

SEGMENTING EWOM ENGAGERS ON ONLINE SOCIAL NETWORKS BASED ON PERSONAL CHARACTERISTICS AND BEHAVIOUR

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Abstract

The evolution of the Internet has extended consumers' options for communicating their opinions or experiences without any company filters by engaging in electronic word of mouth (eWOM). One of the mediums in which eWOM is effectively disseminated to multitude of people is online social networks (SNSs). SNSs are different from other channels of eWOM, because of their unique characteristic; source trustworthiness. The received information is from a person which is accepted as contact with the consent of the person. In this study, we tried to understand the eWOM engagers on SNSs by personal characteristics and SNS usage behaviour based segmentation. With a sample size of 244, we conducted an online survey. Data was analyzed by factor analysis first. Then, the factor scores were entered in a cluster analysis using a combined hierarchical and non-hierarchical method. At the end, we defined four segments: viral producers, active communicators, average participators, passive communicators.

Keywords: *electronic word of mouth; eWOM; online social networks; personal characteristics; segmentation; internet marketing.*

Çevrimiçi Sosyal Ağlarda Elektronik Ağızdan Ağıza Pazarlama Katılımcılarının Kişisel Özellikleri ve Davranışlarına Göre Bölümlendirilmesi

Öz

İnternetin evrimi, tüketicilerin, görüşlerini ve deneyimlerini elektronik kanallar üzerinden yayılan ağızdan ağıza pazarlama (elektronik fısıltı) ile, şirket filtresi olmaksızın, diğer tüketicilere iletmek için seçeneklerini genişletmiştir. Elektronik fısıltının, çok sayıda insana en etkili şekilde yayılabileceği ortamlardan biri de çevrimiçi sosyal ağlardır. Çevrimiçi sosyal ağlar, bu ortama özgü bir karakteristik olan; fısıltı ile gelen bilgiyi gönderen kaynağın güvenilirliği sebebi ile ağızdan ağıza pazarlamanın olduğu diğer ortamlardan farklıdır. Bilgi, kişinin kendi rızası ile, irtibat kurduğu kişiler arasına kabul ettiği bir başka kişiden gelmektedir. Bu çalışma ile, sosyal ağlarda elektronik kanallar üzerinden oluşan fısıltının yayılmasına katılan kişilerin, kişisel özellikleri ve sosyal ağ kullanım davranışlarına göre tanımlanması hedeflenmiştir. Bunun için, çevrimiçi anket yöntemi kullanılarak 244 kişilik bir örneklem büyüklüğü elde edilmiştir. Toplanan veri önce faktör analizi kullanılarak boyutlarına indirgenmiştir. Elde edilen boyutlar hiyerarşik ve hiyerarşik olmayan yöntemlerin sırayla kullanıldığı kümeleme analizine sokulmuştur. Analiz sonucunda dört bölüm tanımlanmıştır: viral üreticiler, aktif iletişimciler, ortalama katılımcılar, pasif iletişimciler.

Anahtar Kelimeler: *elektronik ağızdan ağıza pazarlama; çevrimiçi sosyal ağlar, kişisel özellikler, bölümlendirme, internette pazarlama*

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Introduction

The introduction of the Internet changes the way consumers learn, gather information and communicate with each other. Today, consumers are driving markets. The development of new Internet applications has led to more interactive and participative environments, which are called Social Web. Social Web includes applications such as online social networking sites (SNSs), blogs, wikis, and other interactive tools, which allow the generation and sharing of contents by individuals (Alarcón-del-Amo et al., 2011). One of the applications that have experienced great growth is SNSs. In less than 5 years, they have gone from being a specialized online activity to becoming a mass phenomenon (Alarcón-del-Amo et al., 2011). From 2003, SNSs reach the mainstream, and start producing audience figures that could be considered “massive”. In April 2009, the most famous SNS, Facebook, had 200 million users worldwide; in March 2010 it had reached 400 million (Perez-Latrè et al., 2011). By January 2012, Facebook’s audience is about 450 million users in just 10 largest countries (<http://www.checkfacebook.com/>).

Boyd and Ellison (2008, p.211) define SNSs as web-based services that allow users to build a public or semi-public within a system; articulate a user list with shared relationships; and observe the list of relationships of those persons with other people within the system. As the definition implies, the growth of SNSs enable users to construct online relationships. Moreover, these relationships have strong effect on consumer behaviour and attitudes (Quinton and March, 2010). Being interactive and participative environments let them to act as a communication platform. The ability to influence a large number of individuals and the minimal effort required to make influence attempts are a potent combination making influence in SNSs considerably more compelling and pervasive than in all others (Subramani & Rajagopalan, 2003). It is the source credibility and trustworthiness of electronic word of mouth (eWOM), when combined with the premise that a receiver will be more involved in an eWOM exchange than in an advertisement, contributes to the power of online SNSs. Information received from a contact, is never evaluated as a commercial interruption, but valuable information (Perez-Latrè et al., 2011).

Electronic word of mouth (eWOM) activities include positive and negative comments about a product or brand that is shared between actual and potential consumers via the Internet (Jalilvand, et.al, 2011). Both scholars and practitioners of marketing are particularly interested in WOM communication behaviour in the context of online communities because of the extraordinary popularity, growth, and influence of such communities (Sache and Mangold, 2010; Dellarocas and Narayan, 2006; Zhang et al., 2010).

