-mouth. Even if a listener does not personally know the source, he/she assumes that ordinary users are individuals just like him/her –and those individuals do not seek monetary rewards for talking or tweeting about a product (Dichter, 1966). Apparently commercial firm accounts are not the case discussed here. Consequently, the first hypothesis related with psychological condition is if the listener's perception of his/her well-being sought by the source increases, the word-of-mouth activity also increases.

This is one dimension of psychological condition in word-of-mouth. Another dimension arises as traditional word-of-mouth transforms into electronic word-of-mouth: the need to collect more followers (Hughes, Rowe, Batey, & Lee, 2012). Every individual has the need to be appreciated. On the Internet environment, and more specifically on social network sites, this appreciation is reflected as likes, favourites, etc. Especially on Twitter, one of the main intentions of most of the users' (except for the ones with private accounts) is getting more followers and sharing their

opinions to more people at once. The simplest way to gain more followers is to be retweeted. As one user retweets a tweet, this tweet falls into the timelines of other users who do not follow the owner of that tweet but follow the user who retweets. If the user is interested in what he/she sees in the tweet, he/she may look up to the profile of the owner of that tweet. After a quick judgement, the owner, whose tweet is retweeted, probably receives a follower more. So, we can understand and reach to the conclusion that with some exceptions, all users want to get more followers and therefore they pay attention to writing tweets that are more likely to be retweeted. Tweeting with a hashtag also has a huge potential of gathering followers. Hashtags are simple titles that spot essential keywords or topics in a tweet, and are denoted by the symbol "#". Writing a hashtag in a tweet enables the individual to participate in an ongoing debate and declare opinion about it. The most important benefit of a hashtag is that through a hashtag, one can follow all tweets written about that simultaneously; especially the users who are not followed and do not appear in the main timeline. Through appearing in a hashtag search, a user can simplify the follower gaining process. Consequently, the second hypothesis about the psychological condition factor is that if the likelihood of collecting more followers increases, an individual is more likely to participate in tweeting, retweeting, and hashtag activities on Twitter.

4.3.5. Personal Relevance

The decision making process involves a complex mixture of cognitive preferences and emotional benefits (Allsop, Bassett, & Hoskins, 2007). Why consumers prefer a certain brand in each product category cannot be explained only through their needs and how that brand meets those certain needs with its attributes. Emotional benefits and personal values also count in the brand preference decision. When a specific brand relates to a single customer through values, which are emotive, personal, and

inspiring; it could be said to have a high “personal relevance” to that customer (Allsop, Bassett, & Hoskins, 2007).

In each and every product category, personal relevance plays an important role in the buying decision making process (Brown, Broderick, & Lee , 2007). Even if two separate brands promise the same physical benefits to their customers by using their products, one of them could step forward with its personal relevance to the customer compared to the other. Personal relevance is also beneficial for the word-of-mouth dimension of the marketing activity (Richins, 1983). Personally relevant products to a customer are more prone to be involved in word-of-mouth activity. Since the personally relevant products mean more to customers, they are more likely to tweet about those products, or to retweet such messages.

As the personal relevance between the individual and brand increases, the individual’s tendency to follow the brand on Twitter and also Facebook increases too. Reading the tweets of the firm on Twitter and posts on Facebook reinforces the bond between the individual and brand even more, not to mention the promotional gifts won by the individuals on sweepstakes through involving in retweeting activities. The hypothesis about personal relevance is that an individual’s tendency to retweet a tweet about a more personally relevant product is higher than the one about a less personally relevant product.

4.3.6. Content of the Message

Word-of-mouth activity has important elements such as sender or receiver, which directly affects the whole process. Besides sender, receiver, and the relationship between them; the content of the message is very crucial for the word-of-mouth process. As message is the main influencer and the key spot of the word-of-mouth activity, what is said in this message also matters for the listener to get involved in sharing activities. A listener must either agree with the content of the message, or find

it interesting or funny even if she/he does not agree to share it to other people around her/him. This is one of the principles that is valid for traditional word-of-mouth, and also expected to be valid for electronic word-of-mouth too.

Different contents of the message content could lead to increasing word-of-mouth activity on Twitter. The diverse features of message content have been explored in the literature from very different aspects. For example, the message content characteristics can be categorized as "recommendations, usage descriptions, and explanations" in Granitz and Ward's research (1996). However, this research study was performed taking online discussion boards as basis. Such online boards are more close to classical word-of-mouth activity rather than viral marketing on Twitter and they are more alike social network sites and contains more dialogues. The types of message contents are given as "personal experience, advice, and product news" in Richins and Root-Shaffer's research study (1988). Mangold et al. (1999) showed a different approach in categorizing message content and took their "orientation" into consideration: quality-oriented, price-oriented, or value oriented. In another research, message characteristics are listed as "favourableness and valence, emotional aspect, and cognitive aspect" by Sweeney et al. (2012). Nevertheless, we should take social media into consideration beyond classical word-of-mouth, and we should also account for Twitter. For example, social media brings the aspect of including links in the message. In addition to social media aspects, Twitter provides its users with the ability to "retweet", i.e. sending the tweet of another user to your followers. Twitter, along with other social network sites, has changed the facet of word-of-mouth process in various means. Word-of-mouth, in its classical existence, happens to occur between small number of individuals, generally two (Arndt, 1967a). On the other hand, when an individual tweets about a product or a service, or retweets such a message; that message is assumed to be read by all followers of that individual user. The majority of the active Twitter users have more than one followers, and

considering the followers of those followers; the word-of-mouth activity could be said to have an massive exponential effect compared to the classical. Taking this features of Twitter into consideration, the message content categories must be redefined. These categories are: advisory content, humorous content, and diffusion-aimed content.

Advisory content investigates the common issue of word-of-mouth in the marketing literature: the difference between positive and negative word-of-mouth messages; based on the logic that advices would be either positive or negative. Word-of-mouth topic has too many debatable subtitles, but the negative message issue is not one of them. Almost all of the marketing researchers have reached a consensus on the proposition that negative messages diffuse much faster and are more effective compared to positive ones. Advisory content is studied in previous research studies (Richins & Root-Shaffer, 1988; Granitz & Ward, 1996). Tweets or retweets belonging to advisory content category contains negative or positive recommendations or opinions about a product or a service. Advice-giving behaviour happens due to personal experience with a product or a service. Individuals tend to share such experiences on Twitter to influence their followers either in a positive or negative direction. According to Granitz and Ward (1996), recommendations constitute most of the online word-of-mouth activity; but the research was studied on an online discussion board. There is not a certain study in the literature that proposes the same circumstance for Twitter. Sweeney et al. (2012) also recognizes the importance of informative messages in the category of "cognitive aspect". Advices about a product, service, or a brand could be roughly either positive or negative. The hypothesis of this study about advisory word-of-mouth messages is that negative advisory messages are more likely to be involved in word-of-mouth activity compared to positive (Katz & Lazarsfeld, 1955; Chevalier & Mayzlin, 2006).

Humorous content is also an important category for analysing word-of-mouth messages. Not only word-of-mouth messages, any type of messages on social network sites diffuse faster when humour is involved within. Still, humour is an important element for word-of-mouth. Humour steps forward as a category since it plays an important role in Twitter (Qiu, Lin, Ramsay, & Yang, 2012). Any social network site user can explain his/her idea simply by putting what is in his/her mind. Most of them does it this way indeed. But then, such messages are not very likely to be shared by other users, as they could simply be written by anyone. On the other hand, an individual is more prone to share a word-of-mouth message if his/her idea is written in a more humorous way. Individuals enjoy humour interpreted from the details of everyday life; and it is no different when individuals turn into consumers and everyday life turn into a product, service, or brand (Chung & Austria, 2010). Humorous content grabs attention in any case in social media, with or without marketing intentions. Individual Twitter users have a tendency to retweet tweets about a product or service if it contains humour; in other words, humour increases word-of-mouth activity regardless of the word-of-mouth message given in the case.

Diffusion-aimed content is more of a concept that consumers met with the introduction of electronic word-of-mouth. In its classical existence, word-of-mouth activity occurs between individuals and the aim of it is mainly sharing the experience about products or services (Dichter, 1966). However, in Twitter, individual users have the option of retweeting; and some individuals want their tweets to be retweeted and diffused to and read by the followers of followers, with such sentences as “RT please”. In some word-of-mouth messages, especially in the negative ones, sources of the message wants or requests from the listeners to share them to their followers. This notion arose during the era when e-mails were the main tool of communication on the Internet. Back then, the request was put as: “Forward this to your mail list, please.” Nowadays, this demand evolved to “Share this on your profile” on Facebook or “RT

please" on Twitter. The terminology may change, but the essence of this concept is the same: The sources of the word-of-mouth messages want their message seen by more and more people; they do not want the listeners to be limited by only their followers (in Twitter) or friends (in Facebook). Such desire is understandable considering the spirit of word-of-mouth and the difference of personalities among people. Twitter also provides the opportunity of communication between corporate and individual users (Jansen, Zhang, Sobel, & Chowdury, 2009). Therefore, Twitter offers the prospect to its both corporate and individual users to request their followers to disseminate their message. Also, since this study accept the word-of-mouth spot as the moment listener shares the received message, listeners would be more likely to share a message when they see the source's effort for diffusion. The hypothesis about diffusion-aimed content is: If a tweet contains diffusion aimed content, individuals are more likely to get involved in word-of-mouth activity.

4.3.7. Source of Message

Source, other than being a main influencer on the model, was also put as a determinant for message due to its direct effects on the message. Message, as mentioned before, is the main focus of this study and will be measured deeply and separately in the survey and also there will be a deeper analysis for message. As the message was categorised into separate contents to measure the effects of each, rather than taking message as a whole; different sources will also be made so. Even if the message is the same, word by word, on the social network site; from which source that message comes is expected to directly change the sharing likelihood of the source. To be accurate and to involve many types of sources, three different sources were defined for the analysis: a close friend, a celebrity, and an unfamiliar individual.

By close friend, the actual intention was acquaintances. Acquaintances could be expanded as friends or family members. The intention within "acquaintances"

categorisation is to imply that the individual knows that specific source in real-life. As the message analyses are made in sample tweets, close friend was selected to represent the general concept of acquaintances –families may not be involved in social network sites; and close friends could be from various environments involving more word-of-mouth activity. Families, by definition, still interact in real life and do not put social network sites in front of real life interaction. Therefore, word-of-mouth activities between and among the members of a family would still exist in traditional sense. On the other hand, friends keep an interaction through social network sites even if they do not see each other every day; and thus word-of-mouth activities between them are more likely to be carried to electronic environments (Wetzer, Zeelenberg, & Pieters, 2007; Sweeney, Soutar, & Mazzarol, 2012).

"Celebrities" are the celebrity accounts followed by an individual on Twitter in line with his/her interests, likes, and hobbies. The importance of celebrities is that Twitter made celebrities accessible (Boyd & Ellison , 2008). Before Twitter was initiated and so commonly used, it was not so easy to make a contact with a celebrity. With the continuously increasing popularity of Twitter, anyone can communicate with any celebrity using Twitter with just a reply. Also, celebrities, unlike standard users of Twitter, are declaring their real names and they are expected to be incontestably more credible compared to those standard users. First, most of these ordinary users use nicknames instead of real names. Second, and more significantly, celebrities have a reputation to protect, unlike ordinary users. Providing an unconfirmed or worse, incorrect information would be harmful to their reputation and decrease their persuasiveness. Therefore, it can be simply suggested that celebrities are more reliable sources of word-of-mouth-related messages (Allsop, Bassett, & Hoskins, 2007; Kaplan & Haenlein, 2010) and therefore an individual is more likely to retweet that specific celebrities' tweets.

A final alternative source was put in the research as an “unfamiliar individual”. In the traditional sense, the word-of-mouth conversations exist between two or more individuals that know each other, even if in the levels that are least possible. A word-of-mouth message would be simply ignored in traditional word-of-mouth by an individual. However, social network sites, especially Twitter, changed this aspect remarkably. An individual follows accounts of other individuals that are unfamiliar in real life due to many reasons, for instance simply because they find their tweets interesting, or they share a common interest such as politics or sports. Seeing and reading that user’s tweet every once in a while, that source may somehow have a noteworthy level of reliability in the listener’s eyes despite being unfamiliar in real life. This research study aims to see if the case is so.

It is important to note that, rather than expecting an increase or decrease in word-of-mouth participation likelihood, these sources were put into the research to see if they have the adequate power to change it.

4.3.8. Product Category

Products and services are indeed unique by the experience they offer to the customers. Even two identical products provided by two different brands are perceived separately by the customers; basically due to the brand image created by the firm, which prompts the “different experience” perceptions. Putting customer perceptions aside, there are unalike reactions from different groups of people to the same product. Measuring and analysing customer reactions to each product, case-by-case, would be one solution to the issue; but would not be a quite practical one. Such analysis could be suggested to a research which studies only and deeply the relationship between the likelihood of participating in the word-of-mouth activity and product types. However, this study has many other variables and issues, and aims to grasp a general rationale behind the likelihood participating in electronic word-of-

mouth activity in social network sites. Therefore, products and services are not analysed case-by-case but studied in categories instead.

Categories are formed taking a certain separation into consideration. The lines between product and service categories should not be blurred, i.e. one product or service should not coincide with two product or service categories. For the sake of the research, the categories are narrowed down to these: Automobile – automotive, banking – financial services, education, home decoration – design, food – restaurants, clothing – textile, beauty or treatment products, beverages, communication services (Internet, GSM, etc.), media – entertainment, healthcare services, travel – transportation services (airlines etc.), sports, and technological devices. Some of these are more popular in social network sites compared to others. For example, food and dining is a very popular subject of word-of-mouth conversations; albeit technology and media are perceived as "interesting" topics by the customers overall (Keller & Libai, 2009). Not all of the categories but some of them are likely to be shared and retweeted by some types of individuals. By type, demographic features are meant. Gender and age are the demographics that are in the area of interest of this study and measured in the survey. The listener, the user who shares the received message and realizes electronic word-of-mouth, is more related to some categories depending on which gender and age category he/she belongs. Certain types of demographics are directly related with being interested in certain categories of products and services. For instance, females are apparently more involved in beauty and treatment products, while men are into sports or automobiles. Or else, for example, younger people are more related with media and entertainment, while older ones are into healthcare services.

The important point that must be noted here is that not all product or service categories come to forefront for a certain type of demographic (Arndt, 1967a; Richins, 1983; Bansal & Voyer, 2000; Podnar & Javernik, 2012). Some are related

with certain demographics by their nature so that they do not even need to be proved by a research. Therefore, the aim of this research is to identify exactly which product or service categories are related with gender or age demographics.

Accordingly, the hypothesis related with product category is that there are various associations between some product or service categories and certain demographic attributes.

4.3.9. Familiarity with the Product/Service

Familiarity may simply mean whether the individual has used the product or not. Or, it may address the frequency of usage, the more frequently an individual purchases and uses a product, the more familiar he/she is. Regardless of which definition is chosen, the hypothesis is the same: If the familiarity of the individual with a product increases, the word-of-mouth activity of that individual in Twitter also increases; by either tweeting about that product, or retweeting those tweets of other users.

If the listener has no familiarity with a product or service, there would occur a tendency to seek word-of-mouth information especially about new products and services during their purchasing decision phase (Rogers, 2003; Vettas, 1997). However, in this research study, the "retweet likelihood" is studied. In other words, individuals' tendency to retweet a message that is about a product or service is being measured.

Here, it should be noted that the "familiarity effect" does not end up in different situations depending on whether the message is negative or positive. Either negative, or positive; the likelihood of word-of-mouth activity increases with a more familiar product.

Familiarity's existence and absence has remarkable effects on word-of-mouth participation tendency (Sweeney, Soutar, & Mazzarol, 2012; Allsop, Bassett, &

Hoskins, 2007; Chung & Austria, 2010). Its absence is not directly related with this research study, since it leads to "seeking" information about the unfamiliar product or service. This study's main focus is on a listener who shares the received word-of-mouth message on online social networks, rather than a listener seeking for the related information about a brand new product.

All in all, there are 14 hypotheses of this research study to be tested through analysing the results derived from the survey. These hypotheses are listed as such in sum in a table:

Table 1. ***The Hypotheses and the Corresponding Determinants***

No.	Hypothesis	Determinants
H1a	The accounts owned by people who are familiar to an individual at real life are prone to be more reliable compared to the rest of the accounts followed.	Reliability
H1b	Tweets containing a word-of-mouth message have more likelihood of being retweeted provided that it comes from a celebrity.	Reliability
H1c	As the credibility of Twitter increases, the credibility of corporate Twitter accounts increases.	Reliability
H1d	The social network site and its reliability has an effect on the word-of-mouth participation of an individual.	Reliability
H2	The diffusion of a word-of-mouth message would be higher and faster with a higher level in a given social network.	Level of Individual in a Social Network
H3	With higher network usage efficiency, it is more likely to receive retweets for word-of-mouth messages on Twitter.	Network Usage Efficiency
H4a	The retweeting tendency of a listener increases provided that the source is not seeking for material benefit.	Psychological Condition
H4b	Participation rates in word-of-mouth increases with the possibility to collect more followers on Twitter.	Psychological Condition
H5	Increasing personal relevance between a brand and an individual correspondingly increases the likelihood of retweeting the tweets about that brand.	Personal Relevance
H6a	Electronic word-of-mouth messages with negative advisory content are more likely to be retweeted compared to positive.	Characteristics of Message
H6b	Humorous word-of-mouth messages are more likely to be retweeted compared to those which are not humorous.	Characteristics of Message
H6c	Diffusion-aimed word-of-messages are more likely to be retweeted compared to those which are not diffusion-aimed.	Characteristics of Message
H7	The reactions of individuals from different demographic aspects are not the same for different product categories in terms of retweeting likelihood.	Product Category
H8	The likelihood of retweeting a tweet about a product or a service increases with the familiarity with that product or service.	Familiarity with the Product/Service

CHAPTER 5

DATA COLLECTION AND ANALYSIS

5.1. Data Collection and Survey

The hypotheses were tested through the data from a survey that was distributed online. Online distribution was preferred due to multiple reasons. First of all, it was suitable to the *spirit* of the study: online word-of-mouth. Sharing and spreading the link on the social network sites, the survey has reached to people who could not receive it on the first hand. The link of the survey was shared on Twitter, Facebook, Tumblr, Blogger, and Google Plus. While sharing the link, the potential respondents were not only asked to complete the survey, but also asked to share it again on whichever social network site they encountered the link. Once the link was pushed through these social network site channels, they were shared again and again by the sharing tools of that social network site; i.e. retweeted on Twitter, or reblogged on Tumblr, and so on. Second reason of online distribution preference was that it would be more efficient compared to handing a printed survey to real-life participants. The efficiency is demonstrated in the social network site usage. Collecting a useful number of efficient social media users in real-life would not be possible. Also, considering this study is sort of comparing Facebook and Twitter; finding social media users that use both social network sites efficiently would be harder, even impossible. Instead, sharing the survey link in online environment would simply meet the survey with current efficient social media users, without additional efforts. Final and the simplest reason of online distribution is it would reach more number of respondents. Even if all respondents that started the survey did not end up finishing it (and this could be seen from the survey site), the number of completed surveys was

satisfying. Such numbers were not easy to be reached with real-life distributed surveys.

The survey was created and distributed through a survey site named SurveyGizmo. This website was especially preferred because it allowed collecting endless number of results for university students. It also provided assigning random questions to random respondents, which is essential for this survey and such questions will be explained later on.

While forming the survey questions, the main measurement aim is the perception of individual users about Twitter, and the different message characteristics' effect on word-of-mouth activity. Perception about Twitter will be measured through the definition of "homophily" and "tie strength" variables together. These variables are used together because they are simply in line with each other: they are both built upon the assumption of social networks' information source identity. As mentioned before, viral marketing took the homophily and tie strength variables from interpersonal level to "between individual and social network" level. Message characteristics will also be the main variable of our surveys, since different sort of contents are expected to influence the word-of-mouth activity directly.

The message characteristics fall into three separate content categories: advisory content, humorous content, and diffusion-aimed content. These content types were provided as separate tweets and Facebook statuses to the respondents and they will be asked to evaluate those tweets and Facebook statuses in terms of their word-of-mouth involvement likelihood. Each content type were presented as either tweets or Facebook statuses, so that the measurement were made about both message characteristics and social network site. Facebook has been selected to make comparisons with Twitter because it is as much, or even more widespread as Twitter,

and the simple assumption that the two social network sites have equivalent reliabilities is acceptable.

The questions about other variables were provided under the sample tweets and statuses in likert scale, and were measured as covariants. Those questions will not involve any sample tweets or stasuses, they will be only measuring the opinions about word-of-mouth involvement likelihood of the respondents with simple likert scale measurements.

5.2. Questions

The first set of questions was designed to measure the reliability perceptions of respondents about Facebook and Twitter. Five questions were asked about reliability of the social network site and its users, and expressing ideas and sharing tendencies. Each question was five-point likert scale and the respondents were asked to give a degree on the likert scale both for Facebook and Twitter. The preference of this sort of questions enables comparison of two sites for each question, and also the comparison in total. These questions were indeed measuring the homophily and tie strength variables as mentioned above.

The second set of questions was measuring another variable: message characteristics. As mentioned above, there were three types of word-of-mouth messages: advisory, humorous, and diffusion-aimed. Sample tweets were either written properly to its category, or taken from a Twitter user's profile with his/her permission. For each type of message, the sample tweets were written or taken for the same industry and product so as to prevent other variables to participate in respondents' decisions. With different industries and different products, personal experiences and perceptions may lead to answering with other bias rather than measuring the type of message. Two different sample tweets were given to respondents for each message type. The sample tweets for advisory content, for example, were one positive and one negative; about

the same industry. Humorous type was measured with two tweets that propose the same idea, one with a humorous and other with a serious style of writing. Diffusion-aimed type messages are very common in social network sites. In many occassions, users want their word-of-mouth message to be distributed by other users as well; so that this message reaches more and more users. This could be because they believe their message is urgent, important, or else. The third part of this question set measures the difference in the respondents' tendency of sharing between diffusion-aimed messages and plain messages.

