THE SEGMENTATION OF FACEBOOK USERS FROM ROMANIA BY WOM BEHAVIOR

ANA RALUCA CHIOSA
ASSOCIATE LECTURER PHD "AL. I. CUZA" UNIVERSITY, IASI, ROMANIA
e-mail:ana_raluca_c@yahoo.com
BOGDAN ANASTASIEI
ASSOCIATE PROFESSOR PHD "AL. I. CUZA" UNIVERSITY, IASI, ROMANIA
e-mail:abo28@yahoo.com

Abstract

The novelty of the research is the study of the Facebook eWOM behavior of Romanian users. The study was conducted on 640 respondents aged between 19 and 45 years old and it is representative for the population of internet users in urban areas of Romania. Statistical analysis aimed to identify the profile of Facebook users by grouping them into clusters. The analysis was performed in the SPSS software.

The most important variable is "the actual process of using Facebook to seek product recommendation is pleasant" (cluster 1), followed by "seeking product recommendation on Facebook is enjoyable" (cluster 2). Dayly time spent on Facebook (cluster 3) is the variable with the slightest importance.

The research results showed two consumer segments with different characteristics regarding eWOM behavior on Facebook. This information will help the marketing manager to adapt the social media communication and the promotion strategy according to the profile of each target. The companies should pay attention to their brand pages, to interact with users and to encourage them to recommend their products. Facebook brand page managers can launch creative contests or promotions, initiate interesting discussions or interactive activities, offer coupons or gifts.

Cuvinte cheie: *eWOM, electronic word of mouth, product recommendation, Facebook users*

Clasificare JEL: *M31, M37*

1. Introduction

Many choices of consumers are made within different social groups and even once consumers decide on their own, word-of-mouth from other people can influence them [1]. Schutz (1966) postulated that people engage in interpersonal communication because they are motivated to express one or more of three interpersonal needs: inclusion (need to be part of a group/need for attention), affection (show appreciation and concern for others), and control (need to exert power in one's social environment) [2].

Some things get talked about more. The communication modality influences what gets discussed [3]. People who communicate in writing rather than orally mention more products and brands, because they have more time to build their answers.

The differences between the two mediums of communication are [4]:

- online, the user can agree when to react. This is not an emotional conversation and the user has time to consider how they would like to engage.
- offline, the conversation is more natural, free-flowing and spontaneous due to the fact that it is face to face and the emotions.

The motivations which create conversation about brands involve three issues [4]:

- Function – conversations are generated in order to make agreement and choose what brands are useful and what aren't.
- Social – people converse about brands online to look good and to build up their own sense of reputation.
- Emotion – brands that create immediate reactions are more inclined to be discussed in both online and offline situations.

eWOM differs from interpersonal word of mouth in three aspects: the messengers of eWOM are anonymous to receivers, there are no limits on time and space in generating eWOM and the eWOM can exit at relatively longer time than oral information [5].

Sernovitz (2012)[6] formulated the 5Ts of word-of-mouth marketing:

- Talkers – find people who will talk about you
- Topics – give people a reason to talk
- Tools – helps the message spread faster and farther
- Taking part – join the conversation
- Tracking – measure and understand what people are saying

Rohm et al. (2013) [7] conducted a study whose findings suggest that brand-consumer interactions driven by social media can be characterized by five motivations: entertainment, brand engagement, timeliness of information and service responses, product information, and incentives and promotions. King, Racherla & Bush (2014) [8] have identified 6 eWOM characteristics: enhanced volume, dispersia, persistence and observability, anonymity and deception, salience of valence.

Kozinets et al. (2010) explain that social networks have transformed WOM theory because consumers spread comments not only to reduce dissonance or because of altruistic desires to help others, but also because the customer is now an actor in a social system [9]. Word of mouth can be understood in terms of five key functions (Berger, 2014) that it serves for the word of mouth transmitter: impression-management, emotion, regulation, information acquisition, social bonding, and persuasion.

2. Research objectives

The research aimed to identify word of mouth behavior and its impact on Facebook. The research objective was to create the Facebook user profile, depending on:

- Facebook user behavior (awareness networks, access frequency and time spent);
- type of social interaction;
- interaction with pages;
- motivation of liking a brand page;
- motivation to generate WOM.