Research Question

Because of fast and widespread diffusion, SNSs’ users are becoming more and more heterogeneous. As they become more heterogeneous, the need for SNSs’ users’ segmentation and classification becomes apparent from both an academic and practitioner

approach. Most of the previous research focused on sociodemographic variables in SNSs usage, such as gender (Park et al., 2009; Magnuson and Dundes 2008; Geidner et al., 2007, Gross et al., 2002), ethnicity (Gajjala, 2007), religion (Nyland and Near, 2007) and national identity (Fragoso, 2006). Surprisingly, only a few studies have examined the segments within SNSs (ex. Alarcón-del-Amo 2011; Hennig-Thrau et al., 2004). Furthermore, the studies appear to be limited in scope as they have relied only on experience in SNSs and motives for usage.

In view of the existing gaps in the eWOM literature, the purpose of this study is to explore the segments of those who are involved in eWOM within online SNSs, based on personal characteristics, including personality traits and personal variables, and SNS usage.

In this study we focus on eWOM communicated through SNSs for the following reasons. First, SNSs are widely used for existing eWOM. Second, eWOM communication articulated on SNSs can be expected to exert a stronger impact on consumers than other means because of source trustworthiness. In SNSs, eWOM is received from someone who was accepted as contact by the receiver, which indicates a familiar source. Further, SNSs provide information on almost every area of consumption.

1. Theoretical Background

The advent of the Internet has extended consumers' options for gathering unbiased product information from other consumers and provides the opportunity for consumers to communicate their opinions or consumption-related experiences by engaging in eWOM. eWOM is emerging as an important means to spread-the-word and stimulate the trial, adoption, and use of products and services (Subramani & Rajagopalan, 2003).

The distinct characteristic of eWOM is its ability to be directed to multiple individuals, convenience, limitless space and time, and availability to the other consumers for an indefinite period of time (Lin et al., 2012; Hennig-Thrau et al., 2004). Interpersonal influence processes are the hallmark of eWOM since it views the social network as an important source of information and cues for behaviour and action for individuals (Wellman et al., 1996). The consumer-created information, disseminated through electronic mediums, is helpful for decision-making because it provides consumers with indirect experience (Park et al, 2007). eWOM plays two roles – an informant and a recommender (Park et al., 2007). As an informant, eWOM deliver additional user-oriented information. As a recommender, it provides either a positive or negative signal of product usage. Consumers may follow others' opinion as a result of overt conformity pressures from peer groups, in response to concerns about what others may think of them, or they may react to their product choice and usage (Bearden and Rose, 1990), or because others have provided credible information regarding a product's value (Cohen and Golden, 1972).

SNSs, considering their capability to allow users to share information about brands and products, are considered as an effective medium for eWOM. According to Alarcón-

del-Amo et al., (2011), the first step for an efficient use of SNSs stems from a detailed understanding of the individuals' behaviours and interaction patterns when they are using and browsing within these social environments. Segmentation of these users is the next step toward a better understanding of SNSs' users. Although SNSs are growing in importance, there is not much study on segmenting users.

In their book of Wikinomics, Tapscott and Williams (2006) described the mediums that depend on user generated content as symbol of new markets which are free from copyright. At that mediums, communication strategy and message control by hierarchical management are under attack. Moreover, this new market is influencing the communication of brands, fashion, markets, ideas and ideology. Being an example of such a medium, SNSs are the prime candidates to facilitate and structure this communication process, leading eWOM.

In this article, we refer to eWOM communication as “any written statement, which is made visible to a multitude of people and institutions via SNS, about a product, brand or company, expressed by members of an SNS”.

For the purpose of this study, SNS is defined as “a web-based community that exists in the online world, articulate a user list with shared relationships and members interact with each other in a constant base”. The definition implies that they form an environment for an effective eWOM. eWOM activity can be in the form of following content (consumption/consumer), writing/posting content (production/producer) and/or sending content to others (forwarding/forwarder).

Jenkins (2006) described three concepts that shape what he calls “convergence culture”: media convergence, participatory culture and collective intelligence (Jenkins, 2006: 2). In line with this article, with the term “participatory culture”, Jenkins underlined the contrast with the idea of a passive viewer in a time when producers and consumers do not show clearly different roles but interact with rules we don't seem to understand fully yet. Social media develops in this unique convergence, participation and “crowd sourcing” environment. In harmony with Jenkins, the aim of this research is to take a step in describing the segments, in the concept of eWOM, within SNS and understand them in terms of personal characteristics and SNS usage.

To find the constructs of personal characteristics, an initial eight motives pool was constructed on the basis of literature review. Following focus group analysis and deleting non-motivating items, we selected five motives described below.

Need for Cognition (NFC): This personality trait is reflecting the extent to which people engage in and enjoy effortful cognitive activities (Cacioppo and Petty, 1982). According to Cohen et al., (1995, s.291), an individual's innate NFC is a concept defined as “a need to structure relevant situations in meaningful, integrated ways” and “a need to understand and make reasonable the experiential world”. People high in NFC have more cognitive resources available and are more likely to use systematic rules to process information. They are naturally motivated to seek and acquire information (Lin et al., 2011). They are more likely to form their attitudes by paying close attention to relevant

arguments, whereas people low in NFC are more likely to rely on peripheral cues, such as how attractive or credible a source is. NFC is the personality factor most commonly used as a means of defining and measuring individuals' tendencies towards information (Amichai-Hamburger et al., 2007).