These second set of questions were also provided as if they were coming from three different sources: a close friend, a celebrity, or an individual user that is not known in real life. With the help of the survey site, random assignment was implemented on the survey. The respondents were divided into three groups randomly by the survey engine. A respondent has 33.33% chance of seeing the sample tweets coming from a close friend, a celebrity, or an unfamiliar user. This aspect was designed to measure the source's effects on the word-of-mouth reliability and diffusing tendencies.

All these sample tweet type of questions were presented again as five-point likert scale questions. After evaluating the retweeting tendency on Twitter, respondents were asked to again evaluate the sharing tendency on Facebook with definitely the same questions and the same source. In other words, each respondent has seen all types of message characteristics questions with 6 questions for Twitter, and 6 for Facebook; but through random assignment, one respondent only saw one source, either close friend, celebrity, or unfamiliar user. Like in the first set of questions measuring homophily and tie strength, Facebook was also added in the second set of questions measuring message variable in order to see if the answers are only valid for Twitter or also valid for all social network sites. For Facebook questions, the survey was polished a little: "statuses" were used instead of "tweets", "tendency of sharing this status on your Facebook profile" was used instead of "tendency of retweeting",

and in the diffusion-aimed sample, “Please share this on your profile” was written instead of “RT please.”

The remaining part of the survey measures the covariants and demographics. A third set of questions were created to measure if there is a correlation between word-of-mouth activity and different product categories. The retweeting tendencies were asked to degree on a five-point likert scale to the respondents for each product category. The next set of questions was created to measure the remaining covariants in the model, such as third-person effect, or network usage efficiency. 18 questions were asked to the respondents, again in a five-point likert scale. In the final part of the survey, respondents were asked to provide their demographic information without any personal information. Here, they were also asked to give their intervals of follower and following numbers on Twitter.

CHAPTER 6

FINDINGS AND RESULTS

6.1. Descriptive Statistics

There are 372 participants in the online survey. All of these participants filled the survey from the online survey form distributed through above-mentioned social network sites.

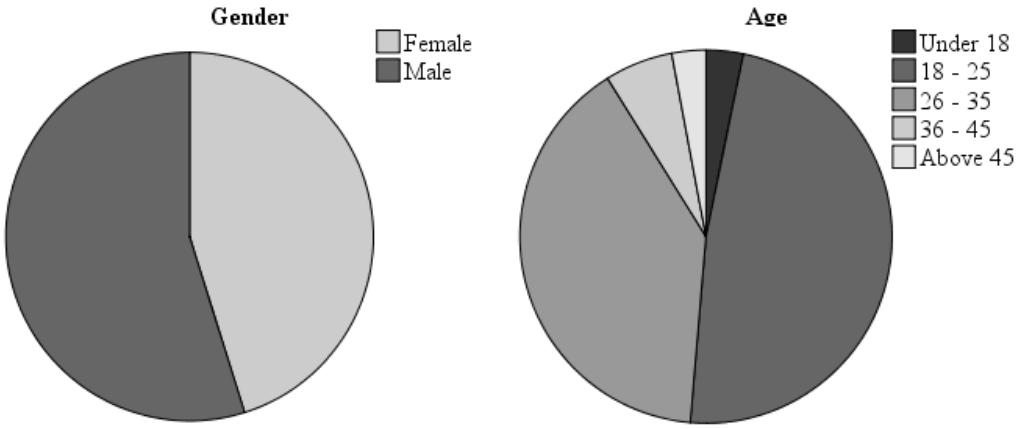

Figure 2: Gender and Age Distributions of the Sample in Pie Chart Demonstration

To start with simple numerical results and to have an overview of the respondents' overall profile, the results of the final part is shared first. Out of these 372 participants, 168 were women, and the rest 204 were men; i.e. women constitute 45.2% of all participants, while men constitute 54.8%. Accepting there is not an equal distribution, still we can intuitively conclude that the gender distribution is fine enough in terms of equality.

Gender is one demographic variable. The other is age. The question of age was given to respondents in five options, each as an interval: Under 18 years old, 18 – 25, 26 – 35, 36 – 45, or 45 and older. The relative equivalence in gender distribution is not applicable for the distribution rate in age. The number of participants younger than the age of 18 is only 12, and they form 3.2% of all. The largest share of age distribution is taken by the 18-25 interval; it is constituted by 179 participants, which corresponds to 48.1% of all –almost half of all of the respondents. This can be accepted as a high percentage while not surprising at all; social media is known to be used by younger generations in general. The 26 – 35 age interval also constitutes a considerable percentage in the entire survey responses: 39.8%; and this percentage corresponds to 148 respondents. The respondents between the ages of 36 and 45 are 22 in number, and they are 5.9% of the total respondent number. The last interval is people older than the age of 45, who are 11 in total, and only 3% of the respondents. 18-25 age interval with 26 – 35 are the most remarkable and high numbered intervals; in total, they correspond to 327 of 372 respondents, i.e. 87.9% of all respondents.

Another question was about the number of accounts followed by the user, again given in intervals: 0 – 9, 10 – 49, 50 – 99, 100 – 199, 200 – 499, 500 – 999, 1,000 or more; 7 intervals in total. Such high number of intervals was given for the sake of reliability, as the number of accounts followed changes and reflects the use of Twitter. The least selected options were 0 – 9 (with 32 respondents) and 1,000 or more (with 5 respondents) intervals. This is a comforting result since following such excessively low or high number of accounts would lead to being unable to access word-of-mouth messages, or an extremely crowded Twitter timeline making word-of-mouth messages inaccessible, respectively. The number results of remaining interval are as such: 10 – 49 interval has 55 respondents with 14.8%, 50 – 99 has 88 respondents with 23.7%, 100 – 199 has 101 respondents with 27.2%, 200 – 499 has

75 respondents with 20.2%, and finally 500 – 999 interval has 16 respondents with 4.3%.

Such dominant intervals are not valid when following numbers are checked. The number of followers is retrieved again in intervals and the intervals are just the same as the former question, the number of accounts followed; with one exception: 2,000 or more followers are added as a final interval. This addition aims to distinguish the users that have tens of thousands of followers and followers with 1,000-something. 10 – 49 interval has the highest share with 21.2%, or 79 participants, and it is followed by 50 – 99 and 100 – 199 intervals, with 20.7% or 77 participants. Lowest share apparently falls to 2,000 and more interval with 0.8%, or 3 respondents. The rest of the intervals provide such numbers: 0 – 9 has 9.4% or 35 respondents, 200 – 499 has 17.5% or 65 respondents, 500 – 999 has 7% or 26 respondents, and finally 1,000 – 1,999 has 2.7% or 10 respondents.

The final question of this part of the survey is questioning the respondents' average tweet number written per week. Four intervals are given: 0 – 10, 11 – 50, 51 – 100, and 101 and more. 185 of the respondents (49.7%) write 0 to 10 tweets per week, 109 of the respondents (29.3%) write 11 to 50, 43 of the respondents (11.6%) write 51 to 100, and 35 respondents (9.4%) write 100 or more tweets per week. Even if the frequency distribution in this question is not equal for each option, the results and the percentages are understandable.

6.2. Analysis

6.2.1. Factor Analysis

Considering the complexity of the model, there were not only one but multiple factor analyses. Instead of putting all determinants in one analysis, determinants were

separated according to the variables they belong; and factor analyses were conducted based on these groups.

6.2.1.1. Source

The first factor analysis was conducted for the source determinants: Reliability, level of individual in a social network, and network usage efficiency. A principal component analysis (PCA) of 8 likert scale survey questions was conducted with oblique on a data from 372 participants. The Kaiser-Meyer-Olkin measure confirmed the sample adequacy with KMO = .78, and each KMO value were separately > .58, excessing the adequate level of .5. Bartlett's test of sphericity χ^2 (28) = 804.966, $p <$ 0.001, therefore the correlations between items are large enough for PCA. As the factors with loadings less than 0.50 were omitted, the PCA generated a two-factor result.

Table 2. ***Factor Analysis on Source***

	Component	
	SNS Use	Reliability
Network Usage Efficiency – Question 7	**.806**	.011
Level of Individual in a Social Network – Question 5	**.786**	.006
Level of Individual in a Social Network – Question 6	**.774**	-.153
Network Usage Efficiency – Question 8	**.759**	.015
Reliability – Question 2	**.584**	.252
Reliability – Question 1	-.238	**.725**
Reliability – Question 4	.170	**.649**
Reliability – Question 3	.323	**.587**

The first factor included survey questions that are related to *level of individual in a social network* and *network usage efficiency* determinants. It is understandable that these two determinants were grouped together in one factor, as both of them are examining the issues related with the use of Twitter and social network sites in general. Unexpectedly, one question about reliability was matched with the factor about social network site use; but it should be noted that this question was about

celebrities and their reliability in social network sites unlike other reliability questions about the social network site itself or anonymous or real-life sources. Even if not as much as reliability, celebrities are also attached with social network site use; as ordinary individuals get to have an intense contact with celebrities on social network sites that they cannot have such a chance in any other channel. Additionally, this factor about *level of individual in a social network* and *network usage efficiency*, has a high reliability, Cronbach's $\alpha = 0.811$.

The second factor, as it can be seen above, involves questions related to *reliability* determinant of the source variable. In these questions, respondents were asked to evaluate the changing levels of reliability of a word-of-mouth message according to the facts such as knowing the source in real-life, reliability of a corporate account, and the assessment of the reliability of the social network site (especially Twitter). However, *reliability* as a factor has low reliability, Cronbach's $\alpha = 0.448$.

6.2.1.2. Listener

This time, the factor analysis was conducted on listener determinants: Psychological condition, and personal relevance. Again, a PCA was conducted on 6 items this time with varimax rotation using the data from 372 participants. The Kaiser-Meyer-Olkin test results verified the sampling adequacy of this analysis, KMO = .73, and each KMO value for the items separately were > .64, remarkably above the acceptable level of .5. Bartlett's test of sphericity χ^2 (15) = 1220.975, $p < .001$, supporting sufficiency of the correlations between the items. The PCA provided with a two-factor result as expected.

Table 3. ***Factor Analysis on Listener***

	Component	
	Psychological Condition	Personal Relevance
Psychological Condition – Question 9	**.968**	-.075
Psychological Condition – Question 10	**.954**	-.035
Psychological Condition – Question 11	**.697**	.144
Personal Relevance – Question 13	-.074	**.922**
Personal Relevance – Question 14	.071	**.846**
Psychological Condition – Question 12	.025	**.808**

The first factor included questions only related to the determinant of *psychological condition*. These questions examined the respondents' attempts to gain more followers so that they can address to more people, i.e. an issue about the self-esteem of the user. The *psychological condition* has high reliability, Cronbach's $\alpha = 0.856$.

The second factor grouped the *personal relevance* questions together expectedly, and included a *psychological condition* question unexpectedly. However, this separate question related with the *psychological condition* determinant was about a different dimension of it. It questioned the genuineness of the message and assessment of the listener to understand if the message was profit-aimed or not. Therefore, even if it is unexpected, it is not a destructive outcome to see it was not included with the other *psychological condition* questions examining the efforts of users to collect followers. *Personal relevance* as a determinant of retweeting likelihood also has high reliability, Cronbach's $\alpha = 0.827$.

The rest of the questions in the likert scale section of the survey were not put in factorial analysis. Among four variables of source, listener, message, and product or service; message has a separate set of questions due to being the main focus of this research study, therefore not needing a factor analysis as for source or listener. The other variable that is not put in a factor analysis is product or service. The reason for this extraction is the *product category* determinant's different set of questions. These

categories were evaluated in terms of retweeting likelihood by the participants in a different set, so they cannot be put in the same factor analysis with the standard likert scale questions assessing the other determinant of the product or service variable: familiarity with the product or service. As there is only one determinant of product variable exists in the likert scale set, there is no need to put that in a factor analysis to separate into its factors.

6.3. Hypotheses

6.3.1. Source

6.3.1.1. Reliability

In this stage of the research study, each hypothesis is tested with the help of the SPSS software, using the results of the online survey.

H1a: The accounts owned by people who are familiar to an individual at real life are prone to be more reliable compared to the rest of the accounts followed, and therefore more likely to be retweeted.

This hypothesis is a relatively less important one among all; therefore it was not processed through multiple questions in the survey and deep analysis afterwards. The hypothesis was tested through one question in the survey (along with other questions about reliability measuring the remaining hypotheses, again about reliability). The results of descriptive analysis made through SPSS were as such: 140 of the participants totally agreed, 128 of them agreed, 50 of them neither agreed nor disagreed, 25 disagreed, and 29 totally disagreed. Putting it differently, 37.6% of the participants totally agreed and 34.4% agreed with the statement, which makes 72% in total; remaining a 18% of both disagreeing and indecisive participants. Accordingly, the mean is 2.13 (SD = 1.212) on a likert scale from 1 (totally agree) to 5 (totally disagree). The mean value is visibly closer to the positive end from the negative end,

considering the midpoint of 3 (neither agree nor disagree). Putting these all together, it could be said that the data from the survey supports the hypothesis. These results were also tested by one sample t-test in SPSS, testing the difference of results from the midpoint of 3 to measure the participants' tendency to one side or another.

Table 4. ***One-Sample Test Results of Reliability of Real Life Acquaintances on Social Network Sites***

Test Value = 3					
t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
				Lower	Upper
-13.902	371	.000	-.874	-1.00	-.75

The one-sample test results, shown above in Table 3, support the hypothesis that individuals familiar to the user in real life are more reliable on social network sites; $t(371) = -13.902$, $p < 0.001$.

H1b: Tweets containing a word-of-mouth message have more likelihood of being retweeted provided that it comes from a celebrity.

This hypothesis is again processed and analysed through one question in the survey. The question was in a 5-point likert scale form. The results derived from the answers of the respondents are as such: 25 of them completely agreed with the proposal, 37 of them agreed, 71 neither agreed nor disagreed, 82 disagreed, and 157 of them completely disagreed. From another point of view, 42.2% of the respondents totally disagreed, and 22% disagreed with the idea that celebrities are more reliable compared to the average users; making a total of 64.2% of all who gave sort of a negative vote to the proposal. The mean is 3.83 ($SD = 1.261$), which falls to the negative side of the likert scale where the value 1 means completely agreeing, 5 means completely disagreeing, and 3 is the midpoint.

Table 5. ***One-Sample Test Results of Reliability of Celebrities on Social Network Sites***

Test Value = 3					
t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
				Lower	Upper
12.701	371	.000	.831	.70	.96

The reliability of celebrities were also tested with a one-sample t-test, setting 3 as the test value due to its midpoint undertaking in the related 5-point likert scale survey question. Despite having (M = 3.83), which means participants do not agree with the statement, it should be noted that the difference is significant, $t(371) = 12.701$, $p < 0.001$.

H1c: As the credibility of Twitter increases, the credibility of corporate Twitter accounts increases.

The reliability of corporate accounts was measured by two different 5-point likert scale questions in the online survey. The first question measuring the reliability of Twitter in terms of information-giving and advertising aspects has a mean of 3.24 (SD = 1.279), indicating that the participants slightly disagree with the statement. Of the 372 participants, 10.8% totally agreed, 18% agreed, 30.4% neither agreed nor disagreed, 18.5% disagreed, and 22.3% totally disagreed. The residual question measuring the priority of Twitter in information gathering and communication with the firms has a mean of 3.15 (SD = 1.437), again falling into the disagreeing side of the 5-point scale. For this question, 18.3% completely agrees, 16.9% agrees, 21.8% neither agrees nor disagrees, 18% disagrees, and 25% completely disagrees.

Table 6. ***One-Sample Test Results of Reliability of Celebrities on Social Network Sites***

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Information-giving and advertising aspects	3.566	371	.000	.237	.11	.37
Information gathering and communication aspects	1.948	371	.052	.145	.00	.29

The first question about the reliability of information-giving and advertising aspects of corporate accounts has a significant difference, despite being contrary to the hypothesis, $t(371) = 3.566$, $p < 0.001$. The second question about the reliability of information gathering and communication aspects of corporate accounts neither has a mean that falls into the agreeing side nor has a significant difference, $t(371) = 1.948$, $p = 0.052$, $p > 0.05$.

6.3.1.2. Social Network Site Reliability

H1d: The social network site and its reliability has an effect on the word-of-mouth participation of an individual.

The analysis of social network sites is made based on the set of questions on the survey that are asked separately for Facebook and Twitter. These five questions were aimed to address the various perceptions about these social network sites while comparing them in each sense. While there will be a correlation and regression analysis to be made; these will only be based on Twitter, as it is the centre of the study for the social network site role. On the other hand, for each aspect, there will be a Twitter and Facebook comparison.

First question addressed the perception of individuals about the influence of the advertisements on each social network site compared to the influence of classic advertisements, such as TV or newspaper ads. While the participants evaluate Facebook slightly more influential (M = 3.13, SD = 1.321) than Twitter (M = 3.18, SD = 1.287); the difference turned out not to be a significant one in the paired-sample t-test; $t(371) = -0.798$, $p = 0.425$, $p > 0.05$. Also, as the values are higher than the midpoint of 3 for the five-point likert scale, it could be said that individuals do not generally agree with such an influence compared to classic advertisements.

Second question of the set was about the individuals' evaluation of reliability of other individuals as users of the social network site, other than their reliability in real life. In other words, the question was put in the analysis to see if the use of social network site changes the reliability of an individual. For this question, participants have a tendency to agree with the suggestion that individuals are not reliable as social network site users just because they are reliable in their real life; not only for Twitter (M = 2.95, SD = 1.201) but also for Facebook (M = 2.84, SD = 1.222). Subsequently, a paired-sample t-test between Twitter and Facebook shows that the difference between the two social network sites in this sense is significant, $t(371) = -2.745$, $p = 0.006$, $p < 0.05$. Even if Facebook users' reliability is questioned significantly more by the participants, the difference of the reliability perceptions between real life and social network sites are applicable for both Twitter and Facebook, derived from the average values less than the midpoint of 3 in the five-point likert scale, showing the positive tendency towards agreeing.

The third question aims to see if the word-of-mouth participation increases with the higher frequencies of usage. Unlike the former questions, the social network sites contradict with each other for this question. Participants agree with such correspondence between usage rate and tweeting frequency for Twitter (M = 2.73, SD = 1.279), while they tend to disagree with it for Facebook (M = 3.17, SD = 1.243).

Besides falling into the two sides of the midpoint on the likert scale, the difference between Twitter and Facebook is also significant, $t(371) = 7.239$, $p < 0.001$. In summary, individuals have increasing tendencies to tweet or retweet about a product or service if they use Twitter more frequently; but frequent usage of Facebook does not lead to writing status updates or sharing links with a word-of-mouth content.

The fourth question of the set was addressing the increasing tendency to participate in word-of-mouth if the subject is contemporary or popular at the moment. Participants, for this question, agree with such tendency, for both Facebook ($M = 2.98$, $SD = 1.239$) and Twitter ($M = 2.50$, $SD = 1.203$). While such an increasing tendency is accepted to exist for both social network sites, Twitter is evaluated to have it more by the participants; and the difference is proven to be significant by a paired-sample t-test between Facebook and Twitter, $t(371) = 8.652$, $p < 0.001$. So, respondents have a tendency to participate more in word-of-mouth actions on social network sites when the topic is popular at the moment; but they have such tendency more for Twitter than Facebook.

The fifth and the final question of the related set was examining if the tendency to participate in word-of-mouth activity on social network sites increases with the increasing willingness to enter the site. Like in the case of the third question, there is a contradicting situation between Twitter and Facebook for this question. Participants agree that there is higher tendency to tweet if the willingness to enter Twitter increases ($M = 2.81$, $SD = 1.270$), while they disagree with the existence of such relationship for Facebook ($M = 3.24$, $SD = 1.223$). There is roughly a difference between the two social network sites as they are in the separate sides of the midpoint, and the paired-sample t-test proves the significance of this difference, $t(371) = 9.026$, $p < 0.001$. Therefore, it can be said that the tendency of word-of-mouth participation increases with the increasing willingness to enter Twitter, while it does not exist for Facebook as much.

6.3.1.3. Level of Individual in a Social Network

H2: The diffusion of a word-of-mouth message would be higher and faster with a higher level in a given social network.

The effect of a user's level in a given social network was again measured through 5-point likert scale questions, given in two parts. As the main focus of this research study was on Twitter as a social network site, the questions are asked for Twitter and about how many followers the source has. First question interrogated the reliability of two users in terms of the followers they have. The second question was about the source's number of followers, and its reliability compared to the listener's. A one-sample t-test was used to see if level of an individual matters to the listeners in terms of reliability of the word-of-mouth messages of that user, given the test value as 3 (being the midpoint of the 5-point likert scale). For the first question, 4.3% of the 372 participants totally agreed with the reliability of the user with more followers, 12.4% agreed, 19.6% neither agreed nor disagreed, 22.6% disagreed, and 41.1% totally disagreed. In total, it has a mean of 3.84 (*SD* = 1.211), indicating that people in general disagree with the statement. To ensure if this disagreement has a significant meaning, results of the one-sample t-test should be analysed.

Table 7. ***One-Sample Test Results of Effects of Level of Individual in a Social Network***

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Comparison between two sources	13.355	371	.000	.839	.72	.96
Comparison between source and listener	14.435	371	.000	.911	.79	1.04

From the table, it can be seen that there is a significant difference from the test value of 3 for comparing two sources in terms of their level in Twitter, $t(371) = 13.355$, $p < 0.001$. However, the results are not expected, and therefore the significance proves the contrary to the expectations: Individuals do not assess reliability with the number of followers of the source on Twitter.

For comparing the source and the listener from the listener's point of view, the results are somewhat similar, having a mean value of 3.91 ($SD = 1.218$). Separately, 5.6% of all participants totally agree with the statement that sources with less followers than them is less reliable in terms of word-of-mouth messages; 9.4% agree, 16.7% neither agree nor disagree, 24.7% disagree, and 43.5% totally disagree. The one-sample t-test results support the evidence with the significant difference, $t(371) = 14.435$, $p < 0.001$.