3. Methodology

The study was conducted on 640 respondents with Facebook accounts and age between 19 and 45 years and it is representative for the population of internet users in urban areas of Romania. The main tool of data collection was the questionnaire, based on scales from the literature review. The first part of the questionnaire focused on questions about the social networks accessed by users, frequency of use of Facebook, network density (number and type of relationship), the reasons for liking brand pages, the domains of interaction and type of content wanted by users. The second part of the questionnaire aimed to identify the perception of Facebook users on usefulness, ease-of-use and enjoyment of being connected to this network, trust in friends' recommendations, brand engagement, recommendation and purchase intentions. Statistical analysis aimed to identify the profile of Facebook users by grouping them into clusters.

4. Analysis and results

Most of the Facebook users are young people, having the age between 20-25 years old. 95.8% of respondents log in every day on Facebook, with the average time spent between 31-60 minutes. They have more than 450 friends, namely acquaintances, close friends, colleagues and family.

75% of the sample has clicked on a Facebook Ads advertisement. The areas of interaction are: music/movies, retail, fashion/beauty, books/culture, celebrities, and magazines/newspapers. The main reasons for linking a brand page on Facebook are: because users had used the products and are satisfied with them, because they are interested or working in the field, or because that is a way to take part of a contest on a brand page.

Regarding motivation to generate WOM, users are likely to recommend a brand to friends and family on Facebook, they appreciate a brand page in order to spread positive messages and to give recommendations. Users want to find on a Facebook page posts about product prices, discounts, special offers and product descriptions.

In order to identify the main segments of Facebook users depending on the recommending behavior and the time spent daily on Facebook, a two-step cluster analysis was performed.

The input variables for the cluster analysis were the following:

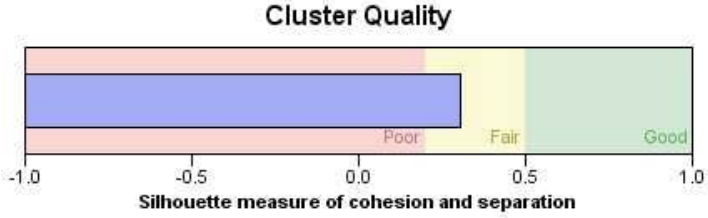
- "Seeking product recommendations on Facebook is useful to me"
- "Seeking product recommendations on Facebook makes me more efficient"
- "Seeking product recommendations on Facebook makes my life easier"
- "Seeking product recommendations on Facebook is easy"

- "Learning how to seek product recommendation on Facebook is easy"
- "It is easy to get a product recommendation on Facebook"
- "Seeking product recommendation on Facebook is enjoyable"
- "The actual process of using Facebook to seek product recommendation is pleasant"
- "Seeking product recommendation on Facebook is fun"
- "Seeking product recommendations on Facebook is interesting"

Besides the input variables, we have created a set of four descriptive variables that will be used to further define the cluster profiles: referral intention, purchase intention, brand engagement, trust in recommendation. Another descriptive variables used in our study are subjects' gender and motivations to like a brand page on Facebook.

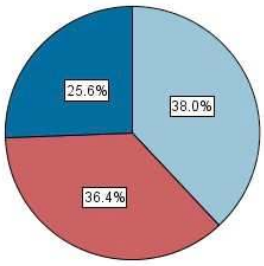
The analysis was performed in the SPSS software. The program was required to generate three clusters. After scrutinizing the results, we came to the conclusion that the solution with three clusters is suitable. The cluster quality is good enough, as one can notice from the figure 1:

Figura nr 1. The silhouette measure of cohesion and separation



The silhouette measure of cohesion and separation has the value of 0.3, denoting a fair cluster quality. Moreover, the cluster sizes are balanced – the ratio of sizes for the largest and the smallest cluster is under 2 (1.48, more exactly).

Figura nr 2. Size balance



Size of Smallest Cluster	159 (25.6%)
Size of Largest Cluster	236 (38%)
Ratio of Sizes: Largest Cluster to Smallest Cluster	1.48

The figure 3 presents the variables according to their importance on cluster grouping. Thus, the most important variable is "The actual process of using Facebook to seek product recommendation is pleasant" (cluster 1), followed by "seeking product recommendation on Facebook is enjoyable" (cluster 2). Daily time spent on Facebook (cluster 3) is the variable with the slightest importance.