Electronic Social Interaction: According to Sun and associates (2006), internet social connection entails the number and strength of online social ties, as well as the desire to fulfill social needs through Internet connections. Consumers with more online contacts and stronger ties to those contacts will have a greater likelihood of engaging in eWOM activities. In his study, Phelps et al., (2004) has found that the desire to get connected and share ideas motivate people to pass along e-mails (Phelps et al., 2004), which is a form of eWOM activity. Moreover, evidence from WOM literature supports the idea that consumers are often driven by the need for social interaction in publishing their experiences on online forums (Hennig-Thurau et al., 2004).

Altruism (The Need to Help Others): Altruism is defined as the motivation to provide a value to a party without anticipating any reward in return (Sundram et al., 1998). Altruistic people feel responsible to secure the safety and well-being of another. In their study, Sundram et al. (1998) found that; in offline environments, it is mostly the altruistic motive to guide people to share consumption experiences with others. Considering the negative WOM, the motive became to help others by warning them about negative consequences of a particular action (Sundram et al., 1998).

Self-enhancement: It is a type of motivation that works to make people feel good about themselves and to maintain self-esteem (Sedikides and Strube, 1995). Self-enhancement involves a preference for positive over negative self-views (Sedikides and Gregg, 2008). Self-enhancement is occurring if the consumer believes the good s/he has purchased is recognized publicly and classified in a manner that supports and matches his/her self-concept (Grubb and Grathwohl, 1967). People appeared to have the need to share their positive consumption experiences through WOM communication are in an effort to enhance their image among others by projecting themselves as intelligent shoppers, to enhance status, and to seek appreciation (Sundram et al., 1998; Engel et al., 1993). Much of the marketing literature describes self-enhancement as a motive for engaging in traditional WOM.

Exhibitionism: In a very broad sense, exhibitionism is displaying self to public. When considered in the context of eWOM, it is the production of content to be perceived as smart to others, to gain status, or for any other inherent reason. In the marketing literature, there is no much study concerning exhibitionism. From the literature, Pollay (1983) has considered the exhibitionism as a form of status along with prestige, trendsetting and compliment seeking. Exhibitionism is considered by Schmitt (1999) as a way to manipulate one's own social image. For the purpose of this study, this construct refers to the phenomenon wherein consumers share their feelings/experiences about a product, brand or company on online SNSs as signals to express their actual, desired or ideal self-concepts to others.

In addition to personal characteristics, SNS usage variables were used to define each behaviour. The followings are variables used:

- Main motives for using SNSs
- Daily time spent browsing in SNSs
- Number of subscriptions to different SNSs
- Number of daily participation in different SNSs

Method

Subjects and Sampling

The personal characteristics and SNS usage of eWOM engagers are examined using an online sample of SNS users in Turkey. An online questionnaire was developed and announced on Facebook and Twitter which are the mostly used SNSs in Turkey. The data used in this study was collected in 3 weeks. The questionnaire link was sent to the prospective respondents via newsfeeds, walls and personal messaging through Facebook and Twitter. A total number of 252 people completed the questionnaire. Due to missing data, 8 of them were eliminated. A sample size of 244 was obtained. The average age for 122 females and 122 male subjects was 28 years old. The average age was low due to online SNSs user profile in Turkey. All of the subjects had experience with online SNSs. Descriptive statistics concerning online SNS usage and membership of the subjects are summarized in Table 1.

Table 1. *SNS Usage and Membership Behaviour of the Subjects*

Variables	Frequencies
SNS visit duration/day	
Less than an hour	142 (58.7%)
1-3 hours	85 (34.8%)
4 - 6 hours	9 (3.7%)
More than 6 hours	6 (2.5%)
Number of SNSs. (Membership)	
1	82 (33.6%)
2	76 (31.1%)
3	51 (20.9%)
More than 3	33 (13.5%)
Number of SNSs visited daily	
0-1	140 (57.3%)
2-3	95 (38.9%)
4-5	3 (0.01%)
More than 5	6 (0.02%)

Measures

All measures were adopted from previous studies and five-point rating scales (1 – strongly disagree; 5 – strongly agree) were used for all measures.

Altruism and *self enhancement* were measured by the scales developed to measure eWOM motives by Hennig-Thurau et al., (2004). The results of the previous study (Hennig-Thurau et al., 2004) indicated that both altruism and self enhancement were strongly related to production and consumption of eWOM. Each scale contains four items. Examples of the statements to measure altruism were “warn others about bad products” and “help others with positive experiences”, and self enhancement “I write comments on online *social networks* because...”; “This way I can express my joy about a good buy” and “My contributions show others that I am a clever customer”.

Electronic social interaction was measured with the scale used by Taylor (2010) which was adopted from Boyd and Ellison (2008). The scale asked participants to report their level of agreement with six statements. Statements included “Communicating with others electronically is part of my everyday activity” and “I have many friends with whom I communicate electronically”.