Throughout this study, the number of followers and the number of accounts followed were meant by the term "level of individual in a social network." With a simple logic, it was assumed that individuals perceive a user in higher levels if her/his number of followers is high and number of accounts followed is, respectively, low. Correspondingly, a user with lower number of followers and a high number of accounts followed, a user is assumed to have a lower level in a social network site, namely, Twitter. Therefore, further analysis was made to see if number of followers or number of accounts followed has an effect on these "level" perceptions. As level of individuals in Twitter is measured with two separate comparisons, comparison between two sources, and comparison between source and listener; so will the deeper analysis of follower and following numbers be.

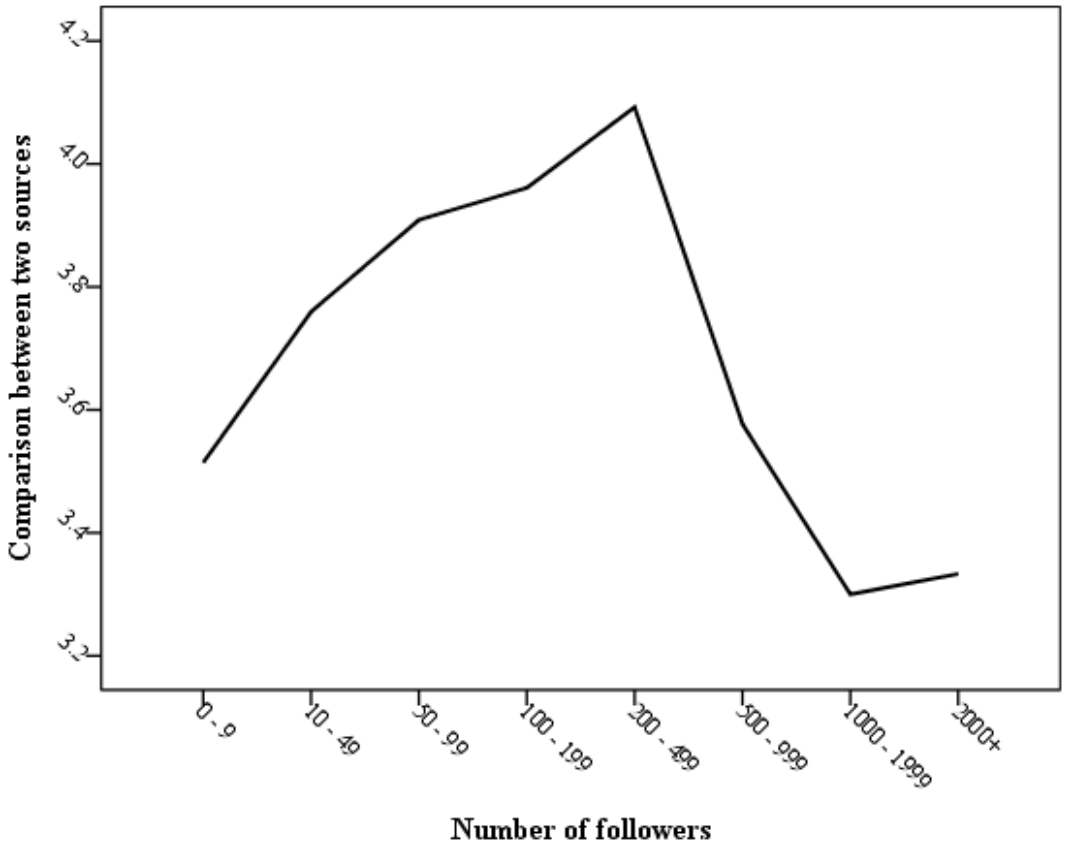

Figure 3: Line Graph of Mean Comparison between Two Sources According to the Number of Followers

The number of followers is the first independent variable that will be used in the analysis to see if the different number of followers causes different perceptions of level in Twitter, and acts as an important factor for participation in word-of-mouth activity. For the question of comparison of two sources in terms of their number of followers, respondents were separated according to their number of followers and each group's mean value were calculated. As it can be seen from Figure 3, the tendency to find a source with more followers more reliable than a source with fewer followers decreases with more followers –until the 200 – 499 group. After this peak, such tendency increases again. The highest tendency belongs to the 1000 – 1999 group with (M = 3.30, SD = 1.703); while the 200 – 499 group has the lowest

tendency to rely more on users with more followers, (M = 4.09, SD = 1.057). (Remember that in the survey, on a five-point scale, the value of 1 meant "totally agree" while 5 meant "totally disagree"; i.e. the higher the mean, higher the disagreeing rate, and vice versa.)

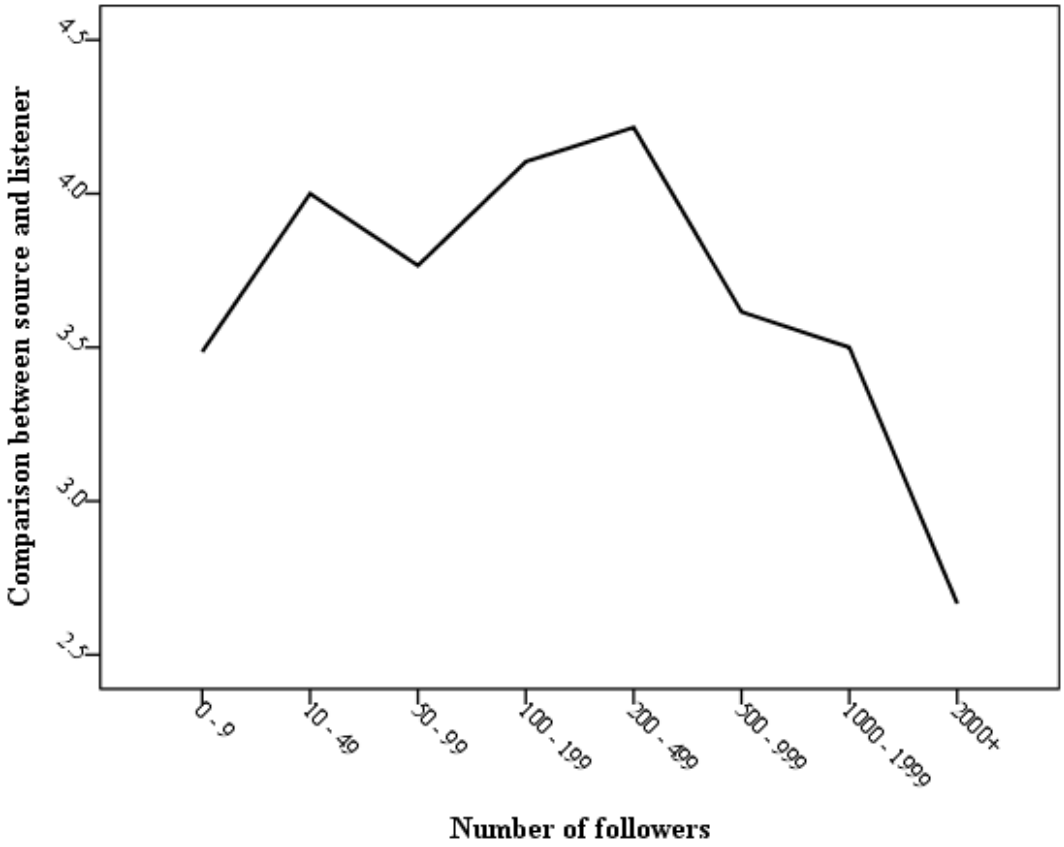

Figure 4: Line Graph of Mean Comparison between Source and Listener According to the Number of Followers

Such a comparison were also made to see if the number of followers has an effect on comparing oneself and another account in terms of reliability considering the number of followers. Figure 4 shows the mean values for the related 5-point likert scale question with the comparison between different groups of respondents in terms of their follower numbers. Again, roughly, a decreasing tendency to rely more on

accounts with more number of followers compared to fewer can be seen among the respondents with until 200 – 499 followers. After this peak (M = 4.22, SD = 1.097), such tendency increases and reaches its bottom at respondents with 2,000 or more followers (M = 2.67, SD = 1.155).

The differences shown in graphs (Figure 3 and Figure 4) are measured with ANOVA to see if they are significant. The ANOVA results are given in the Table 16. According to the ANOVA results, the difference between groups with different number of followers while comparing their reliability assessments between two sources in terms of their follower numbers is not significant, $F(7, 364) = 1.508$, $p = 0.163$, $p > 0.05$. On the other hand, their difference while comparing themselves and other sources, again in terms of follower numbers, is significant; $F(7, 364) = 2.586$, $p = 0.013$, $p < 0.05$.

Table 8. ***ANOVA Results of Comparing Number of Followers and Level of Individuals in a Social Network***

		Sum of Squares	df	Mean Square	F	Sig.
Comparison between two sources * Number of Followers	Between Groups	15.344	7	2.192	1.508	.163
	Within Groups	528.979	364	1.453		
	Total	544.323	371			
Comparison between source and listener * Number of Followers	Between Groups	26.064	7	3.723	2.586	.013
	Within Groups	524.009	364	1.440		
	Total	550.073	371			

The analysis for the number of followers was repeated for number of accounts followed. First of all, respondents' comparison between two sources were analysed in terms of the number of accounts they follow. The mean values of each group on a five-point likert scale were compared and turned into a line graph, which can be seen

in Figure 5. Roughly, as the number of accounts followed increase, the tendency to find users with more followers decrease; until the group that follows between 500 – 999 accounts (*M* = 4.06, *SD* = 1.063). (There is a small increase between 50 – 99 and 100 – 199, but it is ignorable, as the difference between the means is so small – respectively 3.89 and 3.81). After the peak, there is an incremental increase, for the accounts following more than 1,000 accounts (*M* = 3.60, *SD* = 1.949). Still, the bottom value belongs to the group following less than 9 accounts, (*M* = 3.47, *SD* = 1.367).

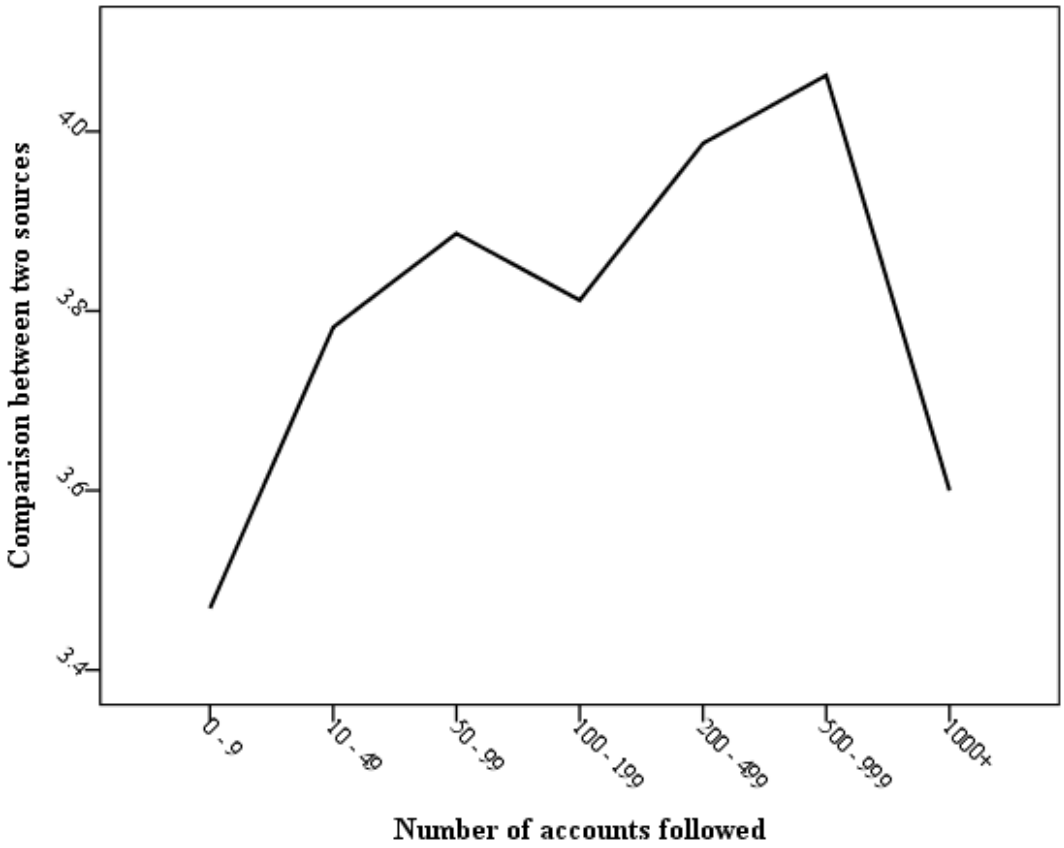

Figure 5: Line Graph of Mean Comparison between Two Sources According to the Number of Accounts Followed

Respondents, grouped in terms of the number of accounts they follow, were also compared for their assessment of the reliability comparing themselves and another source. Similar to the above analyses about number of followers and number of accounts followed, the tendency to find a source that has less followers than the respondent decreases with the higher number of followers (Figure 6), until the peak point of the 200 – 499 group (M = 4.12, SD = 1.102). After that, such tendency again increases and reaches the bottom at the group following 1,000 and more accounts, (M = 3.40, SD = 1.817).

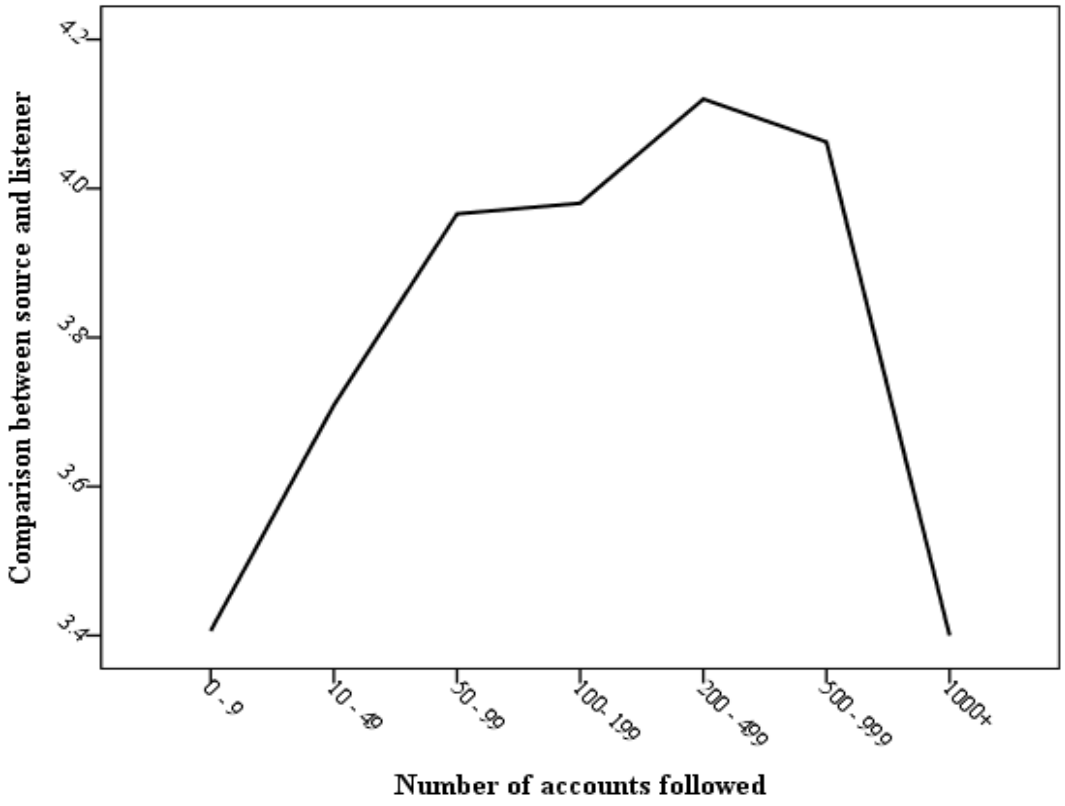

Figure 6: Line Graph of Mean Comparison between Source and Listener According to the Number of Accounts Followed

Table 9. ***ANOVA Results of Comparing Number of Accounts Followed and Level of Individuals in a Social Network***

		Sum of Squares	df	Mean Square	F	Sig.
Comparison between two sources * Number of Accounts Followed	Between Groups	7.558	6	1.260	.857	.527
	Within Groups	536.764	365	1.471		
	Total	544.323	371			
Comparison between source and listener * Number of Accounts Followed	Between Groups	16.093	6	2.682	1.833	.092
	Within Groups	533.980	365	1.463		
	Total	550.073	371			

Even if there is a observable difference between different groups (according to the number of accounts they follow) in terms of assessing the reliability of different levels in Twitter, these differences are not significant: neither for comparing two different sources in that terms, $F(6, 365) = 0.857$, $p = 0.527$, $p > 0.05$; nor for comparing source and listener, again in that terms, $F(6, 365) = 1.833$, $p = 0.092$, $p > 0.05$.

6.3.1.4. Network Usage Efficiency

H3: With higher network usage efficiency, it is more likely to receive retweets for word-of-mouth messages on Twitter.

Network usage efficiency, i.e. the frequency and activeness of the social network site usage, was analysed in two terms: its reliability and its respective retweeting likelihood. When the respondents were asked to assess the reliability of a word-of-mouth message source in terms of its network usage efficiency, 3.2% totally agreed with the statement that they rely more on individuals using Twitter more efficiently, 12.6% agreed, 27.4% neither agreed nor disagreed, 19.1% disagreed, and 37.6% totally disagreed, showing in total a negative tendency towards linking reliability and

network usage efficiency, (*M* = 3.75, *SD* = 1.178). On the other hand, they were also asked about their retweeting likelihood from a more efficient Twitter user; again 3.2% totally agreed with such correlation, 11.6% agreed, 20.2% neither agreed nor disagreed, 23.1% disagreed, and 41.9% totally disagreed; again showing the same negative tendency towards linking two concepts, this time retweeting likelihood and network usage efficiency, (*M* = 3.89, *SD* = 1.168). One-sample t-test was used to see if the difference was significant.

Table 10. ***One-Sample Test Results of Effects of Network Usage Efficiency***

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Reliability Effects of Network Usage Efficiency	12.319	371	.000	.753	.63	.87
Retweeting Likelihood Effects of Network Usage Efficiency	14.688	371	.000	.890	.77	1.01

As the one-sample t-test results indicate, the participants' reliability assessments about network usage efficiency are significantly different from the test value of 3, $t(371) = 12.319$, $p < 0.001$. Likewise, retweeting likelihood assessments are also significantly different, $t(371) = 14.668$, $p < 0.001$.

Additional analyses were also made for this concept separately. The network usage efficiency term was used for tweeting frequency of a user. It is simply assumed that the more frequently a user tweets, the more efficiently she/he uses Twitter. The general analysis toward network usage efficiency showed that listeners neither rely more on sources tweeting more frequently, nor they retweet such sources more. This analysis is further deepened to see different groups of participants in terms of

network usage efficiency behave differently for this reliability and retweeting likelihood issues for sources' network usage efficiency. Figure 7 shows the mean values of participants' mean values of their responses to the related likert scale questions for reliability and retweeting likelihood, grouping the participants according to their tweeting frequencies.

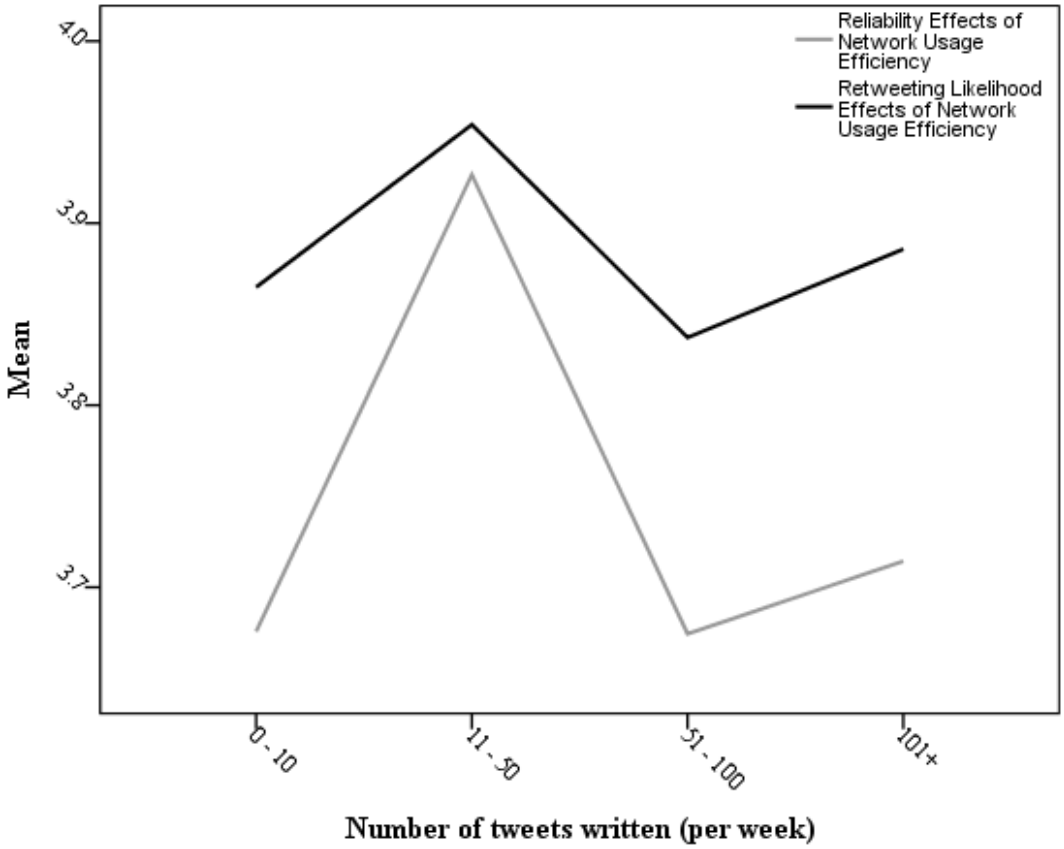

Figure 7: Line Graph of Network Usage Efficiency Effects in terms of Reliability and Retweeeting Likelihood

Even if the graph shows sharp increases and decreases, the mean values of each group are not that distant from each other, considering the scale consists of 5 points. Holding two questions together, the mean values vary from 3.68 to 3.95. Still, it

should be noted that, users tweeting 11 to 50 times per week have the least tendency to rely on accounts tweeting more frequently (M = 3.93, SD = 1.111), and also they have the least retweeting likelihood for such frequently tweeting accounts, (M = 3.95, SD = 1.189). The mean values for the two questions were also put into an ANOVA analysis to ensure if there is a significant difference between these frequency groups in terms of their assessment of network usage efficiency, and the results are given in the table below.