Figura nr 3. Clusters report

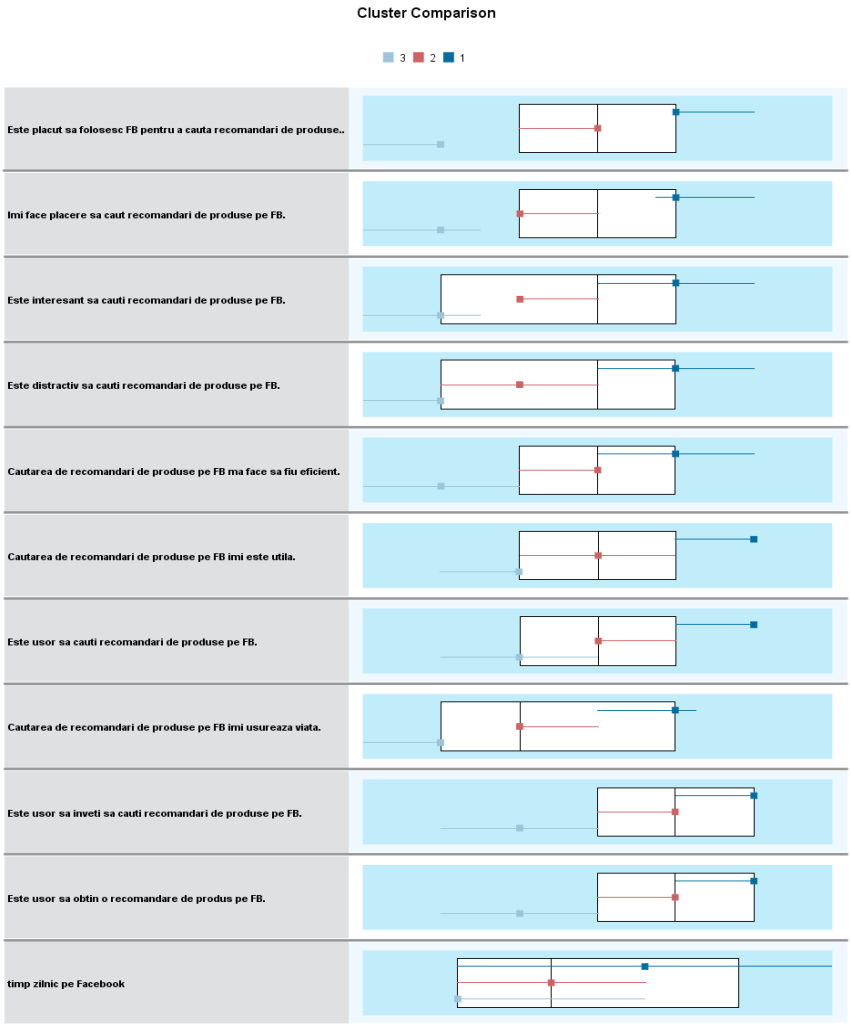
Clusters

Input (Predictor) Importance
1.0 0.8 0.6 0.4 0.2 0.0

Cluster	1	2	3
Label			
Description			
Size	38.0% (236)	36.4% (226)	25.6% (159)
Inputs	Este placut sa folosesc FB pentru a cauta recomandari de produse..	Este placut sa folosesc FB pentru a cauta recomandari de produse..	Este placut sa folosesc FB pentru a cauta recomandari de produse..
	Imi face placere sa caut recomandari de produse pe FB.	Imi face placere sa caut recomandari de produse pe FB.	Imi face placere sa caut recomandari de produse pe FB.
	Este interesant sa cauti recomandari de produse pe FB.	Este interesant sa cauti recomandari de produse pe FB.	Este interesant sa cauti recomandari de produse pe FB.
	Este distractiv sa cauti recomandari de produse pe FB.	Este distractiv sa cauti recomandari de produse pe FB.	Este distractiv sa cauti recomandari de produse pe FB.
	Cautarea de recomandari de produse pe FB ma face sa fiu eficient.	Cautarea de recomandari de produse pe FB ma face sa fiu eficient.	Cautarea de recomandari de produse pe FB ma face sa fiu eficient.
	Cautarea de recomandari de produse pe FB imi este utila.	Cautarea de recomandari de produse pe FB imi este utila.	Cautarea de recomandari de produse pe FB imi este utila.
	Este usor sa cauti recomandari de produse pe FB.	Este usor sa cauti recomandari de produse pe FB.	Este usor sa cauti recomandari de produse pe FB.
	Cautarea de recomandari de produse pe FB imi usureaza viata.	Cautarea de recomandari de produse pe FB imi usureaza viata.	Cautarea de recomandari de produse pe FB imi usureaza viata.
	Este usor sa inveti sa cauti recomandari de produse pe FB.	Este usor sa inveti sa cauti recomandari de produse pe FB.	Este usor sa inveti sa cauti recomandari de produse pe FB.
	Este usor sa obtin o recomandare de produs pe FB.	Este usor sa obtin o recomandare de produs pe FB.	Este usor sa obtin o recomandare de produs pe FB.
	timp zilnic pe Facebook	timp zilnic pe Facebook	timp zilnic pe Facebook