Exhibitionism was measured by asking the subjects their reasons to initiate eWOM activities. To measure exhibitionism Hoolenbaugh’s (2011) blogging motives scale and Foster et al.’s (2010) SNSs usage motives scale were used. The exhibitionism scale used in this study included five items, two of which was selected from Hollenbaugh’s (2011) study. Respondents were required to indicate their degree of agreement to the statements following the sentence “I write comments on *online social networks* ...”, “for attention”, “for fame and notoriety”.

Another construct measured in this study was *need for cognition (NFC)*. To measure this construct the scale developed by Petty and Cacioppo (1982) was used. The eighteen items from the original study were adopted. Two examples of statements were “I like to have the responsibility of handling a situation that requires a lot of thinking” and “I only think as hard as I have to”.

Production of eWOM was measured with two separate scales. The first scale was Feick and Price’s (1987) market maven scale, and the other was Flynn’s (1996) scale, adopted from the study of Chu and Kim (2011). The ten item scale was used to discover the tendency of the subjects to send market and product related information with the questions like “I like introducing new brands and products to others”. Questions concerning *consumption and forwarding* of eWOM content were also adapted from Chu and Kim’s (2011) study. The items used by Chu and Kim (2011) were adopted from Flynn’s (1996) –consumption- and Sun et.al’s (2006) –forwarding- scales. Examples to the questions were “I like to get my contacts’ opinion on SNS before I buy new products” and “When I receive product related information or opinion from a friend, I will pass it along to my other contacts on SNS”, respectively. Each was measured with three items.

The online survey also included demographic questions like gender, age, education level and income. In addition to demographics, SNS usage and membership profile of the subjects were discovered by six questions.

Results

Preliminary Analysis

As the study uses a variety of multi item measures, data reduction was required. Principal component and factor analysis were conducted separately on multi item measures. To achieve a simpler factor pattern Varimax rotation was used. While conducting the factor analysis, eigenvalues were also taken into consideration. Besides factor analysis, reliability analysis was also conducted. To assess the consistency of the scales Cronbach alpha coefficient was used.

Altruism, self-enhancement, electronic social interaction, exhibitionism, production, consumption and forwarding scales were expected to have uni-dimensional structures. As expected, the principal component analysis of these measures has led to the extraction of a single factor solution. The eigenvalues for all these factors were greater than one.

An important aspect in interpreting factor analysis is the factor loadings. Expectations about factor loadings differ according to the sample size of a study. The sample size of the following study is fairly high as a result factor loadings are expected to exceed 0.50. Loadings exceeding .70 are considered as an indicator of well defined structure. The factor loadings of the items in the altruism scale were between .864 and .915. The loadings for self-enhancement were between .903 and .948. Electronic social interaction's loadings were between .718 and .843. The highest and lowest loadings for exhibitionism scale were .837 and .776. The lowest factor loadings for production, consumption and forwarding of eWOM messages were .763; .962; .957 respectively. The alpha coefficient for each factor is higher than the expected level of .70. The results of the reliability analysis confirm that the study has internal consistency.

The last principal component analysis that was executed is for need for cognition. The last principal component analysis that was executed is for need for cognition. Need for cognition is expected to be a uni-dimensional construct. But the results led a two factor solution which explained 57% of the total variance. In the single factor solution the factor loadings, extraction scores and the percentage of variance explained were fairly low. As a result for the single factor solution there were problems concerning both statistical and practical significance issues. The two factor solution showed statistically better results. This problem could be explained by various issues like the questionnaire was deployed online and the geographical origin of the study.

The KMO measure for the analysis was .735 (See Table 2). The eigen values for both factors were greater than one. Cronbach alpha coefficients were calculated for both factors, and were higher than .70. The reliability measure for the first factor was .810 and

for the second was .798. The factor loadings for the two factor solution were above .50.

Before the interpretation of the factor analysis, the factor loadings should be interpreted for both statistical and practical significance. To determine practical significance factor loadings should be examined. The loadings above .50 denote that 25% of the variance is accounted for by the factor and are considered to be practically significant. For statistical significance the loadings should be interpreted with relation to the sample sizes. For a sample size larger than 250 a loading of .35 is enough for factor analysis to be statistically significant (Hair, et.al, 2006). As a result these loadings can be considered both practically and statistically significant.

The factors were named as:

Factor 1 - Need for Intellectual Engagement: This factor relates to engagement of effortful cognitive activities. It indicates a tendency to seek, acquire, think about and reflect back on information. People in need for intellectual engagement have much fun with thinking, like more complex problems and deliberations, and prefer more difficult problems.

Factor 2 - Aversion of Cognitive Activities: This factor indicates avoiding complex thinking and problems, preferring short term tasks and projects.

The KMO measures, cumulative variance and reliability statistics of the principle component analysis are summarized in Table 2.