Table 11. ***ANOVA Results of Comparing Tweeting Frequency and Network Usage Efficiency***

		Sum of Squares	df	Mean Square	F	Sig.
Reliability Effects of Network Usage Efficiency * Tweeting Frequency	Between Groups	4.709	3	1.570	1.131	.336
	Within Groups	510.538	368	1.387		
	Total	515.247	371			
Retweeting Likelihood Effects of Network Usage Efficiency * Tweeting Frequency	Between Groups	.686	3	.229	.166	.919
	Within Groups	505.796	368	1.374		
	Total	506.481	371			

The ANOVA results in Table 21 also shown that the difference between the frequency groups for assessing the network usage efficiency is not significant; neither for the reliability effects, $F(3, 368) = 1.131$, $p = 0.336$, $p > 0.05$; nor for retweeting likelihood effects, $F(3,368) = 0.166$, $p = 0.919$, $p > 0.05$.

6.3.2. Listener

6.3.2.1. Psychological Condition

The first determinant under listener is psychological condition of the listener, and it has two dimensions.

H4a: The retweeting tendency of a listener increases provided that the source is not seeking for material benefit.

In the first dimension of psychological condition, the listener's viral advertising assessment was analysed to see if the retweeting likelihood decreases upon seeing a word-of-mouth message is part of a viral advertising. With the related question suggesting this idea, 19.6% of the participants totally agreed, 34.1% agreed, 21.0% neither agreed nor disagreed, 12.6% disagreed, and again 12.6% totally disagreed, all in all with a agreeing tendency, (M = 2.65, SD = 1.279).

Table 12. ***One-Sample Test Results of Effects of Psychological Condition about Viral Marketing***

Test Value = 3					
t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
				Lower	Upper
-5.350	371	.000	-.355	-.49	-.22

The t-test results support the positive tendency seen in the mean value as a sketch, and proves that there is a significant difference from the midpoint; meaning participants have more likelihood of retweeting a word-of-mouth message if they believe it is not a part of a viral advertising campaign, $t(371) = -5.350$, $p < 0.001$.

H4b: Participation rates in word-of-mouth increases with the possibility to collect more followers on Twitter.

The next set of questions analyse the other aspect of psychological condition: the need to be appreciated, i.e. for the case of Twitter, the need to collect more followers. This, for the diversity of related actions, was analysed in three questions: the first one questioning the tendency to write tweets with potential to gain followers, second one questioning the tendency to write tweets with potential to be retweeted, and the third one with hashtags. The first question about writing tweets that brings in more

followers has 8.6% of the sample that totally agrees, 15.3% agrees, 16.9% neither agrees nor disagrees, 21.8% disagrees, and 37.4% totally disagrees; and with a mean value of 3.64 (*SD* = 1.344), the participants generally do not agree with writing tweets in order to gain followers. The second question, about the tendency of writing tweets with the potential of receiving retweets and favourites, has 9.7% totally agreeing, 14.0% of agreeing, 23.4% of neither agreeing nor disagreeing, 16.7% disagreeing, and 36.3% of totally disagreeing respondents; with the mean value of 3.56 (*SD* = 1.356), again a negative tendency towards the suggestion. Finally, in the question about hashtags, 6.5% of the participants totally agreed, 13.2% agreed, 21.2% neither agreed nor disagreed, 23.1% disagreed, and 36.0% totally disagreed; and the participants have a mean value of 3.69 (*SD* = 1.260) for this question, repeating a negative tendency towards this suggestion as well.

The point here is to see if these negative tendencies are statistically significant. A one-sample t-test with the test value of 3 would see if the participants have a tendency from midpoint to one way or another significantly.

Table 13. ***One-Sample Test Results of Effects of Psychological Condition about Gaining Followers***

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Tendency to write tweets with potential to gain followers	9.184	371	.000	.640	.50	.78
Tendency to write tweets with potential to be retweeted	7.956	371	.000	.559	.42	.70
Tendency to write tweets with hashtags	10.571	371	.000	.691	.56	.82

For the first question that analyses the tendency to tweet word-of-mouth messages or retweet such messages, there is a significant difference that proves participants do not have such tendency, $t(371) = 9.184$, $p < 0.001$.

Second question about the tendency to write word-of-mouth tweets that have more potential to be retweeted is also analysed with a one-sample t-test, and the results have shown that there is a significant difference from the test value of 3, meaning the participants do not consider the retweeting potential at first, $t(371) = 7.956$, $p < 0.001$.

Final question about the tendency to write tweets with hashtags has also proven that participants have negative tendencies towards writing and retweeting word-of-mouth tweets including containing hashtags with the significant difference, $t(371) = 10.571$, $p < 0.001$.

6.3.2.2. Personal Relevance

H5: *Increasing personal relevance between a brand and an individual correspondingly increases the likelihood of retweeting the tweets about that brand.*

Personal relevance between the customer and the product or service is an important part of the word-of-mouth model of this research study and it is analysed in two questions submitted in 5-point likert scale. The first question in the personal relevance set asks the tendency to write or retweet word-of-mouth tweets about a product or service that is personally relevant to the individual. The second question was set to measure the tendency to head towards retweeting a word-of-mouth tweet about a more personally relevant product or service rather than the less.

The first statement about retweeting likelihood of personally relevant products has 26.1% of the sample as totally agreeing, 38.4% agreeing, 16.4% neither agreeing nor disagreeing, 9.9% disagreeing, and 9.1% totally disagreeing; with a mean value of

2.38 (*SD* = 1.228), i.e. a positive tendency towards retweeting word-of-mouth messages on Twitter about personally relevant products and services. In the meantime, while comparing two products or services in terms of personal relevance, 19.1% of the sample totally agrees, 30.4% agrees, 26.1% neither agrees nor disagrees, 13.4% disagrees, and 11.0% totally disagrees with the suggestion that they have more retweeting likelihood for a tweet that is about a more personally relevant product or service, having a positive attitude in general, (*M* = 2.67, *SD* = 1.240).

Table 14. ***One-Sample Test Results of Effects of Personal Relevance***

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Writing or retweeting a tweet about a personally relevant product or service	-9.797	371	.000	-.624	-.75	-.50
Comparing word-of-mouth tweets in terms of personal relevance	-5.143	371	.000	-.331	-.46	-.20

The positive attitude towards personal relevance in the sense of word-of-mouth was analysed with one-sample t-test in order to see if the difference from the midpoint of 3 was significant. The test results indicate that both writing and retweeting tendency about a personally relevant product and service, $t(371) = -9.797$, $p < 0.001$; and selecting a more personally relevant product product or service while entering into word-of-mouth actions on Twitter, $t(371) = -5.413$, $p < 0.001$, have significant differences, meaning the hypothesis in this sense is supported by the participants.

6.3.3. Message

For the analysis of upcoming hypotheses about message contents, sample tweets were given to the respondents in the survey. The message contents were classified into

three as in the hypotheses: negative versus positive, humorous versus non-humorous, and advisory content versus non-advisory content. For each characteristic, there was one tweet in the related section of the survey. Furthermore, the source of the message was differentiated for the section: a close friend, a celebrity, and an unfamiliar individual using Twitter. These sample sources were intentionally selected; to check if these sources have specific effects above message contents. In addition, to reduce the number of questions per survey and to prevent respondents from getting bored, the sources were randomly assigned to each respondent by the electronic survey system. In other words, a respondent could only see one source, either a close friend, a celebrity, or an unfamiliar individual while filling in the survey. Each sample tweet was asked to be evaluated in terms of retweeting likelihood in a likert scale, where the value 1 corresponds to "I would definitely RT this message" while 5 is "I would definitely not RT this message."

6.3.3.1. Content of the Message

H6a: Electronic word-of-mouth messages with negative advisory content are more likely to be retweeted compared to positive.

A paired-sample t-test was used to analyse the related questions from the survey. Each source from random assignments were put into the test separately; sample negative and positive tweets were paired for the sources "close friend", "celebrity", and "unfamiliar individual". The results are as in Table 28:

Table 15. ***Paired-Samples T-Tests for Negative and Positive Tweets from Different Sources***

	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
Close Friend	.206	.975	.082	2.505	140	.013
Celebrity	.098	1.074	.101	.968	111	.335
Unfamiliar Individual	.277	1.057	.097	2.862	118	.005

In the case of close friends, there was a significant effect of negativity where positive electronic word-of-mouth messages (M = 3.61, SD = 1.164) are more likely to be retweeted than negative tweets (M = 3.40, SD = 1.236) in terms of electronic word-of-mouth, $t(140) = 2.505$, $p = 0.013$, $p < 0.05$.

When celebrities are analysed, it seems that negativity does not have a significant effect on the retweeting likelihood. Still, negative word-of-mouth messages (M = 3.76, SD = 1.225) are less likely to be retweeted than positive ones (M = 3.66, SD = 1.174), $t(111) = 0.968$, $p = 0.335$, $p > 0.05$.

With an unfamiliar individual as a source, there is a significant effect of negativity in messages, negative word-of-mouth messages (M = 4.03, SD = 1.053) are less likely to be retweeted than positive ones (M = 3.75, SD = 1.129), $t(118) = 2.862$, $p = 0.005$, $p < 0.05$.

Positive sample tweets having lower means compared to negative ones in each source shows, unexpectedly, that positive word-of-mouth messages are more likely to be retweeted compared to negative messages.

H6b: Humorous word-of-mouth messages are more likely to be retweeted compared to those which are not humorous.

As in comparing negative and positive word-of-mouth messages, humorous and not humorous tweets are also compared with a pairwise t-test.

Table 16. ***Paired-Samples T-Tests for Humorous and Non Humorous Tweets from Different Sources***

	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
Close Friend	-.071	1.382	.116	-.609	140	.543
Celebrity	-.241	1.595	.151	-1.599	111	.113
Unfamiliar Individual	-.143	1.244	.114	-1.253	118	.213

When a humorous word-of-mouth message is received from a close friend (M = 4.06, SD = 1.214) on Twitter, it does not have a significantly different effect from a message that is not humorous (M = 4.13, SD = 1.037). The insignificant difference is also shown by the t-test results, $t(140) = -0.609$, $p = 0.543$, $p > 0.05$.

In case of celebrities, the retweeting likelihood is also compared according to the humour in the word-of-mouth messages. Humorous messages (M = 4.09, SD = 1.326) are compared to the messages that are not humorous (M = 4.33, SD = 0.990). The pairwise t-test shown that there is not a significant difference between humorous and not humorous messages while retweeting it from a celebrity, $t(111) = -1.599$, $p = 0.113$, $p > 0.05$.

A word-of-mouth message from an unfamiliar individual can again be received as a humorous tweet (M = 4.24, SD = 1.219), or not as a humorous tweet (M = 4.38, SD = 0.974). From the pairwise t-test results, it can be seen that there is again not a significant difference between humorous and not humorous tweets coming from an unfamiliar individual, $t(118) = -1.253$, $p = 0.213$, $p > 0.05$.

In each source, humorous tweets' mean values are smaller than the means of the tweets that are not humorous; which means humorous word-of-mouth messages are more likely to be retweeted even if there is not a significant difference.

H6c: Diffusion-aimed word-of-messages are more likely to be retweeted compared to those which are not diffusion-aimed.

Table 17. ***Paired-Samples T-Tests for Diffusion-Aimed and Not Diffusion-Aimed Tweets from Different Sources***

	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
Close Friend	.177	1.044	.088	2.017	140	.046
Celebrity	.170	.958	.090	1.875	111	.063
Unfamiliar Individual	.244	1.081	.099	2.459	118	.015

The sample tweets, i.e. word-of-mouth messages, are first compared in terms of diffusion aim for close friend as a source. The results have shown that there is a significant difference between diffusion-aimed tweets (M = 3.20, SD = 1.359) and not diffusion-aimed tweets (M = 3.02, SD = 1.427), $t(140) = 2.017$, $p = 0.046$, $p < 0.05$.

Assuming the source as a hypothetical celebrity, the diffusion-aimed tweets (M = 3.50, SD = 1.375) are compared to not diffusion-aimed tweets (M = 3.33, SD = 1.365). The pairwise t-test results revealed that there is not a significant difference between such tweets in terms of retweeting likelihood when it comes from a celebrity, $t(111) = 1.875$, $p = 0.063$, $p > 0.05$.

The source as an unfamiliar individual, the diffusion-aimed tweets (M = 3.44, SD = 1.376) are again compared with not diffusion-aimed tweets (M = 3.19, SD = 1.297). The pairwise t-test results indicated the significant difference between diffusion-aimed and not diffusion-aimed tweets in terms of retweeting likelihood from an unfamiliar individual as the source, $t(118) = 2.459$, $p = 0.015$, $p < 0.05$.

Aggregately, diffusion-aimed tweets have larger means compared to not diffusion-aimed tweets in each source, which indicates that diffusion-aimed word-of-mouth messages are less likely to be retweeted compared to the ones that are not diffusion-aimed.

6.3.3.2. Source of the Message

In addition to analysing separately, the data from random assignments were merged and compared with each other. Comparing these merged data according to different sources yielded the results given in Table 7.

Table 18. ***One-Way ANOVA of Comparing Messages for Different Sources in Twitter***

		Sum of Squares	df	Mean Square	F	Sig.
Negative	Between Groups	11.262	2	5.631	4.267	.015
	Within Groups	486.962	369	1.320		
	Total	498.223	371			
Positive	Between Groups	8.391	2	4.195	2.992	.051
	Within Groups	517.502	369	1.402		
	Total	525.892	371			
Humorous	Between Groups	2.117	2	1.059	.677	.509
	Within Groups	576.944	369	1.564		
	Total	579.062	371			
Non-humorous	Between Groups	4.378	2	2.189	2.176	.115
	Within Groups	371.200	369	1.006		
	Total	375.578	371			
Diffusion-Aimed	Between Groups	6.563	2	3.281	1.750	.175
	Within Groups	691.717	369	1.875		
	Total	698.280	371			
Not Diffusion-Aimed	Between Groups	6.063	2	3.032	1.621	.199
	Within Groups	690.268	369	1.871		
	Total	696.331	371			

First, the negative word-of-mouth messages coming from Twitter are compared according to their sources. The negative word-of-mouth message could come from a close friend (M = 3.61, SD = 1.164), a celebrity (M = 3.76, SD = 1.225), or an unfamiliar individual (M = 4.03, SD = 1.054). This shows that individuals have the most likelihood of retweeting a negative word-of-mouth message when it comes from a close friend, while the least likelihood exists if the source is an unfamiliar individual. The difference between these different sources is also significant taking

the values into account, $F(2, 369) = 4.267$, $p = 0.015$, $p < 0.05$. In other words, the source changes the retweeting likelihood of negative word-of-mouth messages on Twitter.

When word-of-mouth tweets with positive content are compared in terms of retweeting likelihood according to different sources, the results are quite different from the negative tweets case. The cases where the positive word-of-mouth message came from a close friend ($M = 3.41$, $SD = 1.237$), a celebrity ($M = 3.67$, $SD = 1.175$), and an unfamiliar individual ($M = 3.75$, $SD = 1.129$) are compared. The difference between sources is somewhat significant, $F(2, 369) = 2.992$, $p = 0.050$.

There is also the humorous tweet case. The retweeting likelihoods are almost equal to each other among different sources; close friends ($M = 4.07$, $SD = 1.215$), celebrities ($M = 4.09$, $SD = 1.326$), and unfamiliar individuals ($M = 4.24$, $SD = 1.219$). In addition, there is not a significant difference between sources in terms of listener's retweeting likelihood, $F(2, 369) = 0.677$, $p = 0.509$, $p > 0.05$.

Compared to humorous tweets, respondents were also asked to evaluate word-of-mouth tweets with the same message except humour in it. A close friend ($M = 4.14$, $SD = 1.037$), a celebrity ($M = 4.34$, $SD = 0.989$), and an unfamiliar individual ($M = 4.38$, $SD = 0.975$) are again the sources provided. The results indivated that there is not a significant difference in retweeting likelihood of tweets without homour comparing different sources with each other, $F(2, 369) = 2.176$, $p = 0.115$, $p > 0.05$.

The sources are compared also according to their retweeting likelihood for a tweet that is diffusion-aimed. If a word-of-mouth tweet had an expression like "RT please!" in it, i.e. if it had a diffusion aim, it does not make a huge difference if it is written by a close friend ($M = 3.199$, $SD = 1.359$), a celebrity ($M = 3.500$, $SD = 1.376$), or an unfamiliar individual ($M = 3.438$, $SD = 1.376$). Likewise, the ANOVA results also

indicate that the difference between these sources are not significant for a diffusion-aimed tweet, $F(2, 369) = 1.750$, $p = 0.175$, $p > 0.05$.

When the different sources are compared in terms of retweeting likelihood when a tweet that is not diffusion-aimed is the subject, the results are not very different from a diffusion-aimed tweet is the subject. As mentioned before, a tweet that is not diffusion-aimed is the same as the diffusion-aimed one, except the "RT please!" expression in it. With this comparison, the research study intended to measure the difference, if exists, in the retweeting likelihood with the existence of expressions like "RT please". Sources are again a close friend ($M = 3.022$, $SD = 1.427$), a celebrity ($M = 3.331$, $SD = 1.365$), and an unfamiliar individual ($M = 3.194$, $SD = 1.298$). The ANOVA results infer that the difference between those sources are not significant, $F(2, 369) = 1.621$, $p = 0.199$, $p > 0.05$.

6.3.3.3. Further Demographic Analysis

The comparison between contrary word-of-mouth messages on Twitter are also made according to the gender and age variables.

Table 19. ***Paired Samples Test on Opposing Word-of-Mouth Messages on Twitter According to Gender***

Gender		t	df	Sig. (2-tailed)
Female	Negative – positive	1.912	167	.058
	Humorous – non-humorous	.000	167	1.000
	Diffusion aimed – not diffusion aimed	2.589	167	.010
Male	Negative - positive	3.156	203	.002
	Humorous – non-humorous	-2.787	203	.006
	Diffusion aimed – not diffusion aimed	2.610	203	.010

The results have shown that females do not have a significant difference between retweeting a negative word-of-mouth tweet ($M = 3.84$, $SD = 1.104$), and a positive one ($M = 3.69$, $SD = 1.131$), $t(167) = 1.912$, $p = 0.058$, $p > 0.05$. More interestingly, the mean values are equal for humorous ($SD = 1.194$) and non-humorous ($SD =$

1.061) word-of-mouth tweets, 4.191; therefore a difference, significant or not, could not be mentioned for females, $t(167) = 0.000$, $p = 1.000$, $p > 0.05$. Still, females have a significant difference between retweeting diffusion-aimed tweets ($M = 3.42$, $SD = 1.302$) and not diffusion-aimed tweets ($M = 3.21$, $SD = 1.339$); $t(167) = 2.589$, $p = 0.010$, $p < 0.05$. On the other hand, males behave significantly different while retweeting negative word-of-mouth tweets ($M = 3.75$, $SD = 1.204$) and positive ones ($M = 3.51$, $SD = 1.234$); $t(203) = 3.156$, $p = 0.002$, $p < 0.05$. Males also have a significance difference between retweeting humorous ($M = 4.07$, $SD = 1.294$) and non-humorous ($M = 4.34$, $SD = 0.957$) tweets with word-of-mouth content; $t(203) = -2.787$, $p = 0.006$, $p < 0.05$. Similarly, there is also a significant difference between males' retweeting diffusion-aimed word-of-mouth tweets ($M = 3.33$, $SD = 1.429$) and not diffusion-aimed ($M = 3.14$, $SD = 1.397$); $t(203) = 2.610$, $p = 0.010$, $p < 0.05$.

All in all, females have the only significant difference in their retweeting likelihood between diffusion-aimed and not diffusion-aimed tweets, while males have significant differences in each category. However, it should be noted that despite these significant differences, their likelihoods are in the same direction and do not oppose with each other.