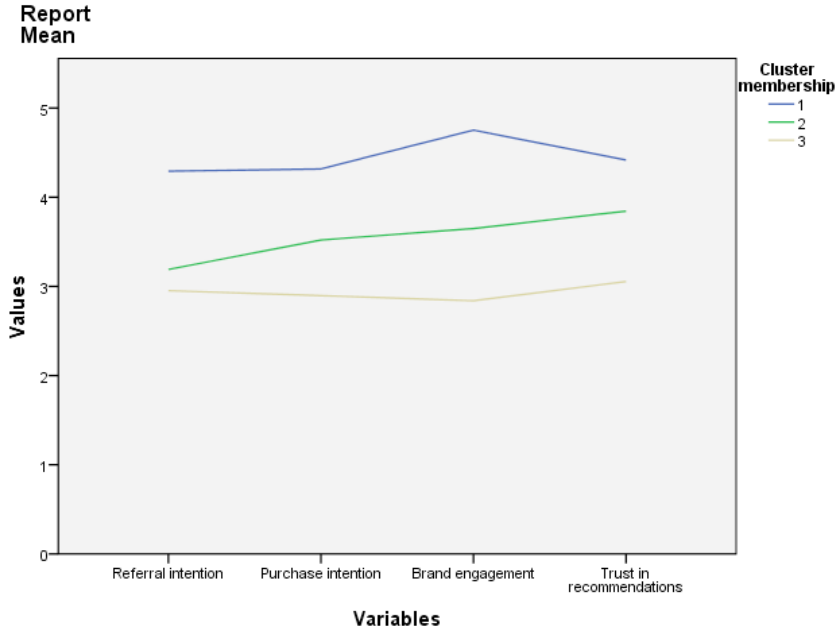
The figure below shows medians of the input variables for each cluster, and the boxplot chart of each variable.

Figura nr 4. Cluster comparison



In the figure 5, one can examine the cluster profiles for the following descriptive variables: referral intention, purchase intention, brand engagement and trust in recommendations.

Figura nr 5. Cluster graphic



For the descriptive variables above, the cluster 1 presents again the highest means. It is followed by cluster 2 and cluster 3, in this order.

To determine whether the mean differences between clusters are significant for these variables, a series of one-way analyses of variance were executed. The results of these analyses can be inspected in the table 1 below:

Tabel nr. 1 ANOVA analysis

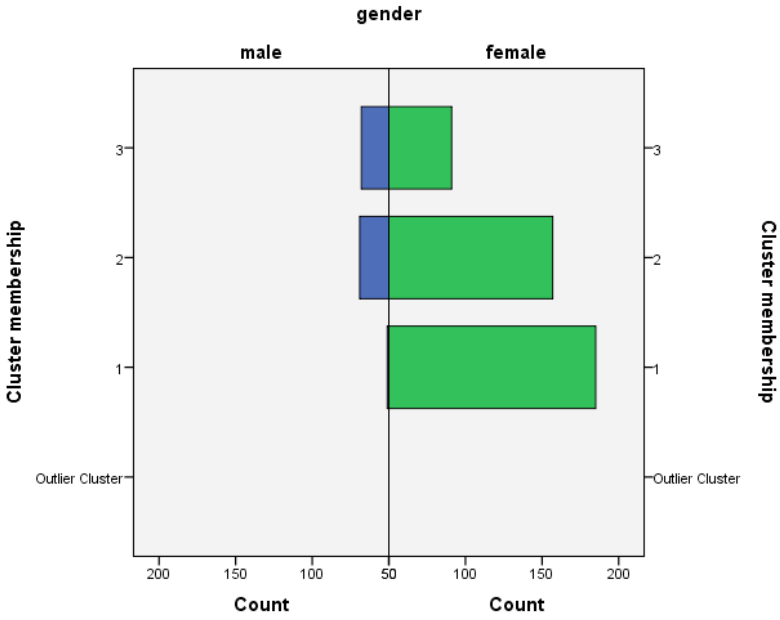
		Sum of Squares	df	Mean Square	F	Sig.
Referral intention	Between Groups	215.371	2	107.686	47.894	.000
	Within Groups	1387.265	617	2.248		
	Total	1602.637	619			
Purchase intention	Between Groups	198.787	2	99.394	71.067	.000
	Within Groups	862.931	617	1.399		
	Total	1061.719	619			
Brand engagement	Between Groups	361.762	2	180.881	142.890	.000
	Within Groups	779.781	616	1.266		
	Total	1141.543	618			
Trust in recommendations	Between Groups	175.615	2	87.808	67.355	.000
	Within Groups	801.750	615	1.304		
	Total	977.366	617			