Table 2. Summary of Principle Component Analysis

Scales	KMO Measure	Cumulative Variance Explained (%)	Cronbach Alpha
Altruism	.859	88.582	.957
Self-Enhancement	.861	86.587	.948
Electronic Social Interaction	.866	63.386	.903
Exhibitionism	.715	63.556	.854
Production of eWOM Messages	.895	67.471	.946
Consumption of eWOM Messages	.777	93.351	.964
Forwarding eWOM Messages	.773	93.556	.965
Need for Intellectual Engagement	.735	57.327	.810
Aversion of Cognitive Activities			.798

Results

Following the identification of the factors concerning eWOM behaviour, the factor scores were entered in a cluster analysis using a combined hierarchical and non-

hierarchical method. In the hierarchical clustering method, early combinations can cause undesirable outcomes as the objects cannot be reassigned throughout the clustering procedure. To prevent these outcomes after performing hierarchical clustering methods, a new analysis was conducted using the K-means method. Squared Euclidean Distance and the average linkage method were chosen in the hierarchical analysis. The dendrogram obtained showed a four-cluster solution and as a result in the K-means method the number of clusters were determined as four. The variables used in the clustering method were the personal characteristics that lead to the eWOM engagement. The results of this analysis are summarized in Table 3.

Table 3. *Final Cluster Centers*

Scales	Cluster 1: Average Participants	Cluster 2: Active Communicators	Cluster 3: Viral Producers	Cluster 4: Passive Communicators	Sig.
Altruism	10.58	12.20	13.87	7.20	.000
Self- Enhancement	5.51	10.11	9.12	3.76	.000
Electronic Social Interaction	17.65	22.79	20.26	12.91	.000
Exhibitionism	8.94	13.45	14.14	5.75	.000
Aversion of Cognitive Activities	16.72	14.11	17.32	19.27	.000
Need for Intellectual Engagement	34.14	34.48	44.00	36.39	.000
Producing eWOM Messages	24.91	32.59	33.76	14.91	.000
Consuming eWOM Messages	5.15	8.25	7.51	2.95	.000
Forwarding eWOM Messages	4.76	7.90	7.75	2.77	.000

The main characteristics of the eWOM user groups are detailed below:

- *Average Participants (n=86)*: This group comprises 36 percent of the sample. This is the largest group with a sample size of 86. They prefer production to either consumption or forwarding. Although the scores of personal characteristics are average, production behaviour is mainly triggered by need for intellectual engagement and altruism.

- *Passive Communicators (n=57)*: This group is the least active group using SNSs as an eWOM platform. In other words they don't share much information concerning products and brands. Their tendencies concerning altruism, self-enhancement, electronic social interaction, exhibitionism and need for cognitive activities are relatively low. They have the highest tendency to aversion of cognitive activities as expected. They don't like to share much information in SNSs, and they don't prefer neither to produce nor to consume and forward eWOM messages. Most of them have subscription to only one SNS.
- *Viral Producers (n=51)*: This group represents the 20.9 percent of the sample. Although they consume and forward messages about products and brands, they are mainly the producers of eWOM. Primary underlying motives of viral producers are need for intellectual engagement, exhibitionism and altruism. As the need for cognitive activities' score increases, people show a higher tendency to produce. It is important for this group of users to seek, acquire and reflect back information. They enjoy effortful cognitive activities. Furthermore, they are motivated with the idea of expressing their self to others. They like to warn and inform people about possible outcomes of a purchase decision. They have high number of subscriptions, use SNSs more than 3 times a week, and their daily number of participation is more than all others. The importance of this group lies in the fact that they are the certain initiators of eWOM. Therefore, they should be in the special interest of companies.
- *Active Communicators (n=48)*: This group represents 19.6 percent of the sample. Members of this group have the highest scores both in consumption and forwarding of eWOM. Although their scores are high in all personal characteristics, self-enhancement and electronic social interaction are the differentiating characteristics which motivate active communicators. It can be assumed that this group of users has a need to share their positive consumption experiences through eWOM communication in SNSs. Furthermore, it seems that people with more online contacts and stronger ties have more probability to consume, and have a higher tendency to be involved in eWOM as forwarders. When the behavioural characteristics are examined, it appears that as the number of SNS subscriptions increases, people are more involved in eWOM as consumers and forwarders.

For the validation of cluster analysis a common way used is to establish criterion validity (Hair, et.al, 2006). To do so, four variables that were not used to form the clusters were chosen. We believe that SNS users from different clusters should differ in the following SNS usage behaviours:

- Weekly frequency of SNS usage
- Daily time spent browsing in online SNSs.
- Number of subscription to different online SNSs
- Number of daily participation in different SNSs

Table 4. SNS Usage Behaviours of the Cluster Segments

Variables	Cluster 1: Average Participators n (%)	Cluster 2: Active Communicators n (%)	Cluster 3: Viral Producers n (%)	Cluster 4: Passive Communicators n (%)	Pearson X^2
Weekly frequency					
Once	13(15.12)	0 (0)	6 (11.76)	12 (20.05)	32.546*
Twice	9 (10.47)	6 (12.5)	3(0.06)	18(31.58)	
Three times	12 (13.95)	9 (18.75)	6 (11.76)	6 (10.53)	
More than 3 times	52 (60.47)	33 (68.75)	36 (70.59)	21(36.84)	
Daily time spent					
Less than 1 hour	55(64.95)	24(50.0)	21(41.18)	42(73.68)	29.203*
1-3 hours	28(32.56)	21(43.75)	21(41.18)	15(26.32)	
4-6 hours	0(0)	3(0.06)	6(11.76)	0(0)	
More than 6 hours	3(0.03)	0 (0)	3(0.06)	0(0)	
Number of subscriptions					
1	34(39.53)	12(0.25)	9(17.65)	27(47.37)	74.792*
2	37(43.02)	12(0.25)	3(0.06)	24(42.11)	
3	12(13.95)	15(31.25)	21(41.18)	3(0.05)	
More than 3 SNSs.	3(0.03)	9(18.75)	18(35.29)	3(0.05)	
Daily number of participation					
0-1	59 (68.60)	24(0.50)	15(29.41)	42(73.68)	59.200*
2-3	29(33.72)	18(0.38)	33(64.71)	15(26.32)	
4-5	0 (0)	0(0)	3(0.06)	0(0)	
More than 5 SNSs	0 (0)	6(0.13)	0(0)	0(0)	

Notes: *p<0.001; values in parenthesis were calculated using percentage.