Table 20. ***Paired Samples Test on Opposing Word-of-Mouth Messages on Twitter According to Age***

Age		t	df	Sig. (2-tailed)
Under 18	Negative – positive	1.149	11	.275
	Humorous – non-humorous	-1.483	11	.166
	Diffusion aimed – not diffusion aimed	-.897	11	.389
18 – 25	Negative – positive	3.173	178	.002
	Humorous – non-humorous	-.741	178	.460
	Diffusion aimed – not diffusion aimed	3.034	178	.003
26 – 35	Negative – positive	.831	147	.408
	Humorous – non-humorous	-1.699	147	.091
	Diffusion aimed – not diffusion aimed	2.503	147	.013
36 – 45	Negative – positive	1.904	21	.071
	Humorous – non-humorous	-.134	21	.894
	Diffusion aimed – not diffusion aimed	.000	21	1.000
Above 45	Negative – positive	3.130	10	.011
	Humorous – non-humorous	-.803	10	.441
	Diffusion aimed – not diffusion aimed	.711	10	.493

The retweeting tendencies of opposing word-of-mouth tweets were also analysed to see the effects of age as a demographic aspect. Participants younger than the age of 18 do not have any significant difference for any of the categories; not for negative or positive tweets, $t(11) = 1.149$, $p = 0.275$, $p > 0.05$; not for humorous or non-humorous tweets, $t(11) = -1.482$, $p = 0.166$, $p > 0.05$; and also not for diffusion-aimed and not diffusion-aimed tweets, $t(11) = -0.897$, $p = 0.389$, $p > 0.05$. Participants that are in the age interval of 18 and 25 have significant differences for retweeting negative ($M = 4.05$, $SD = 1.054$) and positive ($M = 3.81$, $SD = 1.138$) word of mouth tweets, $t(178) = 3.173$, $p = 0.002$, $p < 0.05$. They also have the significant difference for their likelihood of retweeting word-of-mouth tweets that are diffusion-aimed ($M = 3.68$, $SD = 1.328$) and not diffusion-aimed ($M = 3.43$, $SD = 1.332$), $t(178) = 3.034$, p

= 0.003, p < 0.05. However, participants in this age interval do not have the same significant difference for retweeting humorous (*M* = 4.25, *SD* = 1.203) or non-humorous (*M* = 4.33, *SD* = 1.074) word-of-mouth tweets, *t*(178) = -0.741, *p* = 0.460, p > 0.05. Participants between the ages of 26 and 35 only have significant difference for retweeting diffusion-aimed (*M* = 3.16, *SD* = 1.308) or not diffusion-aimed tweets (*M* = 2.96, *SD* = 1.314) word-of-mouth tweets; *t*(147) = 2.503, *p* = 0.013, p < 0.05. This age interval does not have a significant difference for neither retweeting word of mouth messages negative or positive, *t*(147) = 0.831, *p* = 0.408, p > 0.05; nor for humorous or non-humorous word-of-mouth tweets, *t*(147) = -1.699, *p* = 0.091, p > 0.05. Like the participants younger than the age of 18, participants between the ages of 36 and 45 do not have any significant difference for any of the opposing categories. They do not have the significant difference for negative and positive tweets, *t*(21) = 1.904, *p* = 0.710, p > 0.05; not for humorous or non-humorous tweets, *t*(21) = -0.134, *p* = 0.894, p > 0.05; and not for diffusion-aimed and not diffusion-aimed tweets, *t*(21) = 0.000, *p* = 1.000, p > 0.05. As a final point, participants older than the age of 45 only have a significant difference between retweeting negative word-of-mouth tweets (*M* = 3.28, *SD* = 1.191) and positive ones (*M* = 2.64, *SD* = 1.121); *t*(10) = 3.130, *p* = 0.011, p < 0.05. On the other hand, they do not have such significant difference between retweeting humorous or non-humorous tweets, *t*(10) = -0.803, *p* = 0.441, p > 0.05; or diffusion-aimed and not diffusion-aimed tweets, *t*(10) = 0.711, *p* = 0.493, p > 0.05.

Again, like in the gender analysis, it should be noted that even if the age of the participants have a remarkable effect on their retweeting likelihood of opposing word-of-mouth message categories, this effect is not large enough to make these differences to be contrary to each other. The tendency does not change, even if the scales do.

6.3.3.4. Social Network Site Comparison

The message analysis until this point were made based on Twitter as the social network site that carried the word-of-mouth messages. One last additional analysis was made to see if there is an effect of a change in the social network site. Facebook was selected as the alternative social network site as it is the most commonly used one all over the world and it also has a "timeline" concept coming out of the shares made by the user's friend list, like in Twitter –so sharing is not a rare thing that would affect the evaluations of participants in the survey. Each type of messages, negative, positive, humorous, non-humorous, diffusion-aimed, and not diffusion-aimed; were compared in combination with the same message from the substitute social network site. Pairwise t-tests were used to do so.

Table 21. ***Paired Sample T-Test Results of Twitter and Facebook Comparison***

	Paired Differences			t	df	Sig. (2-tailed)
	Mean	SD	Std. Error Mean			
Negative	-.39785	.91280	.04733	-8.406	371	.000
Positive	-.54570	.96324	.04994	-10.927	371	.000
Humorous	-.28763	.93771	.04862	-5.916	371	.000
Non-humorous	-.16129	.70486	.03655	-4.413	371	.000
Diffusion-aimed	-.55914	1.12996	.05859	-9.544	371	.000
Not diffusion-aimed	-.63978	1.10345	.05721	-11.183	371	.000

It can obviously be seen that there is a significant difference between Twitter and Facebook in terms of affecting the retweeting likelihood of the "listeners" in each and every message type. There is a significant difference between Twitter (M = 3.79, SD = 1.159) and Facebook (M = 4.19, SD = 1.042) in terms of sharing likelihood of a negative word-of-mouth message, $t(371) = -8.406$, $p < .001$. For positive messages, Twitter (M = 3.59, SD = 1.191) has significantly more likelihood of sharing a word-

of-mouth message than Facebook (M = 4.14, SD = 1.047), $t(371) = -10.927$, $p < .001$. Also for word-of-mouth messages with humorous content, Twitter (M = 4.13, SD = 1.249) has significantly more likelihood than Facebook (M = 4.42, SD = 0.935) in terms of sharing, $t(371) = -5.916$, $p < .001$. Likewise, non-humorous word-of-messages in social network sites has significantly more likelihood to be shared in Twitter (M = 4.28, SD = 1.007) than in Facebook (M = 4.44, SD = 0.881), $t(371) = -4.413$, $p < .001$. Diffusion-aimed word-of-mouth messages are also significantly more likely to be shared in Twitter (M = 3.37, SD = 1.372) than in Facebook (M =3.93, SD = 1.283), $t(371) = -9.544$, $p < .001$. And finally, word-of-mouth messages that are not diffusion-aimed do not go against the tendency of all categories that Twitter (M = 3.17, SD = 1.371) has significantly more likelihood in sharing the message than Facebook (M = 3.81, SD = 1.338) t(371) = -11.183, $p < .001$.

Overall, there is significant evidence that Twitter retains higher likelihood for word-of-mouth messages in the sense of sharing compared to Facebook, which is essential to the esprit of word-of-mouth concept in general. Yet, one social network site being ahead of another do not indicate they oppose with each other and have contrary sharing likelihoods, they both have negative likelihoods.

6.3.4. Product or Service

6.3.4.1. Product Category

H7: The reactions of individuals from different demographic aspects are not the same for different pruct categories in terms of retweeting likelihood.

To start with, the demographic aspects are gender and age in this research study. The effects of product categories on retweeting likelihood are first compared according to

gender. All in all, product and service categories are evaluated by the participants in terms of retweeting likelihood of a word-of-mouth message on Twitter.

Table 22. ***Descriptive Statistics of Retweeting Likelihood of Product Categories***

	N	Mean	Std. Deviation
Automobile – Automotive	372	3.66	1.322
Banking – Financial Services	372	3.61	1.285
Education	372	2.56	1.288
Home Decoration – Design	372	3.58	1.323
Food – Restaurants	372	2.91	1.371
Clothing – Textile	372	3.34	1.355
Beauty / Treatment Products	372	3.77	1.366
Beverages	372	3.30	1.341
Communication Services	371	2.66	1.341
Media – Entertainment	372	2.53	1.332
Healthcare Services	372	2.89	1.298
Travel – Transportation Services	372	3.07	1.298
Sports	372	2.54	1.399
Technological Products	372	2.73	1.394

In order to compare females and males with each other, first of all, data was split in SPSS in terms of gender. Through this procedure, the mean values of participants' responses to each product category, and the related standard deviation values were obtained in terms of their gender, separately. The descriptive results are given in table 23:

Table 23. ***Descriptive Statistics of Retweeting Likelihood of Product Categories in Terms of Gender***

	Female			Male		
	N	Mean	SD	N	Mean	SD
Automobile – Automotive	168	3.85	1.312	204	3.50	1.311
Banking – Financial Services	168	3.64	1.278	204	3.58	1.294
Education	168	2.46	1.252	204	2.64	1.315
Home Decoration – Design	168	3.15	1.327	204	3.92	1.217
Food – Restaurants	168	2.75	1.330	204	3.05	1.392
Clothing – Textile	168	3.12	1.383	204	3.51	1.307
Beauty / Treatment Products	168	3.27	1.430	204	4.17	1.168
Beverages	168	3.19	1.358	204	3.38	1.325
Communication Services	168	2.62	1.289	204	2.70	1.384
Media – Entertainment	168	2.59	1.342	204	2.49	1.326
Healthcare Services	168	2.79	1.309	204	2.97	1.286
Travel – Transportation Services	168	3.10	1.305	204	3.05	1.295
Sports	168	2.82	1.352	204	2.32	1.401
Technological Products	168	2.99	1.369	204	2.51	1.381

After obtaining the descriptive statistics results, the product categories were matched and compared with pairwise t-test; in order to see if the differences between this means are significant. Looking at the previous table and comparing means, the highest differences are in sports between females (M = 2.82, SD = 1.352) and males (M = 2.32, SD = 1.401), and beauty and treatment products again between females (M = 3.27, SD = 1.430) and males (M = 4.17, SD = 1.168).

Table 24. ***Paired Sample T-Test Results of Sports and Beauty / Treatment Products Comparison in Terms of Gender***

Gender	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
Females	-.458	1.656	.128	-3.588	167	.000
Males	-1.853	1.909	.134	-13.865	203	.000

The two product categories compared in terms of retweeting likelihood according to gender. The results show that there is a significant difference between sports and

beauty and treatment products for both females, $t(167) = -3.588$, $p < 0.001$; and males, $t(203) = -13.865$, $p < 0.001$.

The pairwise t-test type of analysis continues with matching the next two product categories that have obvious differences between their means: technological products, for females ($M = 2.99$, $SD = 1.369$) and males ($M = 2.51$, $SD = 1.381$); and home decoration and design, again for females ($M = 3.15$, $SD = 1.327$) and males ($M = 3.92$, $SD = 1.217$).

Table 25. ***Paired Sample T-Test Results of Technological and Home Decoration and Design Products Comparison in Terms of Gender***

Gender	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
Females	-.161	1.595	.123	-1.306	167	.193
Males	-1.407	1.704	.119	-11.794	203	.000

According to the results of pairwise t-tests, females show no significant difference in terms of retweeting likelihood between technological products and home decoration and design products, $t(167) = -1.306$, $p = 0.193$, $p > 0.05$. On the other hands, males have significant difference between retweeting word-of-mouth messages about technological products and home decoration and design products, $t(203) = -11.794$, $p < 0.001$.

Following the decreasing difference between product categories in each gender, the next categories to be compared are automobile and automotive, for females ($M = 3.85$, $SD = 1.312$) and males ($M = 3.50$, $SD = 1.311$); and clothing and textile, for females ($M = 3.12$, $SD = 1.383$) and for males ($M = 3.51$, $SD = 1.307$).

Table 26. ***Paired Sample T-Test Results of Automobile and Automotive, and Clothing and Textile Products Comparison in Terms of Gender***

Gender	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
Females	.732	1.690	.130	5.615	167	.000
Males	-.020	1.364	.096	-.205	203	.838

The above results show that females have significantly different retweeting likelihood of automobile and automotive products, and clothing and textile products, $t(167) = 5.615$, $p < 0.001$; while males do not have a significant difference in terms of retweeting word-of-mouth messages about automotive and automobiles, and clothing and textile $t(203) = -0.205$, $p = 0.838$, $p > 0.05$.

The next comparative analysis is made between media and entertainment category, for females ($M = 2.59$, $SD = 1.342$) and males ($M = 2.49$, $SD = 1.326$); and food and restaurants for females ($M = 2.75$, $SD = 1.330$), and males ($M = 3.05$, $SD = 1.392$).

Table 27. ***Paired Sample T-Test Results of Media and Entertainment, and Food and Restaurants Comparison in Terms of Gender***

Gender	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
Females	-.161	1.268	.098	-1.642	167	.102
Males	-.559	1.404	.098	-5.684	203	.000

According to the results of pairwise t-tests, females do not have a significant difference in terms of retweeting word-of-mouth messages about media and entertainment, and food and restaurants; $t(167) = -1.642$, $p = 0.102$, $p > 0.05$. On the other hand, males have a significant difference for retweeting word-of-mouth messages about media and entertainment, and food and restaurants; $t(203) = -5.684$, $p < 0.001$.

Up next, the two product and service categories to be compared with pairwise t-test are banking and financial services, for females (M = 3.64, SD = 1.278) and males (M = 3.58, SD = 1.294), and beverages for females (M = 3.19, SD = 1.358) and males (M = 3.38, SD = 1.325).

Table 28. ***Paired Sample T-Test Results of Banking and Financial Services, and Beverages Comparison in Terms of Gender***

Gender	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
Females	.452	1.630	.126	3.598	167	.000
Males	.196	1.622	.114	1.726	203	.086

According to the results of the pairwise t-test given above, females have a significant difference in likelihood of retweeting word-of-mouth messages about banking and financial services and beverages, $t(167) = 3.598$, $p < 0.001$. Then again, males do not have significantly different retweeting likelihood of word-of-mouth messages about the two product categories, $t(203) = 1.726$, $p = 0.086$, $p > 0.05$.

Following the gender differences, the next two product and service categories to be compared in terms of retweeting likelihood are travel and transportation services, and healthcare services. Travel and transportation services for females (M = 3.10, SD = 1.305) and males (M = 3.05, SD = 1.295), and healthcare services for females (M = 2.79, SD = 1.309) and males (M = 2.97, SD = 1.296) are measured with paired sample t-tests to see if they have a significant difference.

Table 29. ***Paired Sample T-Test Results of Travel and Transportation Services, and Healthcare Services Comparison in Terms of Gender***

Gender	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
Females	.310	1.371	.106	2.926	167	.004
Males	.083	1.190	.083	1.000	203	.319

Given the results of pairwise t-test above, females have a significant difference of retweeting word-of-mouth messages about travel and transportation services and healthcare services, $t(167) = 2.926$, $p = 0.004$, $p < 0.05$; while males do not have such significant difference, $t(203) = 1.000$, $p = 0.319$, $p > 0.05$.

Final comparison between product and service categories is made between communication services and education. Communication services for females ($M = 2.62$, $SD = 1.289$) and males ($M = 2.70$, $SD = 1.384$), and education for females ($M = 2.46$, $SD = 1.252$) and males ($M = 2.64$, $SD = 1.315$) are compared in terms of retweeting likelihood with paired sample t-tests.

Table 30. ***Paired Sample T-Test Results of Communication Services, and Education Comparison in Terms of Gender***

Gender	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
Females	.155	1.380	.106	1.454	167	.148
Males	.059	1.261	.089	.668	202	.505

According to the results, females did not show significant difference in likelihood of retweeting word-of-mouth messages about communication services and education, $t(167) = 1.454$, $p = 0.148$, $p > 0.05$. Similarly, males also do not have a significant difference between retweeting likelihoods of these two product categories either, $t(202) = 0.668$, $p = 0.505$, $p > 0.05$.

The pairwise t-test comparisons were made based on the selection of observable differences in means of product and service categories, and such comparisons were followed until there would be no significant difference of those product categories for genders. Following the decreasing difference, the last comparison between communication services and education that have not shown any significant difference for both genders, the pairwise analysis have been terminated here.

The next step of product and service category analysis is made on another demographic aspect: age. First, descriptive statistics are derived for each age interval in terms of product category retweeting likelihood evaluations from the survey results, but only the mean values are given for the sake of orderliness.

Table 31. ***Mean Values of Retweeting Likelihood of Product Categories in Terms of Age***

	Under 18	18 – 25	26 – 35	36 – 45	Above 45
Automobile – Automotive	3.33	3.81	3.54	3.41	3.55
Banking – Financial Services	3.67	3.77	3.53	2.95	3.27
Education	2.75	2.57	2.54	2.64	2.36
Home Decoration – Design	3.17	3.76	3.35	3.68	3.82
Food – Restaurants	3.08	2.91	2.89	3.27	2.45
Clothing – Textile	2.67	3.37	3.28	3.77	3.36
Beauty / Treatment Products	4.08	3.83	3.57	4.18	4.18
Beverages	3.25	3.30	3.24	3.45	3.64
Communication Services	2.92	2.55	2.66	3.27	3.00
Media – Entertainment	2.08	2.36	2.64	3.14	3.27
Healthcare Services	3.42	2.99	2.78	2.73	2.36
Travel – Transportation Services	3.67	3.13	2.97	3.18	2.73
Sports	2.83	2.27	2.76	2.95	2.91
Technological Products	2.67	2.61	2.82	3.09	2.82

Like in the gender case, product categories were selected in groups of two, and compared through pairwise t-test for each age interval selected by participants in the survey.

Table 32. ***Paired Sample T-Test Results of Media and Entertainment, and Education Comparison in Terms of Age***

Age	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
Under 18	-.667	1.231	.355	-1.876	11	.087
18 – 25	-.207	1.266	.095	-2.184	178	.030
26 – 35	.095	1.472	.121	.782	147	.436
36 – 45	.500	1.566	.334	1.498	21	.149
Above 45	.909	1.700	.513	1.773	10	.107

Between media and entertainment, and education, the only significant difference of retweeting likelihood exists in the 18-25 age interval, $t(178) = -2.184$, $p = 0.030$, $p < 0.05$. Parpicipants younger than 18, $t(11) = -1.876$, $p = 0.087$, $p > 0.05$; between 26 and 35, $t(147) = 0.782$, $p = 0.436$, $p > 0.05$; between 36 and 45, $t(21) = 1.498$, $p = 0.149$, $p > 0.05$; and participants 45 and older, $t(10) = 1.773$, $p = 0.107$, $p > 0.05$ do not have a significant difference in retweeting likelihood between the categories of media and entertainment, and education.

Table 33. ***Paired Sample T-Test Results of Sports and Beverages Comparison in Terms of Age***

Age	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
Under 18	-.417	1.443	.417	-1.000	11	.339
18 – 25	-1.028	1.519	.114	-9.052	178	.000
26 – 35	-.486	1.771	.146	-3.342	147	.001
36 – 45	-.500	1.371	.292	-1.710	21	.102
Above 45	-.727	1.348	.407	-1.789	10	.104

Comparing sports and beverages, the significant difference of retweeting likelihood exists in 18 – 25, $t(178) = -9.052$, $p < 0.001$; and 26 – 35, $t(147) = -3.342$, $p = 0.001$, $p < 0.05$ age intervals. Users younger than the age of 18, $t(11) = -1.000$, $p = 0.339$, $p > 0.05$; between 36 and 45, $t(21) = -1.710$, $p = 0.102$, $p > 0.05$; and older than 45, $t(10) = -1.789$, $p = 0.104$, $p > 0.05$ do not have a significant difference in terms of retweeting the word-of-mouth messages about sports or beverages.

Table 34. ***Paired Sample T-Test Results of Banking and Financial Services, and Food and Restaurants in Terms of Age***

Age	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
Under 18	.583	1.311	.379	1.541	11	.152
18 – 25	.855	1.608	.120	7.112	178	.000
26 – 35	.649	1.538	.126	5.131	147	.000
36 – 45	-.318	1.393	.297	-1.071	21	.296
Above 45	.818	2.040	.615	1.330	10	.213

Again, a significant difference between retweeting word-of-mouth messages about banking and financial services, and food and restaurants exists for the age intervals of 18 – 25, $t(178) = 7.112$, $p = 0.000$, and 26 – 35, $t(147) = 5.131$, $p < 0.001$. The remaining age intervals do not have a direct effect on retweeting likelihood, i.e. a significant difference between banking and financial services, and food and restaurants; could be younger than 18, $t(11) = 1.541$, $p = 0.152$, $p > 0.05$; between 36 and 45, $t(21) = -1.071$, $p = 0.296$, $p > 0.05$; or older than 45, $t(10) = 1.330$, $p = 0.213$, $p > 0.05$.

Table 35. ***Paired Sample T-Test Results of Home Decoration and Design, and Technological Products in Terms of Age***

Age	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
Under 18	.500	1.679	.485	1.032	11	.324
18 – 25	1.145	1.891	.141	8.105	178	.000
26 – 35	.534	1.635	.134	3.972	147	.000
36 – 45	.591	1.623	.346	1.708	21	.102
Above 45	1.000	.894	.270	3.708	10	.004

As the comparison is made between home decoration and design, and technological products; three age intervals respond with a significant difference in terms of retweeting likelihood: between 18 and 25, $t(178) = 8.105$, $p < 0.001$; between 26 and 35, $t(147) = 3.972$, $p < 0.001$; and older than 45, $t(10) = 3.708$, $p = 0.004$, $p < 0.05$. Participants younger than 18, $t(11) = 1.032$, $p = 0.324$, $p > 0.05$; and between 36 – 45, $t(21) = 1.708$, $p = 0.102$, $p > 0.05$ do not have a significant difference for retweeting word-of-mouth tweets about home decoration and design or technological products.

Table 36. ***Paired Sample T-Test Results of Beauty and Treatment Products, and Travel and Transportation Services in Terms of Age***

Age	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
Under 18	.417	1.564	.452	.923	11	.376
18 – 25	.704	1.678	.125	5.612	178	.000
26 – 35	.601	1.502	.123	4.872	147	.000
36 – 45	1.000	1.773	.378	2.646	21	.015
Above 45	1.455	1.572	.474	3.068	10	.012

When beauty and treatment products and travel and transportation services are compared, almost all age intervals respond significantly for retweeting likelihood. Respondents between 18 – 25, $t(178) = 5.612$, $p < 0.001$; between 26 – 35, $t(147) = 4.872$, $p < 0.001$; between 36 – 45, $t(21) = 2.646$, $p = 0.015$, $p < 0.05$; and respondents older than 45, $t(10) = 3.068$, $p = 0.012$, $p < 0.05$ have a significant difference between retweeting the word-of-mouth messages about two product and service categories, while participants younger than 18 do not have such significant difference, $t(11) = 0.923$, $p = 0.376$, $p > 0.05$.