From the one-way analysis of variance we can draw the following conclusions:

- for the variable referral intention, the mean difference between clusters is statistically significant overall: $F(2,617)=47.894$, $p<0.01$
- for the variable purchase intention, the mean difference between clusters is statistically significant overall: $F(2,617)=71.067$, $p<0.01$
- for the variable brand engagement, the mean difference between clusters is statistically significant overall: $F(2,616)=142.890$, $p<0.01$
- for the variable trust in recommendations, the mean difference between clusters is statistically significant overall: $F(2,615)=67.355$, $p<0.01$.

Consequently, the differences between clusters from the point of view of these important variables are big enough to be considered noteworthy. The cluster structure by gender categories (male and female) can be examined in Figure 6:

Figura nr 6. Cluster by gender



All clusters are formed mostly by female subjects. The most important percentage of female participants can be found in cluster 1, while the cluster three has the biggest percentage of male respondents.

To establish whether there is a significant relationship between the variables gender and cluster membership (i.e. whether the three clusters are different from the point of view of the structure by gender), we ran a chi square test for association. The results of the chi square test can be found in Table 2:

Tabel nr. 2 Chi-Square Test

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20.156[a]	2	.000
N of Valid Cases	621		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 48.14.			

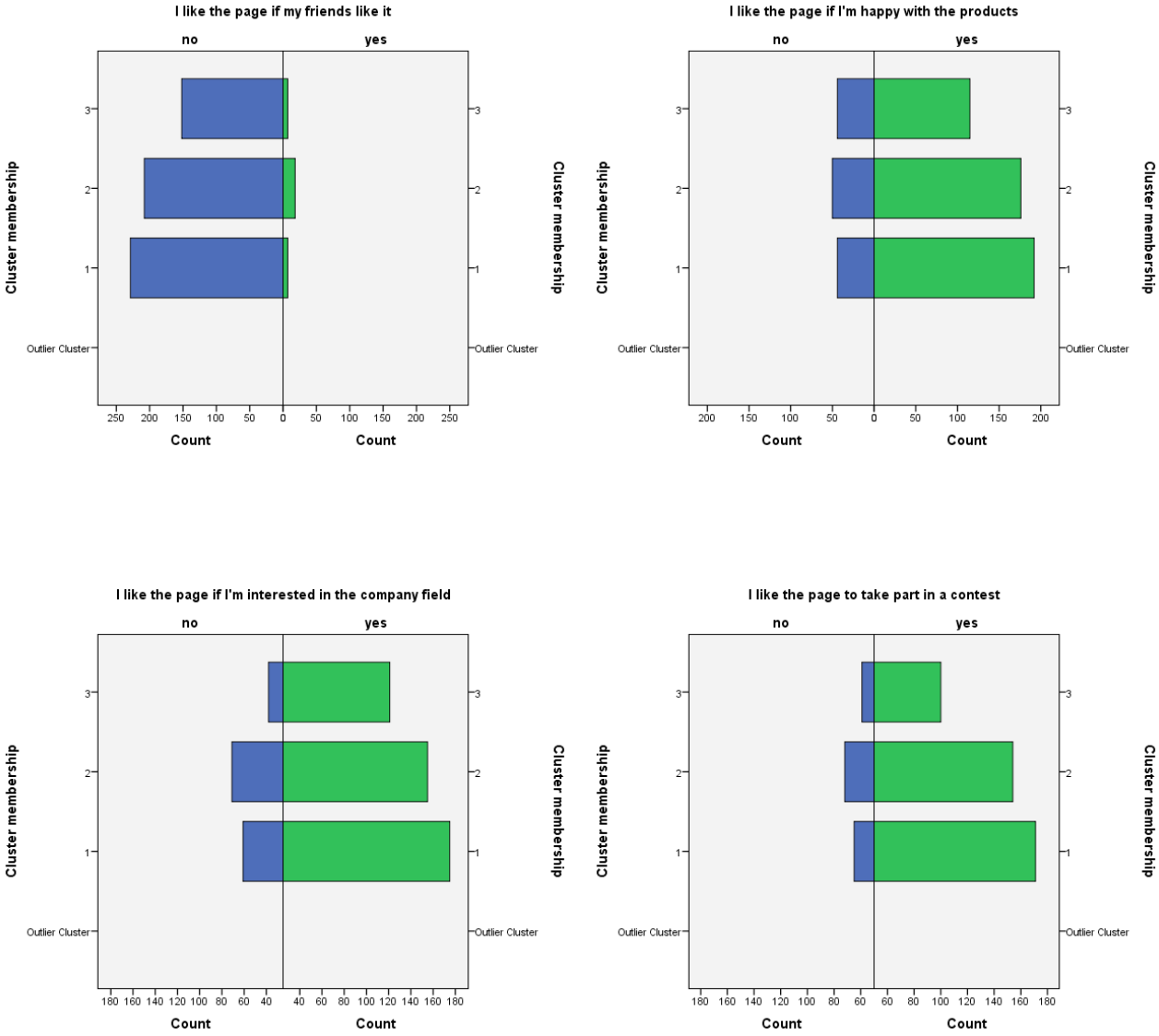
There is a small, significant correlation between the variables gender and cluster membership, as assessed by the Cramer's V test: V=0.180, p<0.01. In conclusion, there are some important, though moderate differences between clusters with respect to the composition by gender.