Based on the results of cluster analysis, chi-square tests were performed to determine if the four clusters differ in behavioural characteristics of SNS users (Table 4) as a validation procedure. The results indicates that cluster segments differed significantly in weekly frequency of SNS usage ($X^2=32.546$; $p=.000$), daily time spent browsing in SNSs ($X^2=29.203$; $p=.001$), number of different SNSs subjects subscribe ($X^2=74.793$; $p=.000$), and number of daily participation in different SNSs ($X^2=59.200$; $p=.000$). To further examine the differences between clusters Bonferroni tests were used.

When the behavioural characteristics of the segments were examined, results show that all four segments behave similarly in terms of weekly frequency of SNS usage. Majority of all segment subjects use online SNSs more than three times a week. However, viral producers have the highest percentage (71%) of people who visit more than three times (Table 4). The greatest distance concerning weekly frequency of SNS usage was between

the average participators and active communicators. Also the Bonferroni test showed that there were differences between clusters of 1 and 3, 2 and 4 and 3 and 4.

In terms of daily time spent in online SNSs, almost all segments have the tendency to browse less than an hour per day. Only differentiating segment is viral producers. They have the same percentage (41%) in less than one hour and 1-3 hours. Additionally, the largest percentage in 4-6 hours daily time spent belongs to viral producers (12%) (Table 4). Concerning daily time spent in online SNSs, the greatest distance was between the active communicators and passive communicators. Also differences were found between clusters of 1 and 3, 2 and 4 and 3 and 4.

When number of subscriptions is examined, the results show that majority of active communicators and viral producers have the subscription of three different SNSs. Moreover, 19% of active communicators have a subscription of more than three SNSs, followed by 35% of viral producers (Table 4). Concerning the number of subscriptions, the greatest distance was between the active communicators and viral producers. Also there were differences between clusters of 1 and 2, 1 and 3 and 3 and 4.

In terms of daily number of participation in different SNSs, only the active communicators tend to make more than 5 visits in a day. It is only the viral producers, which has the highest percentage (65%) in visiting the most number of different SNSs in a day. The most distance concerning daily number of participation in different SNSs was between viral producers and passive communicators. Also the Bonferroni test showed that there are differences between clusters of 1 and 3 and 2 and 4.

Cluster Validation

Two steps of validation procedure were taken during the cluster analysis. The first validation procedure deployed was to conduct a two-step analysis. Hierarchical and non-hierarchical (K-means) methods were used to determine different user segments. Secondly, the validation of the clusters was assessed by comparing the cluster solutions according to different SNS usage behaviours of respondents. The comparison based on SNS usage behaviours showed there are significant differences among the cluster segments as explained in the previous results section.

Discussion and Implications

This research aims to identify the segments of eWOM engagers based on personal characteristics and SNS usage behaviour. Results of the study imply four different segments: Active communicators, passive communicators, average participators and the viral producers. These four consumer segments exhibited statistically significant differences in personal and behavioural characteristics.

Among these groups the most important segments are the active communicators and viral producers as they share more information about brands and products through

SNSs. Active communicators tend to have a high tendency of social interaction and self-enhancement. They are mainly consumers and forwarders of eWOM content. They like to read about other people's posts concerning products and brands and also they like to share this information with others. The analysis of viral producers indicates that production of eWOM messages are mostly triggered by altruism, exhibitionism and need for cognitive activities. The viral producers give importance to warn and inform other people about products and brands. It is important for this group to provide significant information concerning their own purchases. They also like displaying themselves to the public by producing eWOM messages. Viral producers are more likely to seek and acquire information and they pay attention to others' eWOM messages. They are the most active segment. They have the highest percentage in weekly visit in online SNSs among all. Moreover, among all, they spend the most time daily. 35% of them have a subscription to more than three SNSs. They visit 2-3 SNSs daily, which is the highest number among all. Furthermore, they visit the most number of daily SNSs in a day. This group of consumers is important to marketers and may even be market mavens. They are highly oriented towards producing and sharing eWOM messages. As they have more than three subscriptions concerning SNSs, the information that they share can reach to a relatively large population of consumers. They are expected to have a high product and purchase decision involvement. Marketers should offer promotional contents and reward programs to this group of consumers if they want to spread out the information about their brand and products through viral communication.

The average participators are those who share information about brands and products occasionally by viral messages. Although they are defined as average, the results indicate that their tendency to seek and acquire information -need for cognitive activities - is fairly high. However, they have the highest tendency to the production of eWOM. Their altruistic characteristic and need for cognitive activities are in line with viral producers'. Therefore, it is possible to come up with such a result that producers are altruistic people, and have a need for intellectual engagement. Although passive communicators don't share much through SNSs, they have a tendency to consume eWOM messages.