Table 37. ***Paired Sample T-Test Results of Communication Services, and Automobile and Automotive in Terms of Age***

Age	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
Under 18	-.417	1.165	.336	-1.239	11	.241
18 – 25	-1.257	1.653	.124	-10.176	178	.000
26 – 35	-.898	1.552	.128	-7.017	146	.000
36 – 45	-.136	1.424	.304	-.449	21	.658
Above 45	-.545	2.115	.638	-.855	10	.412

The pairwise t-test comparisons follow with communication services and automotives and automobiles. While participants between 18 – 25, $t(178) = -10.176$, $p < 0.001$, and between 26 – 35, $t(146) = -7.017$, $p < 0.001$ have a significant difference between retweeting word-of-mouth messages about communication services and automobiles;

participants younger than 18, $t(11) = -1.239$, $p = 0.241$, $p > 0.05$, between 36 – 45, $t(21) = -0.449$, $p = 0.658$, $p > 0.05$, and older than 45, $t(10) = -0.855$, $p = 0.412$, $p > 0.05$ do not possess such significance.

Table 38. ***Paired Sample T-Test Results of Healthcare Services, and Clothing and Textile in Terms of Age***

Age	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
Under 18	.750	1.138	.329	2.283	11	.043
18 – 25	-.385	1.492	.112	-3.456	178	.001
26 – 35	-.493	1.558	.128	-3.851	147	.000
36 – 45	-1.045	1.914	.408	-2.562	21	.018
Above 45	-1.000	1.612	.486	-2.057	10	.067

Comparing healthcare services and clothing and textile in terms of retweeting likelihood, almost all age intervals respond with significant difference. Participants younger than 18, $t(11) = 2.283$, $p = 0.043$, $p < 0.05$; between 18 – 25, $t(178) = -3.456$, $p = 0.001$, $p < 0.05$; between 26 – 35, $t(147) = -3.851$, $p < 0.001$; and between 36 – 45, $t(21) = -2.562$, $p = 0.018$, $p < 0.05$; all these intervals have significant differences in terms of retweeting word-of-mouth messages about these two product and service categories. On the other hand, participants above the age of 45 do not have such significant difference for retweeting word-of-mouth messages about the two categories, $t(10) = -2.057$, $p = 0.067$, $p > 0.05$.

6.3.4.2. Familiarity with the Product

H8: The likelihood of retweeting a tweet about a product or a service increases with the familiarity with that product or service.

Another determinant of word-of-mouth activity and retweeting likelihood on Twitter about product and services is the familiarity between the user and the product, or service. Two questions were asked to the participants to see if the idea that familiarity with the product increases the word-of-mouth action: The first one was about quite

familiar products and services and the tweeting or retweeting likelihood about those. The second one, on the other hand, was suggesting that individuals directly tweet about brand new products. Both of the questions were presented in 5-point likert scale. For the first question proposing the increasing word-of-mouth likelihood with increasing familiarity, 17.5% of the participants totally agreed, 33.6% agreed, 23.1% neither agreed nor disagreed, 14.5% disagreed, and 11.3% totally disagreed, with a mean value of 2.69 (*SD* = 1.240). Meanwhile, when the question linking low familiarity and high word-of-mouth participation together is the subject, only 8.9% totally agreed, 16.1% agreed, 27.2% neither agreed nor disagreed, 20.7% disagreed, and 27.2% totally disagreed; extracting a mean of 3.41 (*SD* = 1.282). The results at this point, roughly shows that word-of-mouth participation on Twitter increases with high familiarity with a product or service. To see if these results are significant, one-sample t-test was used.

Table 39. ***One-Sample Test Results of Familiarity Effects on Word-of-Mouth Participation***

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Effects of high familiarity	-4.893	371	.000	-.315	-.44	-.19
Effects of low familiarity	6.186	371	.000	.411	.28	.54

As it can be seen from the t-test results, if the familiarity with the product or service is high, individuals have a tendency to participate more in the word-of-mouth actions on Twitter; and the results came up to be significant, $t(371) = -4.893$, $p < 0.001$. Likewise, low familiarity has the potential to decrease word-of-mouth participation on Twitter with significant results from the t-test, $t(371) = 6.186$, $p < 0.001$.

6.4. Further Exploratory Analysis on Gender and Age Demographics

Table 40. ***Further Exploratory Analysis of Determinants Comparing Gender Demographics***

Hyp.	Related Determinant	Measured Aspect	Gender		Age	
			F	Sig.	F	Sig.
H1a	Reliability	Reliability of Real Life People on SNS	.168	.682	1.105	.399
H1b	Reliability	Reliability of Celebrities on Social Networks	2.592	.108	.383	.821
H1c	Reliability	Information-giving	.034	.854	1.251	.289
H1c	Reliability	Information-gathering	2.465	.117	2.699	.031
H2	Level of Individual	Comparison between two sources	5.094	.025	1.295	.271
H2	Level of Individual	Comparison between source and listener	6.646	.010	.980	.418
H3	Network Usage Efficiency	Reliability Effects of Network Usage Efficiency	.570	.451	.473	.755
H3	Network Usage Efficiency	Retweeting Likelihood Effects of Network Usage Efficiency	4.064	.045	.929	.447
H4a	Psychological Condition	Source's irrelevance with material benefits	.361	.548	.706	.588
H4b	Psychological Condition	Tendency to write tweets with potential to gain followers	8.637	.004	.349	.845
H4b	Psychological Condition	Tendency to write tweets with potential to be retweeted	8.274	.004	.675	.610
H4b	Psychological Condition	Tendency to write tweets with hashtags	.029	.865	.864	.485
H5	Personal Relevance	Writing or retweeting a tweet about a personally relevant product	1.900	.169	.558	.693
H5	Personal Relevance	Comparing word-of-mouth tweets in terms of personal relevance	.771	.381	.295	.881
H8	Familiarity with the Product	Effects of high familiarity	.122	.727	.461	.765
H8	Familiarity with the Product	Effects of low familiarity	1.890	.170	2.659	.033

6.4.1. Gender and Age Effects on Reliability

Gender did not make a remarkable difference for this hypothesis about the reliability of individuals on social network sites from real life. The 2.13 total mean was 2.15 (SD = 1.257) for females while it was 2.10 (SD = 1.176) for males. In other words, males rely on people from their real life slightly more than women do. The ANOVA results (given as an option in the mean comparison) supported this notion, $F(1, 370) = 0.168$, $p = 0.682$, $p > 0.05$, indicating there is no difference between genders in terms of assessing the reliability levels of people from their real lives in the social network sites.

Age again does not make any difference for reliability evaluation of users from real life. The mean values are 1.92 (SD = 1.084) for individuals younger than 18, 2.25 (SD = 1.249) for individuals between 18 and 25, 1.99 (SD = 1.175) for individuals between 26 and 35, 2.14 (SD = 1.320) for individuals between 36 and 45, and 2.09 (SD = 0.944) for individuals older than the age of 45. Considering the midpoint of 3 in a 5-point likert scale; none of the age intervals fall into the disagreeing side of the scale. ANOVA results are in line with the means for each interval and in total. $F(4, 367) = 1.015$, $p = 0.399$, $p > 0.05$ values support the notion that the age of the user does not alter his/her reliance on other users on the social network site also from his/her real life.

Gender demographics were also studied in terms of each categories' reliance on celebrities on social network sites in terms of word-of-mouth message source. Females have a mean of 3.95 (SD = 1.249) while males have 3.74 mean (SD = 1.267). Even if both genders do not have a tendency to rely on celebrities' word-of-mouth tweets, males have a slightly higher tendency to rely on those. The ANOVA results also suggest that there is no difference between genders in terms of relying on

word-of-mouth messages of the celebrities more. $F(1, 370) = 2.592$, $p = 0.108$, $p > 0.05$ values prove that females and males do not differ in this sense.

Age factor also does not make a difference in individual's behaviour in terms of relying on celebrities' word-of-mouth tweets. According to the answers of the respondents to the related question in the survey, individuals younger than the age of 18 has a mean value of 4.08 (SD = 0.996), individuals between 18 and 25 has a mean of 3.85 (SD = 1.250), individuals between 26 and 35 has a mean of 3.77 (SD = 1.289), individuals between 36 and 45 has a mean value of 4.00 (SD = 1.309), and people older than 45 has a mean of 3.64 (SD = 1.362). Like the total mean value of 3.83, each age interval separately disagrees with the idea of relying more on celebrity word-of-mouth tweets; and none of the age intervals differ from the consensus. ANOVA results also support this synchronization between age intervals and suggest that there are no differences between age categories in terms of relying on celebrities' word-of-mouth activity with $F(4,367) = 0.383$, $p = 0.821$, $p > 0.05$.

The issue of reliability of corporate accounts were also analysed for gender and age. Both information-giving and advertising aspects, and information gathering and communication aspects were compared for genders and age intervals. The ANOVA results show that both aspects do not have a significant difference between females and males. Neither the information giving and advertising aspects, $F(1, 370) = 0.034$, $p = 0.854$, $p > 0.05$; nor the information gathering and communication aspects, $F(1, 370) = 2.465$, $p = 0.117$, $p > 0.05$, have different reliability perceptions about Twitter between females and males. Indeed, both genders' have similar tendencies with the general means for each aspect of corporate accounts on Twitter. In other words, information-giving and advertising aspects for females (M = 3.25, SD = 1.312) and males (M = 3.23, SD = 1.255), and information gathering and communication aspects for females (M = 3.27, SD = 1.475) and males (M = 3.04, SD = 1.400) disagree with the reliability of corporate Twitter accounts.

According to the ANOVA results, the reliability of information giving and advertising aspects of Twitter do not have a significant difference between the age intervals, $F(4, 367) = 1.251$, $p = 0.289$, $p > 0.05$. On the other hand, participants from different ages have significantly different reliability perceptions of the information gathering and communication aspects of Twitter, $F(4, 367) = 2.699$, $p = 0.031$, $p < 0.05$. In information-giving and advertising aspects, only participants older than 45 find Twitter reliable in such terms, ($M = 2.55$, $SD = 1.036$); the remaining disagree with such reliability: participants younger than 18 ($M = 3.33$, $SD = 1.155$), between 18 – 25 ($M = 3.22$, $SD = 1.313$), between 26 – 35 ($M = 3.24$, $SD = 1.221$), and between 36 – 45 ($M = 3.59$, $SD = 1.501$). On the other hand, in information gathering and communication aspects, none of the age categories believe in the reliability of Twitter: participants younger than 18 ($M = 3.75$, $SD = 1.422$), between 18 – 25 ($M = 3.00$, $SD = 1.442$), between 26 – 35 ($M = 3.13$, $SD = 1.453$), between 36 – 45 ($M = 3.82$, $SD = 1.259$), and participants older than 45, ($M = 3.73$, $SD = 0.905$).

6.4.2. Gender and Age Effects on Level of Individual

Further analysis was made on the participants' responses to the level questions so as to see if gender has an effect on the perception of level of the source in Twitter in terms of number of followers. When the issue is comparing two different sources for their levels in Twitter, females ($M = 3.99$, $SD = 1.135$) and males ($M = 3.71$, $SD = 1.259$) tend to have a significant difference, $F(1, 370) = 5.094$, $p = 0.025$, $p < 0.05$. Likewise, when females ($M = 4.09$, $SD = 1.131$) and males ($M = 3.76$, $SD = 1.218$) compare a word-of-mouth source and themselves as listeners in terms of follower numbers, they have a significant difference while doing so, $F(1, 370) = 6.646$, $p = 0.010$, $p < 0.05$.

Age comparison did not yield results like in the gender case. For the first question, the youngest (younger than 18) ($M = 4.08$, $SD = 0.793$) and the oldest (older than 45)

(M = 4.09, SD = 0.944) have the highest means, therefore disagreeing the most; but all in all there is not a significant difference between the age intervals of participants, $F(4, 367) = 1.295$, $p = 0.271$, $p > 0.05$. Comparing source's reliability to a listener's oneself does not make a significant difference between age intervals either, $F(4, 367) = 0.980$, $p = 0.418$, $p > 0.05$.

6.4.3. Gender and Age Effects on Network Usage Efficiency

The analysis was carried one step ahead to see gender and age effects on such assessment about network usage efficiency. As it can be seen from the ANOVA results, females (M = 3.80, SD = 1.175) and males (M = 3.71, SD = 1.183) do not have a significant difference in terms of assessing the reliability of efficient users in Twitter, $F(1, 370) = 0.570$, $p = 0.451$, $p > 0.05$. However, females (M = 4.02, SD = 1.121) and males (M = 3.78, SD = 1.197) are significantly different in their retweeting likelihood of efficient users of Twitter, with females less likely to retweet, $F(1, 370) = 4.064$, $p = 0.045$, $p < 0.05$.

Five age intervals do not have a significant difference in terms of network usage efficiency assessment, neither for reliability, $F(4, 367) = 0.473$, $p = 0.755$, $p > 0.05$; nor for retweeting likelihood, $F(4, 367) = 0.929$, $p = 0.447$, $p > 0.05$.

6.4.4. Gender and Age Effects on Psychological Condition

The analysis was carried on to see if gender has an effect on viral advertisement evaluation. The ANOVA result has shown that there is not. Females (M = 2.60, SD = 1.272) have more likelihood of retweeting such advertising-free word-of-mouth tweets than males (M = 2.68, SD = 1.287); but the difference is not significant, $F(1, 367) = 0.361$, $p = 0.548$, $p > 0.05$. Same analysis was made in order to compare the age intervals. ANOVA results show that there is also not a significant difference between the five different age intervals in terms of their retweeting likelihood of ad-

free word-of-mouth tweets, $F(4, 367) = 0.706$, $p = 0.588$, $p > 0.05$; with participants younger than 18 the least agreement ($M = 3.00$, $SD = 1.206$) and participants older than 45 with the most agreement ($M = 2.18$, $SD = 0.982$).

Another aspect of psychological condition, as mentioned before, was the need to gather more followers on Twitter while participating in word-of-mouth activity. These questions about psychological condition were also analysed to see if there is a difference between genders and measure them. According to the ANOVA results, females ($M = 3.86$, $SD = 1.285$) and males ($M = 3.46$, $SD = 1.366$) are significantly different in terms of writing word-of-mouth tweets or retweeting such to collect followers, and males have higher tendencies to do so; $F(1.370) = 8.637$, $p = 0.004$, $p < 0.05$. Also, males ($M = 3.38$, $SD = 1.375$) again have higher tendencies than females ($M = 3.78$, $SD = 1.301$) in terms of writing word-of-mouth tweets that are more likely to be retweeted, $F(1, 370) = 8.274$, $p = 0.004$, $p < 0.05$. However, in the case of word-of-mouth tweets with hashtags, there is not a significant difference between females ($M = 3.68$, $SD = 1.282$) and males ($M = 3.70$, $SD = 1.245$); $F(1, 370) = 0.029$, $p = 0.865$, $p > 0.05$. On the other hand, there is not a significant difference between them in any of the questions according to the ANOVA results. All in all, age is not a significant factor in determining the need to gain more followers in Twitter.

6.4.5. Gender and Age Effects on Personal Relevance

Personal relevance was also analysed for gender and age demographics, but none of them yielded significant difference between any groups. Gender does not have a significant effect on retweeting likelihood of a word-of-mouth tweet that has personal relevance to the listener. Despite all gender groups have positive attitude towards the logic with mean values about 2.5, none of them has a significant difference from the remaining groups of the related demographic aspect. With a quick summary, females

agree with the higher retweeting likelihood about a personally relevant product (M = 2.28, SD = 1.218) and with the higher retweeting likelihood of a word-of-mouth message about a more personally relevant product compared to the less (M = 2.61, SD = 1.243). Males also agree with both statements respectively, (M = 2.46, SD = 1.233) and (M = 2.72, SD = 1.238). All parties agreeing for all statements, the ANOVA results could not yield significant results for neither first statement between females and males, $F(1, 370) = 1.900$, $p = 0.169$, $p > 0.05$; nor for the second statement, again between females and males, $F(1, 370) = 0.771$, $p = 381$, $p > 0.05$.

Comparing different age groups in terms of their responses to the personal relevance questions, like in the gender demographics, there was not a significant difference between separate groups. Either for the retweeting likelihood for a personally relevant product, $F(4, 367) = 0.558$, $p = 0.693$, $p > 0.05$; or for comparing the retweeting likelihoods of two products or services in terms of personal relevance, age groups do not differ from each other, $F(4, 367) = 0.295$, $p = 0.811$, $p > 0.05$. Each and every age group agrees with their increasing retweeting likelihood for a word-of-mouth message that is about a more personally relevant product or service.

6.4.6. Gender and Age Effects on Familiarity with the Product

The familiarity effects were also analysed through gender and age effects. Gender, somehow, does not seem to have a direct effect on the perception of individuals in terms of evaluating the products or services on Twitter, neither for high nor for low familiarity. Females (M = 2.66, SD = 1.247) and males (M = 2.71, SD = 1.236) both tend to participate in electronic word-of-mouth more when the product or service of the message is more familiar to them; leaving no significant difference between genders, $F(1, 370) = 0.122$, $p = 0.727$, $p > 0.05$. Also, when the product or service in the word-of-mouth message is not familiar to them, neither females (M = 3.51, SD = 1.276) nor males (M = 3.33, SD = 1.285) participate in electronic word-of-mouth,

therefore there is no significant difference between those; $F(1, 370) = 1.890$, $p = 0.170$, $p > 0.05$.

Age, however, has an effect on word-of-mouth participation for the tendencies to participate in word-of-mouth for low familiarity. As it can be seen from the table, there is a significant difference between age groups in terms of word-of-mouth participation for products and services that are not familiar to them, $F(4, 367) = 2.659$, $p = 0.033$, $p < 0.05$. Even if all age groups disagree with participating in word-of-mouth on Twitter for brand new products or services, one age group disagrees significantly higher than the rest: individuals between 36 and 45 ($M = 4.09$, $SD = 0.971$).

CHAPTER 7

DISCUSSION AND CONCLUSION

7.1. Discussion and Interpretation of Results

The main concern of this study was about the retweeting likelihood, specifically for Twitter; and the likelihood of diffusion on social network sites. The analyses were conducted to measure the effects of several drivers, influencers, and determinants on this retweeting likelihood, the scope of their effects, and also the size of the effects, i.e. whether they increase or decrease the likelihood of diffusion. Also, further exploratory analysis were made to see the effects of some generic demographics (gender and age) and some Twitter information about the participants (number of followers and number of accounts followed on Twitter, and number of tweets written per week). All of these collected data and conducted analyses yielded some remarkable results about electronic word-of-mouth diffusion on social network sites, and Twitter in particular.

The focus of this study was on the word-of-mouth message itself, and how different characteristics affect the likelihood of diffusion in social network sites, and how they affect retweeting likelihood on Twitter especially. Beyond the message characteristics, the source of the message was another issue that was investigated throughout the studies to reveal their influence on diffusion likelihood, if exists, as well. Another important point about this message issue was the social network site where the message exists. This further analysis was conducted to see if the word-of-mouth participation rates were general to all social network sites, or if they are specific to Twitter.

First of all, the content of the message was studied, in terms of negativity, humour, and diffusion aim. Data collected from sample tweets were used to see if such characteristics, or the absence of those have a direct effect on retweeting likelihood on Twitter. Additionally, these sample tweets were arranged to appear from a certain source: a close friend, a celebrity, or an unfamiliar individual. The results have shown that negative messages are more likely to be retweeted if they come from a close friend. Celebrities, as a source, do not have a direct effect on negative or positive messages to be retweeted more. When an unfamiliar individual is the source, tweets with positive messages are more likely to be retweeted. Taking humour object as the content of the message, the results revealed out that humour do not have a direct effect, either increasing or decreasing, on retweeting likelihood of individuals on Twitter. Such ineffectiveness is applicable to all three sources; close friend, celebrity, and unfamiliar individual. Diffusion aim is another type of content that was investigated, and it turned out that, unexpectedly, diffusion-aimed messages are less likely to be retweeted compared to not diffusion-aimed messages –having close friends or the unfamiliar individuals as the source of such messages. Celebrities, again, do not affect significantly the content of diffusion aim, or the absence of it.

Looking at the mean values of these sample tweets, unfamiliar individuals are least likely to be retweeted for negative, positive, humorous, and non-humorous contents. Considering the privacy and reliability elements, it is not a surprising outcome; as individuals rely more on sources they know and they are familiar with. However, for the diffusion-aimed and not diffusion-aimed content, celebrities turned out to have the least likelihood to be retweeted among all sources. This, again is an expected result; and shows that the aim of a source to diffuse more is likely to be appreciated more when the source has fewer followers. In other words, people support the diffusion-aim and retweet the message more when the source has less followers; and ignore such aim and effort when the source has abnormally high number of followers.

Message, as the focus of the study, was also analysed in terms of its source. Sources, which are a close friend, a celebrity, or an unfamiliar individual, were compared with each other for each type of message to see if there is a significant difference between or among them. As described throughout the survey explanations, a participant of the survey evaluated the sample word-of-mouth messages for only one of the sources. Therefore, each source was assessed in terms of retweeting likelihood by groups consisting of approximately one-third of all participants. These groups were compared with each other and indicated that close friends are more likely to be retweeting when they convey a message with positive and negative content. Rest of the differences between the sources are not significant, therefore it could be interpreted as source of the message has an effect on likelihood of diffusion, but its effect is not direct as the content of the message.

Further exploratory analysis was conducted on message to see if demographics have an effect on the retweeting likelihood of messages with different contents. The results of the analysis on gender have shown that females react only to diffusion-aimed content and they are less likely to retweet when there is an effort to diffuse the word-of-mouth message. On the other hand, males react to all contents in comparison: They are more likely to retweet word-of-mouth tweets that are positive instead of negative, non-humorous instead of humorous, and not diffusion-aimed instead of diffusion-aimed. Age is the other demographic variable and according to the results, it does not have an effect on diffusion likelihood of humorous or non-humorous tweets. None of the age groups have a difference in retweeting between the two. Diffusion aim decreases the likelihood of retweeting for participants between 18 – 25, and 26 – 35. Additionally, the participants between 18 and 25 and the ones above 45 tend to retweet positive messages more than negative equivalents.