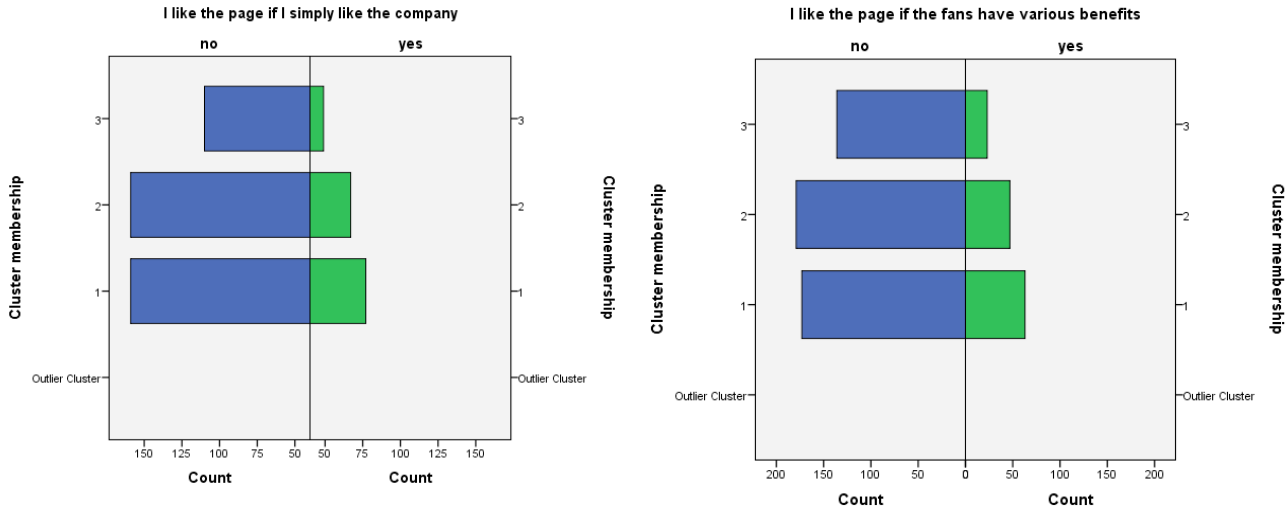
Tabel nr. 3 Phi and Cramer's V tests

	Value	Approx. Sig.
Cramer's V	.180	.000
Number of valid cases	621	

In the next figure we present the clusters structure by the motivation of liking a brand page on Facebook:

Figura nr 7. Clusters by motivation of liking Facebook pages





5. Conclusions and managerial implications

Based on the findings above we are going to define each cluster profile.