This study shows that even consumers that don't prefer to share information still keep track of eWOM messages created and shared through online SNSs. Companies should create different promotional strategies about managing the eWOM activity. As the content is created by users, companies should adopt new tools which are responsible for monitoring the conversations between people. SNSs provide companies with information concerning the habits, usage behaviours, demographics and lifestyle of consumers. This information can and should be used for both segmentation and targeting purposes. Marketers should understand that SNS users are mostly active, social and tend to share information. Although marketers search for different tools to communicate with these consumers, they should also find new ways to encourage them to share positive information about their products, services, brands and companies. Internet technology helps marketers acquire

information concerning eWOM activities. Besides monitoring, they should participate in the production process of different eWOM messages as consumers also share their negative insights about products.

Limitations and Future Research

Besides its contributions this study also has limitations. The first limitation is the segmentation analysis deployed was based on behavioural characteristics of the SNS users. Besides SNSs, eWOM messages are shared in other media like blogs. The blog users' usage behaviours might be completely different from the SNS users. As a result the study cannot describe the ultimate profile of eWOM activities. Second, the list of personal characteristics and usage behaviours researched were limited. By discovering more personal and behavioural characteristics of SNS users', future research should define different groups of consumers in a more detailed way. Also other segmentation approaches could be used to determine how eWOM producers, consumers and forwarders can be segmented. Future research can examine the aspects of eWOM engagers' segmentation in a more comprehensive way. This will not only diversify the implications about eWOM engagement but also help marketers to target SNS users more effectively.

REFERENCES

- Alarcón-del-Amo, M. C., Lorenzo-Romero, C. and Gomez-Borja, M. A. (2011) 'Classifying and profiling social networking site users: A latent segmentation approach', *Cyberpsychology, Behavior, and Social Networking*, Vol. 14 No. 19, pp. 547-53.
- Amichai-Hamburger, Y., Kaynar, O., and Fine, A. (2007) 'The effects of need for cognition on Internet use', *Computers in Human Behavior*, Vol.23 No.1, pp. 880-91.
- Bearden, W.O. and Rose, R.L. (1990) 'Attention to social comparison information: an individual difference factor affecting consumer conformity', *Journal of Consumer Research*, Vol. 16 No.4, pp. 461-471.
- Boyd, D. M. and Ellison, N. B. (2008) 'Social network sites: Definition, history and scholarship', *Journal of Computer-Mediated Communication*, Vol. 13, pp. 210-30.
- Cacioppo, J.T. and Petty, R.E. (1982) "The Need for Cognition", *Journal of Personality and Social Psychology*, Vol.42 No.1, pp.116-31.
- Chu, S.C. and Kim, Y. (2011) 'Determinants of consumer engagement in electronic word-of-mouth (eWOM) in social networking sites', *International Journal of Advertising*, Vol.30 No.1, pp.47-75.
- Cohen, A.R., Stotland, E., and Wolfe, D.M. (1955) "An experimental investigation of need for cognition", *Journal of Abnormal and Social Psychology*, Vol.51, No.2, pp.291-4.

- Cohen, J.B. and Golden, E. (1972). 'Informational social influence and product evaluation', *Journal of Allied Psychology*, Vol. 56, pp. 54-59.
- Dellarocas, C. and Narayan, R. (2006) 'A statistical measure of a population's propensity to engage in post-purchase online word-of-mouth', *Statistical Science*, Vol.21 No.2, pp.277-285.
- Engel, J.F., Blackwell, R.D. and Miniard, P.W. (1993) *Consumer Behavior*, 8th ed., Fort Worth: Dryden-Press.
- Feick, L., Price, L.L. (1987) 'The Market Maven : A Diffuser of Marketplace Information', *Journal of Marketing*, Vol.51 No.1, pp.83-97
- Fragoso, S. (2006) 'WTF a crazy Brazilian invasion', in Sudweeks, F. and Hrachovec, H. (Eds.), *Proceedings of CATac 2006*, Murdoch University, Murdoch, Australia.
- Foster, M.K., Francescucci, A. and West, B.C. (2010). 'Why Users Participate in Online Social Networks', *International Journal of eBusiness Management*, Vol.4 No.1, pp.3-19.
- Gajjala, R. (2007) 'Shifting frame: race, ethnicity, and intercultural communications in online social networking and virtual work', in Hinner, M.B. (Eds.), *The Role of Communication in Business Transactions and Relationships*, Peter Lang, New York, pp. 257-76.
- Geidner, N.W., Flook, C. A. and Bell, M.W. (2007) 'Masculinity and online social Networks: Male self-identification on Facebook.com', Paper presented at *Eastern Communication Association 98th Annual Meeting*, Providence, RI, April.
- Gross E.F., Juvonen J and Gable, SL (2002) 'Internet use and well-being in adolescence', *Journal of Social Issues*, Vol. 58, pp.75-90.
- Grubb, E.L. and Grathwohl, H.L. (1967) 'Consumer self-concept, symbolism and marketing behavior: a theoretical approach', *Journal of Marketing*, Vol.31 No.4, pp. 22-7.
- Hair, Jr. J.F., Black, W.C., Babin, B.J., Anderson, R. E. and Tatham, R.L. (2006) *Multivariate Data Analysis*, Prentice Hall: New Jersey.
- Hennig-Thurau, T., Gwinner, K.P., Walsh, G. and Gremler, D.D. (2004) 'Electronic word-of- mouth via consumer opinion platforms: What motivates consumers to articulate themselves on the Internet', *Journal of Interactive Marketing*, Vol.18 No. 1, pp.38-52.
- Hollenbaugh, E.E. (2011) 'Motives for maintaining personal journal blogs', *Cyberpsychology, Behavior, and Social Networking*, Vol.14 No.1-2, pp.13-20.
- Jalilvand, M.R., Esfahani, S.S. and Samiei, N. (2011) 'Electronic word-of-mouth: Challenges and opportunities', *Procedia Computer Science*, Vol.3, pp.42-46.
- Jenkins, H. (2006) *Convergence Culture: Where Old and New Media Collide*, New York, New York University Press.