One last analysis on message is made to see the effect of Twitter on the likelihood of diffusion. As the main social network of the study is Twitter and the rest of the

influencers and determinants were only measured taking Twitter as the social network site conveying the message, a need to assess the effect and reliability of this social network site was identified. Accordingly, a comparison with another commonly used social network site was assumed to be enough in measuring the expectations and Facebook was selected as a rival. Comparing the two sites for each type of message (negative, positive, humorous, non-humorous, diffusion-aimed, and not-diffusion aimed), the results have shown that social network site also is an important element for diffusion likelihood. The analysis on this issue also shown that Twitter, as a social network site, is more likely to diffuse the word-of-mouth messages than Twitter. These results have revealed the importance of the social network site to facilitate the diffusion of the word-of-mouth message, and also the suitability and convenience of Twitter to the word-of-mouth concept.

Product and service, as an influencer, turned out to have a direct effect on retweeting likelihood even if it was not the main focus of the study. This influencer was analysed in two determinants: product category, and familiarity with the product. The category of product (or service) was expected to have different diffusion likelihoods depending on the demographics, gender and age; and the results turned out to be as expected. Apparently the effects of the demographics are not in the same dimension and magnitude, but still there is a remarkable and indispensable influence in almost all product categories. Similarly, familiarity with the product or service is also an important determinant of diffusion likelihood and the results have shown that when familiarity with a product or service is higher, the likelihood of retweeting of a tweet about that product or service increases. All in all, product (or service) is an important influencer that has consistent and direct effects on retweeting likelihood of individuals for its any determinant.

On the other hand, such consistency is not legitimate for the source. Source is one of the influencers within the model and it has three determinants below: Reliability,

level of individual in a social network, and network usage efficiency. Reliability analysis revealed interesting results; individuals tend to rely more on sources that they are familiar with in their real life. However, celebrities do not have such extra reliability, not for Twitter at least. Reliability for Twitter also has interesting results; which revealed that the users rely more on Twitter while they obtain information about a brand and while they are exposed to advertising. Exploratory analyses about the demographics have shown that gender is not an important variable to change the reliability perceptions of individuals in any manner, while age has one small but important effect. Individuals between 18 and 25 years old have the most likelihood to gather information about corporate accounts and to contact with those.

Another determinant of reliability in the model is the level of individual in a social network, and it was expected to increase the reliability proportionally. However, the results of the analyses have shown that individuals do not care about the number of followers the source has while assessing its reliability. Exploratory analysis on gender has shown that females care even less about the level of the source, while age does not have a significant effect in this evaluation.

Network usage efficiency is the final determinant of reliability as an influencer, and it was also expected to increase the reliability while it was increasing itself. According to the results, individuals again are not concerned with the tweeting frequency of the source while relying on that source or retweeting its word-of-mouth tweets. Gender has turned out to have no effect on reliability about network usage efficiency, but it has on retweeting likelihood: Females are less concerned about the tweeting frequency than males. Age, again, does not directly affect the network usage efficiency perceptions.

The final influencer of this study is the listener, to whom the social network sites convey the electronic word-of-mouth messages from the source. Listener, as a part of

the word-of-mouth message transmission model, should be involved in diffusion activity on social network sites to ensure that the word-of-mouth message was seen and understood. This need for insurance arises from the concept and the working principle of social network sites, as there is no guarantee that the listener will see or read the message even if the source shares it once or multiple times. In any case, listener also has some determinants that are assumed to affect her/his likelihood of retweeting a tweet with word-of-mouth content. One of them is the psychological condition of the listener, and it was measured and analysed in two aspects: material benefit seek of the source and the pursuit of listener to collect more followers. The results have shown that listeners tend to involve more in retweeting when they believe the source is not seeking for material benefit. Further exploratory analysis revealed the ineffectiveness of gender and age in this subject –all age and gender groups favour the absence of benefit-seeking. Then again, psychological condition has another aspect: the pursuit to collect more followers. Contrary to the expectations, the results have shown that individuals do not tweet, write tweets that are more likely to be retweeted, or use hashtags in order to gain more followers to their profile. In other words, in the course of performing such core Twitter activity, what prompts the individuals is not their desire for more followers. While males turned out to be more likely to write and retweet word-of-mouth tweets than females, gender does not have an effect on using hashtags with such purpose.

The other determinant of listener's involvement in retweeting activity is her/his personal relevance with the product or service. The results from the related analyses have supported the hypothesis that individuals have more likelihood of retweeting word-of-mouth messages that are about more personally relevant products. Further exploratory analysis on demographics revealed that neither gender nor age affects individuals' perceptions about personally relevant products; all age and gender

groups are prone to involve more in word-of-mouth activity on Twitter for more personally relevant products.

As the study aimed to grasp a general understanding of word-of-mouth activity on Twitter, all parties of the simple communication model were involved in the model. Therefore, there were many outcomes that should and could be studied further, deeply and carefully. Among all, the most important results came from the message influencer, showing the old-fashioned characteristics within traditional word-of-mouth are not that valid within current state of word-of-mouth. From the participation of unfamiliar individuals to the study, to the positive messages' more likelihood to be shared compared to negative (for some type of sources); message yielded some interesting results that could bring novelty to the marketing literature. Additionally, product and service turned out to be a very important fragment of the electronic word-of-mouth model that has some direct and consistent results in terms of increasing or decreasing the retweeting likelihood. Carrying the study and its results one step further, product and service, along with the message, would definitely be an irreplaceable part of the study.

7.2. Limitations and Directions for Future Research

There were a couple of limitations encountered during the execution of this study. The first and most important was the low number of questions provided in survey per determinant (except for *message* and its determinants). As the study aimed to comprise a general understanding and analysis towards electronic word-of-mouth attitude, the model and the hypotheses tried to approach the concept in each and every aspect of it. With such high number of hypotheses to be analysed, the number of questions in the survey had to be limited to a reasonable number in order to enable the participants' involvement in and completion of the survey. Future research, especially the ones studying on one or more of the determinants specifically, may

measure and analyse those and their contribution with more questions and increase the reliability of the results.

Remembering the measurement was performed through the distribution of a single questionnaire online, unverified responses may exist. Even if the technological infrastructure of the hosting survey site prevents multiple fulfilment of the survey, the responses cannot be proven valid a hundred per cent. Sample validity is another issue that concerns this study like many others performing measurements through questionnaires. With an online questionnaire distributed through a set of social network sites, the results are not guaranteed in terms of grasping a heterogeneous sample. For instance, among all age categories, the participants above the age of 45 constitute only 3% of the sample. Future research analysing that age groups' social network site usage and word-of-mouth attitude in such environment might face the obstacle of reaching this group, therefore these research should find more effective and efficient ways to reach the mentioned population. Sample validity is also related with the population's Internet usage rates and access to the non-users but that is not an issue for this research in particular, as it measures the role of social network site usage in word-of-mouth diffusion –i.e. the participants must have access to the Internet to be qualified to the sample of this study, non-users are not affiliated. Future research can use diverse techniques to increase the reliability and to avoid such research limitations.

An important limitation of this research study is inability to measure the diffusion rates. Sensibly, it can be assumed that word-of-mouth messages diffuse in larger magnitude and more quickly with electronic word-of-mouth compared to traditional. The ease of accessibility in electronic word-of-mouth is also accepted by previous research (Bhatnagar & Ghose, 2004; Hennig-Thurau, Gwinner, Walsh, & Gremler, 2004; Park & Lee, 2009). Nevertheless, the time limitations of this study and its coverage of many aspects of electronic word-of-mouth prevented the measurement

and research to focus on diffusion and to make a sample study that releases case of word-of-mouth messages electronically and traditionally, follow their diffusion, and compare the time and crowd the messages reached. Future research focusing on the diffusion rates in electronic word-of-mouth, especially in social network sites, and their comparison with traditional diffusion may perform such detailed analyses.

The main focus of the word-of-mouth model of this study, consisting of the factors influencing the diffusion, is the message; and it was measured through sample word-of-mouth tweets, asking participants to evaluate their likelihood of retweeting for each. Comparing each sample pair (negative vs. positive, humorous vs. non-humorous, diffusion-aimed vs. not diffusion-aimed), results revealed which characteristics are likely to be retweeted more in a word-of-mouth message. However, as mentioned in Chapter 5, all characteristics turned out to be in a negative tendency to be retweeted, even if some are more likely in comparison. So, unique samples for each characteristic were not likely to be shared but the comparison yielded the expected results at last. For the results to be more focused on target and to be more reliable, future research may provide multiple questions for measuring a message characteristic. Collecting an evaluation of the sample tweet(s) in terms of its characteristic (e.g. how humorous is the message on a five-point likert scale) from the participants in a questionnaire may be another option for future research in the subject.

One final addition may be for the measurement of the effects of electronic word-of-mouth. Even if this study's assumption was that word-of-mouth is executed at the moment the listener gets involved in sharing activity, purchasing effects of word-of-mouth is also important (Leskovec, Adamic, & Huberman, 2007), and such effect of electronic word-of-mouth is not a field of the literature that is studied so much. Therefore, future research may explore electronic word-of-mouth and its influence on consumers' buying behaviour.

7.3. Managerial Implications

Word-of-mouth diffusion is not only a sociological phenomenon, but also an effective marketing tool –if used correctly. The overall influence of word-of-mouth is accepted by previous research, from the beginning of the literature indeed (Katz & Lazarsfeld, 1955; Brown & Reingen, 1987; Grewal, Cline, & Davies, 2003); and this influence can be used for marketing, especially in a viral concept (Day, 1971; McDonnell, 2005). Viral marketing campaigns are now more widespread than ever, due to the use of Web 2.0 and social network sites by a huge proportion of the population. As each product (or service) that is the subject of a viral campaign retains its own target market, the theoretical results of this study could be beneficial to the practical use by managers and professionals.

First of all, the importance of the word-of-mouth message released to the social network site should be formed carefully as the results shown that the characteristics matter. Source has its importance in the issue as well, and these are interrelated determinants for the message; negative messages are more likely to diffuse from a close friend while positive messages are more likely if they come from a total stranger. Humour is not that important and it is hard to find a humour element that catches all the population. Celebrities, as sources, are not that important and effective, mostly because Twitter users believe that their word-of-mouth messages do not need to be diffused, so using a celebrity to spread a message is not a core element of a viral campaign. In fact, celebrities are the most likely source to be diffused in all types of messages, but especially in advisory content, and therefore their effects should be followed carefully.

Another important element that concerns the professionals is demographics. While gender is more influential on the diffusion likelihood of the word-of-mouth messages than age, these aspects must be taken into consideration. Such demographics are

important especially for product and service determinants. Product categories' diffusion likelihood alters remarkably according to the demographics; therefore they should be taken as one of the most significant elements of viral marketing campaigns.

An important result of the study was the finding that individuals find Twitter more reliable compared to Facebook and other social network sites as a source of word-of-mouth messages and during the communication with corporate accounts. This shows the managers the importance of having a corporate Twitter account and using it timely and efficiently to post up information about the brand, to receive feedbacks from customers, and to provide best solution available on such platform.

Beyond viral marketing campaigns, managers and professionals should keep electronic word-of-mouth messages about their brands in sight all the time. The results of this study indicated that Twitter users do not take the sources' number of followers into consideration while relying on her/his word-of-mouth message or retweeting that message. For that reason, while following word-of-mouth messages and seeing those as feedbacks, professionals should not underestimate users with relatively less followers compared to the average –any word-of-mouth message has the potential to lead to a huge influence for a brand, like a domino effect.

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APPENDICES

Appendix A. Questionnaire (in Turkish)

ODTÜ İşletme Yüksek Lisans Tez Anketi

Değerli katılımcı,

Bu anket, ODTÜ İşletme Yüksek Lisans programı 2. sınıf öğrencisi Zühal Sinem Kurşun tarafından, sonuçları bilimsel tezinde kullanılmak üzere uygulanmaktadır. Anketin amacı, tezin konusu olan sosyal medya ve ağızdan ağza pazarlamanın dağılımını, sosyal medya kullanıcılarının vereceği cevaplar yardımıyla incelemektir.

Anket soruların bir kısmını katılımcılara rastgele atadığı için soru numaralarında bazı atlamalar görmeniz normaldir. (Örneğin 7. sorudan sonra 10. sorunun olması gibi.) Farkında olmadan atladığınız sorularda anket zaten siz katılımcıları uyaracaktır.

Bu anketi cevaplandırabilmek için Twitter ve Facebook sitelerini kullanıyor olmanız gerekmektedir.

Araştırmanın sonuçları tamamen bilimsel amaçlarla kullanılacaktır, ve verdiğiniz cevaplar tamamen gizli tutulacaktır. Ankete objektif yanıtlar vermeniz çok önemlidir.

Bu araştırmaya yapacağınız katkılar için çok teşekkür ederim.

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Aşağıda verilen ifadeleri, Facebook ve Twitter için ayrı ayrı değerlendiriniz.

1) Bu sosyal medya sitesinin reklamlarının, insanları klasik (TV, gazete, dergi, radyo) reklamlarına kıyasla daha çok etkisi altına aldığını düşünürüm.

	Kesinlikle katılıyorum	Katılıyorum	Ne katılıyorum ne katılmıyorum	Katılmıyorum	Kesinlikle katılmıyorum
Facebook	( )	( )	( )	( )	( )
Twitter	( )	( )	( )	( )	( )

2) Gerçek hayatta tanıdığım ve güvendiğim kişilere, bu sitenin kullanıcısı olarak aynı oranda güvenmem.

	Kesinlikle katılıyorum	Katılıyorum	Ne katılıyorum ne katılmıyorum	Katılmıyorum	Kesinlikle katılmıyorum
Facebook	( )	( )	( )	( )	( )
Twitter	( )	( )	( )	( )	( )

3) Bu siteyi kullanma sıklığım arttıkça, herhangi bir ürün/hizmetle ilgili mesaj yazma ve yazılanları paylaşma sıklığım artar.

	Kesinlikle katılıyorum	Katılıyorum	Ne katılıyorum ne katılmıyorum	Katılmıyorum	Kesinlikle katılmıyorum
Facebook	( )	( )	( )	( )	( )
Twitter	( )	( )	( )	( )	( )

4) Bir ürün/hizmet güncel bir konuyu oluşturuyorsa, o esnada o ürün/hizmetle ilgili mesaj yazarım ve/ya yazılanları paylaşırım.

	Kesinlikle katılıyorum	Katılıyorum	Ne katılıyorum ne katılmıyorum	Katılmıyorum	Kesinlikle katılmıyorum
Facebook	( )	( )	( )	( )	( )
Twitter	( )	( )	( )	( )	( )

5) Bu siteye girme isteğim ve bağlılığım arttıkça, bir ürün/hizmetle ilgili mesaj yazma ve yazılan yazılanları paylaşma sıklığım artar.

	Kesinlikle katılıyorum	Katılıyorum	Ne katılıyorum ne katılmıyorum	Katılmıyorum	Kesinlikle katılmıyorum
Facebook	( )	( )	( )	( )	( )
Twitter	( )	( )	( )	( )	( )

6) Aşağıda örnek tweetler verilmiştir. Bunların *yakın arkadaşınız* tarafından yazılmış olduğunu varsayarak, bu tweet'leri RT etme isteğinizi derecelendiriniz.

	Kesinlikle RT ederim.	RT ederim.	Belki RT ederim, belki etmem.	RT etmem.	Kesinlikle RT etmem.
"X havayolları önceden haber vermeden 2 saat rötar yaptı. Havaalanında bekliyoruz. Bir daha X'le seyahat etmeyeceğim."	( )	( )	( )	( )	( )
"Y havayolları rötar olunca uçakta bedava sandviç dağıttı, hem de bir sonraki bilete %10 indirim yapılacakmış. Süper."	( )	( )	( )	( )	( )
"Bülent Ersoy'un oynadığı Pepsi reklamı çok başarılı olmuş. Bugüne kadar 1 Coca-Cola alıyorsam artık 3 Coca-Cola alacağım."	( )	( )	( )	( )	( )
"Bülent Ersoy'lu Pepsi reklamını gördünüz mü? Hiç güzel olmamış."	( )	( )	( )	( )	( )
"X Bankası, hesabıma ne zaman para yatırsam hesap işletim ücreti kesiyor. Dilekçe vermezseniz de geri ödemiyor. RT lütfen!"	( )	( )	( )	( )	( )
"X Bankası, hesabıma ne zaman para yatırsam hesap işletim ücreti kesiyor. Dilekçe vermezseniz de geri ödemiyor."	( )	( )	( )	( )	( )

7) Aşağıda örnek tweetler verilmiştir. Bunların *takip ettiğiniz ünlü biri* tarafından yazılmış olduğunu varsayarak, bu tweet'leri RT etme isteğinizi derecelendiriniz.

	Kesinlikle RT ederim	RT ederim	Belki RT ederim, belki etmem	RT etmem	Kesinlikle RT etmem
"X havayolları önceden haber vermeden 2 saat rötar yaptı. Havaalanında bekliyoruz. Bir daha X'le seyahat etmeyeceğim."	( )	( )	( )	( )	( )
"Y havayolları rötar olunca uçakta bedava sandviç dağıttı, hem de bir sonraki bilete %10 indirim yapılacakmış. Süper."	( )	( )	( )	( )	( )
"Bülent Ersoy'un oynadığı Pepsi reklamı çok başarılı olmuş. Bugüne kadar 1 Coca-Cola alıyorsam artık 3 Coca-Cola alacağım."	( )	( )	( )	( )	( )
"Bülent Ersoy'lu Pepsi reklamını gördünüz mü? Hiç güzel olmamış."	( )	( )	( )	( )	( )
"X Bankası, hesabıma ne zaman para yatırsam hesap işletim ücreti kesiyor. Dilekçe vermezseniz de geri ödemiyor. RT lütfen!"	( )	( )	( )	( )	( )
"X Bankası, hesabıma ne zaman para yatırsam hesap işletim ücreti kesiyor. Dilekçe vermezseniz de geri ödemiyor."	( )	( )	( )	( )	( )

8) Aşağıda örnek tweetler verilmiştir. Bunların *gerçek hayatta tanımadığınız biri* tarafından yazılmış olduğunu varsayarak, bu tweet'leri RT etme isteğinizi derecelendiriniz.

	Kesinlikle RT ederim	RT ederim	Belki RT ederim, belki etmem	RT etmem	Kesinlikle RT etmem
"X havayolları önceden haber vermeden 2 saat rötar yaptı. Havaalanında bekliyoruz. Bir daha X'le seyahat etmeyeceğim."	( )	( )	( )	( )	( )
"Y havayolları rötar olunca uçakta bedava sandviç dağıttı, hem de bir sonraki bilete %10 indirim yapılacakmış. Süper."	( )	( )	( )	( )	( )
"Bülent Ersoy'un oynadığı Pepsi reklamı çok başarılı olmuş. Bugüne kadar 1 Coca-Cola alıyorsam artık 3 Coca-Cola alacağım."	( )	( )	( )	( )	( )
"Bülent Ersoy'lu Pepsi reklamını gördünüz mü? Hiç güzel olmamış."	( )	( )	( )	( )	( )
"X Bankası, hesabıma ne zaman para yatırsam hesap işletim ücreti kesiyor. Dilekçe vermezseniz de geri ödemiyor. RT lütfen!"	( )	( )	( )	( )	( )
"X Bankası, hesabıma ne zaman para yatırsam hesap işletim ücreti kesiyor. Dilekçe vermezseniz de geri ödemiyor."	( )	( )	( )	( )	( )

9) Aşağıda örnek Facebook durumları (status) verilmiştir. Bunların *yakın arkadaşınız* tarafından yazılmış olduğunu varsayarak, bu Facebook durumlarını kendi profilinizde paylaşma isteğinizi derecelendiriniz.

	Kesinlikle paylaşırım	Paylaşırım	Belki paylaşırım, belki paylaşmam	Paylaşmam	Kesinlikle paylaşmam
"X havayolları önceden haber vermeden 2 saat rötar yaptı. Havaalanında bekliyoruz. Bir daha X'le seyahat etmeyeceğim."	( )	( )	( )	( )	( )
"Y havayolları rötar olunca uçakta bedava sandviç dağıttı, hem de bir sonraki bilete %10 indirim yapılacakmış. Süper."	( )	( )	( )	( )	( )
"Bülent Ersoy'un oynadığı Pepsi reklamı çok başarılı olmuş. Bugüne kadar 1 Coca-Cola alıyorsam artık 3 Coca-Cola alacağım."	( )	( )	( )	( )	( )
"Bülent Ersoy'lu Pepsi reklamını gördünüz mü? Hiç güzel olmamış."	( )	( )	( )	( )	( )
"X Bankası, hesabıma ne zaman para yatırsam hesap işletim ücreti kesiyor. Dilekçe vermezseniz de geri ödemiyor. Lütfen bu mesajı profilinizde yayın."	( )	( )	( )	( )	( )
"X Bankası, hesabıma ne zaman para yatırsam hesap işletim ücreti kesiyor. Dilekçe vermezseniz de geri ödemiyor."	( )	( )	( )	( )	( )

10) Aşağıda örnek Facebook durumları (status) verilmiştir. Bunların *takip ettiğiniz ünlü biri* tarafından yazılmış olduğunu varsayarak, bu Facebook durumlarını kendi profilinizde paylaşma isteğinizi derecelendiriniz.