Cluster 1 is formed by people for whom it is very pleasurable, amusing and interesting to recommend products and services on Facebook. Subjects in this group are maybe the best influencers. They are mostly women (78%) and they present a very high brand engagement – they like to talk about brands and would be happy to receive information about brands on Facebook. They also trust other people recommendations and are willing to recommend products to other people; however, their purchase intention is slightly lower than the referral intention. They usually like a brand page when they are happy with the product and want to take part in a contest, but some of them also like it when for the benefits they could have as fans.

Subjects in cluster 2 are less inclined to use Facebook for recommending products (and get recommendations) compared to the subjects in cluster 1. Generally they trust in other people recommendations and have a pretty high brand engagement (although not as high as the subjects in cluster 1), but their purchase intention is low and their referral intention even lower. About 70% of them are women. They mostly like a page if they are happy with the company products, if they are interested in the company activity and if they want to enroll in contests.

As for the subjects in cluster 3, they have the weakest propensity for getting and making product recommendations through Facebook. Their brand engagement is feeble, as well as their intention to make referrals and purchases based on recommendations. They are also much less inclined to like brand pages on Facebook. This cluster is formed by both men and women (43% and 57%, respectively). This cluster is the smallest of all; it only represents 25% of the population of study.

Personal contributions are presented in the following lines. First, we created Romanian Facebook users' profile concerning WOM behavior. Facebook aims not just to be another social network, but the number one network in the world. To maintain its leading position, the company uses marketing techniques to keep the interest of users and companies. Facebook's revenue comes from advertising that companies buy to promote brand image, but also from the small ones who want to make their products known.

Second, we defined distinct segment of Facebook users after the WOM behavioral characteristics. Marketing vision has replaced the global approach - a product for all - to consumer segments approach. Thus, the product, the brand and the communication will be adapted to target consumers.

The research results showed two consumer segments with different characteristics regarding eWOM behavior on Facebook. This information will help the marketing manager to adapt the social media communication and the promotion strategy according to the profile of each target. The companies should pay attention to their brand pages, to interact with users and to encourage them to recommend their products. Facebook brand page managers can launch creative contests or promotions, initiate interesting discussions or interactive activities, offer coupons or gifts.

Acknowledgement

"This work was supported by the project "Excellence academic routes in the doctoral and postdoctoral research – READ" co-funded from the European Social Fund through the Development of Human Resources Operational Programme 2007-2013, contract no. POSDRU/159/1.5/S/137926."

6. References

1] **East, R, Wright, M, Vanhuele, M**. Consumer Behaviour: Applications in marketing. London: SAGE, 2008;
[2] **Schutz, WC**. FIRO: A Three Dimensional Theory of Interpersonal Behavior. New York: Holt, Rinehart, &Winston; 1966.
[3] **Berger, J., Iyengar, R.,** Communication Channels and Word of Mouth: How the Medium Shapes the Message, Journal of Consumer Research, October, 2013.
[4] **Phillips, R., Cordell, G., Church, G., Moore, J.,** The Passion Conversation: Understanding, Sparking, and Sustaining Word of Mouth Marketing, 2013.
[5] **Lee, M. S., Motion, J., Conroy, D.,** Anti-consumption and brand avoidance. Journal of Business Research, 62(2), 169-180, 2009.
[6] **Sernovitz, A.,** Word of Mouth Marketing: How Smart Companies Get People Talking, 3rd ed., Austin: Greenleaf Book Group Press, 2012
[7] **Rohm, A., Kaltcheva, V.D., Milne, G.R.,** A mixed-method approach to examining brand-consumer interactions driven by social media, Journal of Research in Interactive Marketing, 7(4), 295-311, 2013.
[8] **King R.A., Racherla, P. Bush, V.D.,** What We Know and Don't Know About Online Word-of-Mouth: A Review and Synthesis of the Literature, Journal of Interactive Marketing, vol. 28, no. 3, pp. 167–183, 2014.
[9] **Kozinets, R.V., de Valck, K., Wojnicki, A.C., Wilner, S.J.S.,** Networked Narratives: UnderstandingWord-of-Mouth Marketing in Online Communities, Journal of Marketing , 74, 71-89, 2010.
[10] **Berger, J.,** Word-of-Mouth and Interpersonal Communication: An Organizing Framework and Directions for Future Research. Journal of Consumer Psychology, Forthcoming, 2014.