- Lin, C.H., Lee, S.H. and Horng, D.J. (2011) 'The effects of online reviews on purchasing intention: The moderating role of need for cognition', *Social Behavior and Personality*, Vol.39 No.1, pp. 71-82.
- Lin, T.M.Y, Lu, K.Y. and Wu, J.J., (2012) 'The effects of visual information in eWOM communication'. *Journal of Research in Interactive Marketing*, Vol.6 No.1, pp.7– 26.
- Magnuson M.J. and Dundes L. (2008) 'Gender differences in "social portraits" reflected in MySpace profiles', *Cyberpsychology Behavior*, Vol. 11, pp. 239-41.
- Nyland, R. and Near, C. (2007) 'Jesus is my friend: Religiosity as a mediating factor in Internet social networking use", paper presented at *AEJMC Midwinter Conference*, Reno, NV, February.
- Park, D.H., Lee, J., Han, I. (2007) 'The effects of on-line consumer reviews on consumer purchasing intention: the moderating role of involvement', *International Journal of Electronic Commerce*, Vol. 11 No.4, pp.125–148.
- Park N., Kee, K.F. and Valenzuela, S. (2009) 'Being immersed in social networking environment: Facebook groups, uses and gratifications and social outcomes', *Cyberpsychology Behavior*, Vol. 12, pp. 729-33.
- Perez-Latrè, F.J., Portilla, I. and Blanco, C.S. (2011) 'Social networks, media, audiences: A literature review", *Comunicación Sociedad*, No. 1, pp.63-74.
- Phelps, J.E., Lewis, R., Mobilio, L. and Perry, D. (2004) 'Viral marketing or electronic word-of-mouth advertising: examining consumer responses and motivations to pass along email", *Journal of Advertising Research*, December, pp. 333-48.
- Pollay, R. W. (1983) "Measuring the cultural values mani-fest in advertising," in James H. Leigh and Claude R. Martin, Jr. (Eds.), *Current Issues and Research in Advertising*, Ann Arbor: Graduate School of Business, Division of Research, University of Michigan, pp.72-92.
- Quinton, S. and March, S.H. (2010) 'Relationships in online communities", *Journal of Research in Interactive Marketing*, Vol.4 No.1, pp.59-73.
- Sachse, S.B. and Mangold, S. (2011) 'Brand equity dilution through negative online word-of-mouth communication", *Journal of Retailing and Consumer Services*, Vol.18, pp.38-45.
- Schmitt, B.H. (1999) *Experiential marketing: How to get customers to sense, feel, think, act, and relate to your company and brands*, New York:Free Press.
- Sedikides, C. and Gregg, A.P. (2008) 'Self-enhancement: Food for thought', *Perspectives on Psychological Science*, Vol. 3 No. 2, pp. 102–16.
- Sedikides, C. and Strube, M. J. (1995) 'The multiply motivated self', *Personality and Social Psychology Bulletin*, Vol. 21 No.12, pp. 1330–35.

- Subramani, M.R., and Rajagopalan, B. (2003) ‘Knowledge-sharing and influence in online social networks via viral marketing’, *Communications of the ACM*, Vol. 46, pp.300–307.
- Sun, T., Youn, S., Wu, G. and Kuntaraporn, M. (2006) ‘Online word-of-mouth (or mouse): An exploration of its antecedents and consequences’, *Journal of Computer-Mediated Communication*, Vol.11 No.4, article 11.
- Sundaram, D.S., Mitra, K. and Webster, C. (1998) ‘Word of mouth communications: A motivational analysis’, *Advances in Consumer Research*, Vol.25, pp. 527-31.
- Tapscott, D. and Williams, A. D. (2006) *Wikinomics: How Mass Collaboration Changes Everything*, Portfolio, New York.
- Taylor, D.G. (2010) ‘*I Speak, Therefore I am: Identity and Self-construction as Motivation to Engage in Electronic Word of Mouth*’, PhD Thesis, University of North Texas.
- Wellman, B., Salaff, J., Dimitrova, D., Garton, L., Gulia, M., and Haythornthwaite, C. (1996)
‘Computer networks as social networks: Collaborative work, telework, and virtual community’, *Annual Review of Socio*, pp. 213–238.
- Zhang, J.Q., Craciun, G. and Shin, D. (2010) ‘When does electronic word-of-mouth matter? A study of consumer product reviews’, *Journal of Business Research*, Vol.63, pp.1336-41.