	Kesinlikle paylaşırım	Paylaşırım	Belki paylaşırım, belki paylaşmam	Paylaşmam	Kesinlikle paylaşmam
"X havayolları önceden haber vermeden 2 saat rötar yaptı. Havaalanında bekliyoruz. Bir daha X'le seyahat etmeyeceğim."	( )	( )	( )	( )	( )
"Y havayolları rötar olunca uçakta bedava sandviç dağıttı, hem de bir sonraki bilete %10 indirim yapılacakmış. Süper."	( )	( )	( )	( )	( )
"Bülent Ersoy'un oynadığı Pepsi reklamı çok başarılı olmuş. Bugüne kadar 1 Coca-Cola alıyorsam artık 3 Coca-Cola alacağım."	( )	( )	( )	( )	( )
"Bülent Ersoy'lu Pepsi reklamını gördünüz mü? Hiç güzel olmamış."	( )	( )	( )	( )	( )
"X Bankası, hesabıma ne zaman para yatırsam hesap işletim ücreti kesiyor. Dilekçe vermezseniz de geri ödemiyor. Lütfen bu mesajı profilinizde yayın."	( )	( )	( )	( )	( )
"X Bankası, hesabıma ne zaman para yatırsam hesap işletim ücreti kesiyor. Dilekçe vermezseniz de geri ödemiyor."	( )	( )	( )	( )	( )

11) Aşağıda örnek Facebook durumları (status) verilmiştir. Bunların *gerçek hayatta tanımadığınız biri* tarafından yazılmış olduğunu varsayarak, bu Facebook durumlarını kendi profilinizde paylaşma isteğinizi derecelendiriniz.

	Kesinlikle paylaşırım	Paylaşırım	Belki paylaşırım, belki paylaşmam	Paylaşmam	Kesinlikle paylaşmam
"X havayolları önceden haber vermeden 2 saat rötar yaptı. Havaalanında bekliyoruz. Bir daha X'le seyahat etmeyeceğim."	( )	( )	( )	( )	( )
"Y havayolları rötar olunca uçakta bedava sandviç dağıttı, hem de bir sonraki bilete %10 indirim yapılacakmış. Süper."	( )	( )	( )	( )	( )
"Bülent Ersoy'un oynadığı Pepsi reklamı çok başarılı olmuş. Bugüne kadar 1 Coca-Cola alıyorsam artık 3 Coca-Cola alacağım."	( )	( )	( )	( )	( )
"Bülent Ersoy'lu Pepsi reklamını gördünüz mü? Hiç güzel olmamış."	( )	( )	( )	( )	( )
"X Bankası, hesabıma ne zaman para yatırsam hesap işletim ücreti kesiyor. Dilekçe vermezseniz de geri ödemiyor. Lütfen bu mesajı profilinizde yayın."	( )	( )	( )	( )	( )
"X Bankası, hesabıma ne zaman para yatırsam hesap işletim ücreti kesiyor. Dilekçe vermezseniz de geri ödemiyor."	( )	( )	( )	( )	( )

12) Aşağıda belli ürün kategorileri listelenmiştir. Bu ürün kategorileri haklarında bir tweet yazma ve/veya haklarındaki bir tweet'i RT etme isteğinizi değerlendiriniz. (1=Kesinlikle tweet yazarım/Yazılan bir tweet'i RT ederim, 5= Kesinlikle tweet yazmam/yazılan tweet'i RT etmem).

	1	2	3	4	5
a. Araba – Otomotiv	( )	( )	( )	( )	( )
b. Bankacılık – Finansal hizmetler	( )	( )	( )	( )	( )
c. Eğitim	( )	( )	( )	( )	( )
d. Ev dekorasyonu – Tasarım	( )	( )	( )	( )	( )
e. Gıda – Restoran	( )	( )	( )	( )	( )
f. Giyim – Tekstil	( )	( )	( )	( )	( )
g. Güzellik / Bakım ürünleri	( )	( )	( )	( )	( )
h. İçecekler	( )	( )	( )	( )	( )
i. İletişim hizmetleri (İnternet, GSM, vs.)	( )	( )	( )	( )	( )
j. Medya – Eğlence	( )	( )	( )	( )	( )
k. Sağlık hizmetleri	( )	( )	( )	( )	( )
l. Seyahat – Ulaşım hizmetleri (Havayolu vs.)	( )	( )	( )	( )	( )
m. Spor – Hobi	( )	( )	( )	( )	( )
n. Teknolojik ürünler	( )	( )	( )	( )	( )

13) Lütfen Twitter kullanımı (tweet yazma, RT etme vs.) ile ilgili aşağıda verilen ifadeleri değerlendiriniz. (1 = Kesinlikle katılıyorum, 5 = Kesinlikle katılmıyorum)

	1	2	3	4	5
1. Bir ürün/hizmetle ilgili tweet'lere, gerçek hayatta tanıdığım kişiler tarafından yazılmışsa güvenirim.	( )	( )	( )	( )	( )
2. Bir ürün/hizmetle ilgili tweet'lere, ünlü biri tarafından yazılmışsa, ünlü olmayan kişilere kıyasla daha çok güvenirim.	( )	( )	( )	( )	( )
3. Twitter'daki kurumsal firma hesapları tarafından yapılan reklamlara ve ürün/hizmetle ilgili bilgi veren tweet'lere, diğer sosyal medya sitelerine kıyasla daha çok güvenirim.	( )	( )	( )	( )	( )
4. Kurumsal firmalarla ilgili bilgi almak veya bu hesaplarla iletişime geçmek için tercih edeceğim ilk sosyal medya sitesi Twitter'dır.	( )	( )	( )	( )	( )
5. İki Twitter kullanıcısından, takipçisi daha fazla olan kullanıcının bir ürün/hizmetle ilgili yorum veya fikirlerine daha çok güvenirim.	( )	( )	( )	( )	( )
6. Bir Twitter kullanıcısının takipçi sayısı benimkinden azsa, bir ürün/hizmetle ilgili yorum veya fikirlerine çok güvenmem.	( )	( )	( )	( )	( )
7. Diğer kullanıcılara oranla belirli bir süre içinde daha sık tweet yazan kullanıcıların bir ürün/hizmetle ilgili yorum veya fikirlerine daha çok güvenirim.	( )	( )	( )	( )	( )
8. Diğer kullanıcılara oranla belirli bir süre içinde daha sık tweet yazan kullanıcıların tweet'lerini daha sık RT ederim.	( )	( )	( )	( )	( )
9. Bir ürün/hizmetle ilgili tweet yazdığımda takipçi sayımın artma ihtimali yüksekse, bu ürünle ilgili tweet yazarım veya yazılan tweet'leri RT ederim.	( )	( )	( )	( )	( )
10. Bir ürün/hizmetle ilgili tweet yazdığımda, takipçilerimden favori veya RT alma ihtimalim yüksekse, bu ürünle ilgili tweet yazarım veya yazılan tweet'leri RT ederim.	( )	( )	( )	( )	( )
11. Bir hashtag'e (#) sahip ürün/hizmetle ilgili tweet yazarım veya yazılan tweet'leri RT ederim.	( )	( )	( )	( )	( )
12. Bir ürün/hizmetle ilgili tweet'in kâr amacı gütmediğini (reklam vs.) düşünüyorsam bu tweet'i RT ederim.	( )	( )	( )	( )	( )
13. Kişisel olarak daha yakın bulduğum bir ürün/hizmetle ilgili tweet'leri RT etmeyi tercih ederim.	( )	( )	( )	( )	( )
14. Birbiriyle benzer özellikler taşıyan iki ürün/hizmetten gerçek hayatta daha çok tercih ettiğim ürün/hizmetle ilgili tweet'leri RT etmeyi tercih ederim.	( )	( )	( )	( )	( )
15. Twitter'da takip ettiğim ve beni takip eden kişiler, gerçek hayattaki sosyal çevremden farklı insanlardan oluşur.	( )	( )	( )	( )	( )
16. Bir ürün/hizmetle ilgili bir tweet'i yazan kullanıcıyı takip ediyor ve/ya onun tarafından takip ediliyor olmam, ona fiziksel (yaş, cinsiyet, vs.) konularda benziyor olmamdan daha güvenilir kılar.	( )	( )	( )	( )	( )
17. Bir ürün/hizmetle ilgili kullanım alışkanlıklarım fazlaysa, bu ürünle ilgili tweet yazarım veya yazılan tweet'leri RT ederim.	( )	( )	( )	( )	( )
18. Yeni satın aldığım bir ürün/hizmetle ilgili fikrimi Twitter'a hemen yazarım.	( )	( )	( )	( )	( )

14) Cinsiyetiniz:*

( ) Kadın

( ) Erkek

15) Yaşınız:*

( ) 18'den küçük

( ) 18 - 25

( ) 26 - 35

( ) 36 - 45

( ) 45'ten büyük

16) Twitter'da takip ettiğiniz kişi sayısının bulunduğu aralığı işaretleyiniz.*

( ) 0 – 9

( ) 10 – 49

( ) 50 – 99

( ) 100 – 199

( ) 200 – 499

( ) 500 – 999

( ) 1000 veya daha fazla

17) Twitter'da sizi takip eden kişi sayısının bulunduğu aralığı işaretleyiniz.*

( ) 0 – 9

( ) 10 – 49

( ) 50 – 99

( ) 100 – 199

( ) 200 – 499

( ) 500 – 999

( ) 1000 – 1999

( ) 2000 veya daha fazla

18) Bir haftada yazdığınız ortalama tweet sayısının bulunduğu aralığı işaretleyiniz.*

( ) 0 – 10

( ) 11 – 50

( ) 51 – 100

( ) 101 veya daha fazla

Ankete katıldığınız için çok teşekkürler.

Appendix B. Questionnaire (in English)

METU MBA Thesis Questionnaire

Dear participant,

This questionnaire, whose results are to be used in academic research, is being conducted by Zühal Sinem Kurşun, a senior student of METU Master of Business Administration program. The purpose of the questionnaire is to analyse social media and the diffusion of word-of-mouth messages, which is also the subject of the thesis, with the help of social network site users' responses.

Seeing some skipping in question numbers is expected, as one section of the questions are randomly assigned to each participant (e.g. Seeing 10^{th} question after 7^{th} one). If you skip a required question without noticing, the system will warn you participants anyway.

It is compulsorily required to be using Twitter and Facebook sites to be able to fill out this questionnaire.

The results of the research study will be used completely for scientific purposes, and your responses will be confidential. It is crucial that you response objectively to the questions.

Thanks for your prospective contributions to this study.

Contact: sinem.kursun@metu.edu.tr

Please evaluate the below given expressions separately for Facebook and Twitter.

1) In my opinion, the advertisements on this social network site influence people more than traditional advertisements (TV, newspaper, magazine, radio).

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
Facebook	( )	( )	( )	( )	( )
Twitter	( )	( )	( )	( )	( )

2) To the people I trust and know from real life, I do not trust at the same rate as the user of this social network site.

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
Facebook	( )	( )	( )	( )	( )
Twitter	( )	( )	( )	( )	( )

3) As my frequency of using this site increases, my frequency to write a message or share what is already written about a product or service increases as well.

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
Facebook	( )	( )	( )	( )	( )
Twitter	( )	( )	( )	( )	( )

4) If a product or service is a trending issue at the moment, I write a message or share what is already written about that product or service.

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
Facebook	( )	( )	( )	( )	( )
Twitter	( )	( )	( )	( )	( )

5) As my desire to log in and attachment for this site increases, my frequency to write a message or share what is already written about a product or service increases as well.

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
Facebook	( )	( )	( )	( )	( )
Twitter	( )	( )	( )	( )	( )

6) Sample tweets are given below. Assuming these tweets are written by your *close friend*, rate your willingness to retweet those.

	Strongly RT	Somewhat RT	Neutral	Somewhat not RT	Somewhat not RT
"X airlines delayed the flight without warning. We're waiting at the airport. I'll never travel with X again."	( )	( )	( )	( )	( )
"Y airlines gave free sandwiches due to the delay, and they will make 10% discount for the next flight. Awesome."	( )	( )	( )	( )	( )
"The Pepsi ad with X celebrity is very well-done. If I was buying 1 Coca-Cola until now, I will buy 3 from now on."	( )	( )	( )	( )	( )
"Did you see the Pepsi ad with X celebrity? It is not good at all."	( )	( )	( )	( )	( )
"X Bank cuts account maintenance fee whenever I put money on the account. Doesn't pay back without petition. RT please!"	( )	( )	( )	( )	( )
"X Bank cuts account maintenance fee whenever I put money on the account. Doesn't pay back without petition."	( )	( )	( )	( )	( )

7) Sample tweets are given below. Assuming these tweets are written by a *celebrity* you are following, rate your willingness to retweet those.

	Strongly RT	Somewhat RT	Neutral	Somewhat not RT	Somewhat not RT
"X airlines delayed the flight without warning. We're waiting at the airport. I'll never travel with X again."	( )	( )	( )	( )	( )
"Y airlines gave free sandwiches due to the delay, and they will make 10% discount for the next flight. Awesome."	( )	( )	( )	( )	( )
"The Pepsi ad with X celebrity is very well-done. If I was buying 1 Coca-Cola until now, I will buy 3 from now on."	( )	( )	( )	( )	( )
"Did you see the Pepsi ad with X celebrity? It is not good at all."	( )	( )	( )	( )	( )
"X Bank cuts account maintenance fee whenever I put money on the account. Doesn't pay back without petition. RT please!"	( )	( )	( )	( )	( )
"X Bank cuts account maintenance fee whenever I put money on the account. Doesn't pay back without petition."	( )	( )	( )	( )	( )

8) Sample tweets are given below. Assuming these tweets are written by an *unfamiliar individual* you do not know in real life, rate your willingness to retweet those.

	Strongly RT	Somewhat RT	Neutral	Somewhat not RT	Somewhat not RT
"X airlines delayed the flight without warning. We're waiting at the airport. I'll never travel with X again."	( )	( )	( )	( )	( )
"Y airlines gave free sandwiches due to the delay, and they will make 10% discount for the next flight. Awesome."	( )	( )	( )	( )	( )
"The Pepsi ad with X celebrity is very well-done. If I was buying 1 Coca-Cola until now, I will buy 3 from now on."	( )	( )	( )	( )	( )
"Did you see the Pepsi ad with X celebrity? It is not good at all."	( )	( )	( )	( )	( )
"X Bank cuts account maintenance fee whenever I put money on the account. Doesn't pay back without petition. RT please!"	( )	( )	( )	( )	( )
"X Bank cuts account maintenance fee whenever I put money on the account. Doesn't pay back without petition."	( )	( )	( )	( )	( )

9) Sample Facebook statuses are given below. Assuming these statuses are written by your *close friend*, rate your willingness to share those in your profile.

	Strongly share	Somewhat share	Neutral	Somewhat share	Somewhat share
"X airlines delayed the flight without warning. We're waiting at the airport. I'll never travel with X again."	( )	( )	( )	( )	( )
"Y airlines gave free sandwiches due to the delay, and they will make 10% discount for the next flight. Awesome."	( )	( )	( )	( )	( )
"The Pepsi ad with X celebrity is very well-done. If I was buying 1 Coca-Cola until now, I will buy 3 from now on."	( )	( )	( )	( )	( )
"Did you see the Pepsi ad with X celebrity? It is not good at all."	( )	( )	( )	( )	( )
"X Bank cuts account maintenance fee whenever I put money on the account. Doesn't pay back without petition. RT please!"	( )	( )	( )	( )	( )
"X Bank cuts account maintenance fee whenever I put money on the account. Doesn't pay back without petition."	( )	( )	( )	( )	( )

10) Sample Facebook statuses are given below. Assuming these statuses are written by a *celebrity* you are following, rate your willingness to share those in your profile.

	Strongly share	Somewhat share	Neutral	Somewhat share	Somewhat share
"X airlines delayed the flight without warning. We're waiting at the airport. I'll never travel with X again."	( )	( )	( )	( )	( )
"Y airlines gave free sandwiches due to the delay, and they will make 10% discount for the next flight. Awesome."	( )	( )	( )	( )	( )
"The Pepsi ad with X celebrity is very well-done. If I was buying 1 Coca-Cola until now, I will buy 3 from now on."	( )	( )	( )	( )	( )
"Did you see the Pepsi ad with X celebrity? It is not good at all."	( )	( )	( )	( )	( )
"X Bank cuts account maintenance fee whenever I put money on the account. Doesn't pay back without petition. RT please!"	( )	( )	( )	( )	( )
"X Bank cuts account maintenance fee whenever I put money on the account. Doesn't pay back without petition."	( )	( )	( )	( )	( )

11) Sample Facebook statuses are given below. Assuming these statuses are written by an *unfamiliar individual* you do not know in real life, rate your willingness to share those in your profile.

	Strongly share	Somewhat share	Neutral	Somewhat share	Somewhat share
"X airlines delayed the flight without warning. We're waiting at the airport. I'll never travel with X again."	( )	( )	( )	( )	( )
"Y airlines gave free sandwiches due to the delay, and they will make 10% discount for the next flight. Awesome."	( )	( )	( )	( )	( )
"The Pepsi ad with X celebrity is very well-done. If I was buying 1 Coca-Cola until now, I will buy 3 from now on."	( )	( )	( )	( )	( )
"Did you see the Pepsi ad with X celebrity? It is not good at all."	( )	( )	( )	( )	( )
"X Bank cuts account maintenance fee whenever I put money on the account. Doesn't pay back without petition. RT please!"	( )	( )	( )	( )	( )
"X Bank cuts account maintenance fee whenever I put money on the account. Doesn't pay back without petition."	( )	( )	( )	( )	( )

12) Certain product categories are listed below. Rate your willingness to write a tweet and/or retweet an already written tweet about each category. (1=Strongly tweet/RT, 5= Strongly not tweet/RT).

	1	2	3	4	5
a. Automobile – Automotive	( )	( )	( )	( )	( )
b. Banking – Financial Services	( )	( )	( )	( )	( )
c. Education	( )	( )	( )	( )	( )
d. Home Decoration – Design	( )	( )	( )	( )	( )
e. Food – Restaurants	( )	( )	( )	( )	( )
f. Clothing – Textile	( )	( )	( )	( )	( )
g. Beauty / Treatment Products	( )	( )	( )	( )	( )
h. Beverages	( )	( )	( )	( )	( )
i. Communication Services	( )	( )	( )	( )	( )
j. Media – Entertainment	( )	( )	( )	( )	( )
k. Healthcare Services	( )	( )	( )	( )	( )
l. Travel – Transportation Services	( )	( )	( )	( )	( )
m. Sports	( )	( )	( )	( )	( )
n. Technological Products	( )	( )	( )	( )	( )

13) Please evaluate below given statements about Twitter usage (tweeting, retweeting, etc.). (1 = Strongly agree, 5 = Strongly disagree)

	1	2	3	4	5
1. I trust a tweet about a product/service if written by people I know from real life.	( )	( )	( )	( )	( )
2. I trust a tweet about a product/service more if written by celebrities rather than ordinary users.	( )	( )	( )	( )	( )
3. I trust more on advertisements and information given by corporate accounts on Twitter compared to other social network sites.	( )	( )	( )	( )	( )
4. My first choice of social network sites to obtain information about or contact with corporate accounts is Twitter.	( )	( )	( )	( )	( )
5. Between two Twitter users, I rely more on the comment about a product/service of the one with more number of followers.	( )	( )	( )	( )	( )
6. I do not trust the comments or ideas of a Twitter user if her/his follower number is less than mine.	( )	( )	( )	( )	( )
7. I trust more on the comments or ideas of a Twitter user that tweets more frequently compared to the average.	( )	( )	( )	( )	( )
8. I RT more on the comments or ideas of a Twitter user that tweets more frequently compared to the average.	( )	( )	( )	( )	( )
9. If the probability of gaining followers is high when I tweet about a product/service, I tweet or RT tweets about that.	( )	( )	( )	( )	( )
10. If the probability of receiving RTs or favourites is high afterwards, I write a tweet about a product/service.	( )	( )	( )	( )	( )
11. I tweet and/or retweet about a product/service that has hashtags (#).	( )	( )	( )	( )	( )
12. I retweet a tweet about a product/service if I think it is not seeking profit (advertisements etc.)	( )	( )	( )	( )	( )
13. I prefer to RT tweets about the products/services that I am closely related.	( )	( )	( )	( )	( )
14. Between two products/services, I prefer to RT tweets about the one I use more in my life.	( )	( )	( )	( )	( )
15. The people I follow and my followers on Twitter are totally different from my social environment in real life.	( )	( )	( )	( )	( )
16. Following/being followed by a user who tweets about a product/service makes her/him more reliable than resembling her/him in real life.	( )	( )	( )	( )	( )
17. If I have quite too many habits about a product/service, I tweet or RT already written tweets about it.	( )	( )	( )	( )	( )
18. I instantly tweet my idea about a brand new product/service I bought.	( )	( )	( )	( )	( )

14) Your gender:

( ) Female

( ) Male

15) Your age:

( ) Under 18

( ) 18 - 25

( ) 26 - 35

( ) 36 - 45

( ) Above 45

16) The number of accounts you follow on Twitter is between:

( ) 0 – 9

( ) 10 – 49

( ) 50 – 99

( ) 100 – 199

( ) 200 – 499

( ) 500 – 999

( ) 1000 or more

17) The number of accounts following you on Twitter:

( ) 0 – 9

( ) 10 – 49

( ) 50 – 99

( ) 100 – 199

( ) 200 – 499

( ) 500 – 999

( ) 1000 – 1999

( ) 2000 or more

18) The number of tweets you write per week:

( ) 0 – 10

( ) 11 – 50

( ) 51 – 100

( ) 101 or more

Thanks for participating.

TEZ FOTOKOPİSİ İZİN FORMU

ENSTİTÜ

Fen Bilimleri Enstitüsü ☐

Sosyal Bilimler Enstitüsü ☐

Uygulamalı Matematik Enstitüsü ☐

Enformatik Enstitüsü ☐

Deniz Bilimleri Enstitüsü ☐

YAZARIN

Soyadı :
Adı :
Bölümü :

TEZİN ADI (İngilizce) :

TEZİN TÜRÜ : Yüksek Lisans ☐ Doktora ☐

1. Tezimin tamamından kaynak gösterilmek şartıyla fotokopi alınabilir. ☐
2. Tezimin içindekiler sayfası, özet, indeks sayfalarından ve/veya bir bölümünden kaynak gösterilmek şartıyla fotokopi alınabilir. ☐
3. Tezimden bir bir (1) yıl süreyle fotokopi alınamaz. ☐

TEZİN KÜTÜPHANEYE TESLİM TARİHİ: