

## An investigation on the effects of personal characteristics on word of mouth advertisement

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### ABSTRACT

This paper presents a study to measure the effect of personal characteristics including neuroticism, extraversion, openness to experience, conscientiousness and agreeableness on word of mouth advertisement. The population of this survey includes all people who use mobile phone in city of Tehran, Iran. The study designs a questionnaire in Likert scale and distributes it among 400 randomly selected people who use mobile devices. Using Spearman correlation test, the study confirms the positive of effects of neuroticism, extraversion, openness to experience on word of mouth advertisement and the negative impact of agreeableness on word of mouth advertisement. However, the study does not find any meaningful relationship between conscientiousness and word of mouth advertisement.

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## 1. Introduction

During the past few years, there have been growing interests in learning more about the effects of word of mouth advertisement on product promotion (Balter & Butman, 2005; Datta et al., 2005; East et al., 2007; Hawkins et al., 2004). Alire (2007) presented a model to dispel the perception that academic libraries would not require to market their services and resources and provided an introduction to the word-of-mouth marketing strategy and its usefulness for academic libraries. Arndt (1967) investigated the role of product-related conversations in the diffusion of a new product and the survey exposure to favorable comments contributed acceptance of a new product. Personal characteristics play important role on measuring the effects of various factors on product development, job satisfaction, etc. Barrick and Mount (1991), for instance, investigated the effect of the “Big Five” personality dimensions including Extraversion, Emotional Stability, Agreeableness, Conscientiousness, and Openness to Experience on three job performance criteria, namely; job proficiency (Jans, 1982), training proficiency, and personnel data for five occupational groups, which

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are professionals, police, managers, sales, and skilled/semi-skilled. They reported that one dimension of personality, Conscientiousness, could demonstrate consistent relationships with all job performance criteria for all occupational groups. Word of mouth (WOM) is normally characterized by valence, focus, timing, solicitation and degree of management intervention and Buttle (1998) identified researchable gaps in the knowledge on WOM. In addition to positive WOM, there is also a negative WOM advertisement, which negatively influences on products. Lau and Ng (2001) examined the effect of some individual and situational factors influencing negative WOM behavior.

According to Mooradian and Swan (2006) and Payne (1994), one advantage of the revitalized “personality-and-culture” paradigm is its potential to explain both individual- and culture-level differences. Personality-and-culture also constructs on recent, substantial methodological and analytic advances specific to cross-cultural study including progress in data collection capabilities, in computational power, and in tools for statistical analyses of bias and equivalence. Mooradian and Swan (2006) reviewed these studies in personality-and-culture and then reported some preliminary empirics linking nation-level extraversion to changes in preferences for interpersonal sources of product information (i.e., WOM), thus indicating national differences in reliance on interpersonal sources of data and, most importantly, explaining the general value of the personality-and-culture approach. According to Sweeney et al. (2008), WOM is becoming increasingly recognized as an essential form of promotion, particularly within professional services environments, where credence qualities play an essential role in consumers' choices. They tried to explore the factors, which are likely to enhance the chances that receivers of positive WOM might be impacted by such information. Their findings implied that the potential for WOM to influence on perceptions or on actions depends entirely on the nature of the sender-receiver relationship, the richness and strength of the message and its delivery, and different personal and situational factors.

## 2. The proposed study

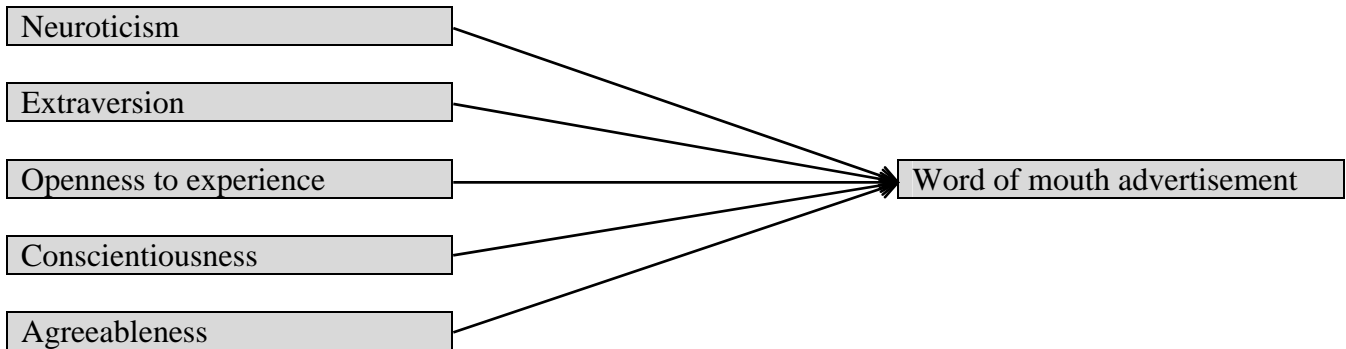
This paper presents a study to measure the effect of personal characteristics including neuroticism, extraversion, openness to experience, conscientiousness and agreeableness on word of mouth advertisement (Malouff et al., 1990; Christiansen, & Tax, 2000). There are two questionnaires associated with this study, where the first one investigates participants' personal characteristics and the second on studies word of mouth advertisement. The population of this survey includes all people who use mobile phone in city of Tehran, Iran. Therefore, the sample size is calculated as follows,

$$N = Z_{\alpha/2}^2 \frac{p \times q}{e^2}, \quad (1)$$

where  $N$  is the sample size,  $p = 1 - q$  represents the probability,  $z_{\alpha/2}$  is CDF of normal distribution and finally  $\varepsilon$  is the error term. For our study, we assume  $p = 0.5$ ,  $z_{\alpha/2} = 1.96$  and  $e = 0.05$ , the number of sample size is calculated as  $N = 384$ . Cronbach alpha for personal characteristics and word of mouth advertisement are calculated as 0.76 and 0.81, respectively, which are within acceptable limits of the survey. The study distributes the questionnaires among 400 randomly selected people who use mobile devices. Fig. 1 demonstrates the structure of the proposed study. According to Fig. 1, we can derive the following five hypotheses,

1. There is a meaningful relationship between Neuroticism behavior and WOM advertisement.
2. There is a meaningful relationship between Extraversion behavior and WOM advertisement.
3. There is a meaningful relationship between Openness to experience behavior and WOM advertisement.
4. There is a meaningful relationship between Conscientiousness behavior and WOM advertisement.

5. There is a meaningful relationship between Agreeableness behavior and WOM advertisement.



**Fig. 1.** The proposed model

The proposed study has performed Kolmogorov–Smirnov test to find out whether the gathered data were normally distributed or not and the results have not confirmed this hypothesis. Therefore, we use Spearman test to verify the hypothesis of the survey.

### 3. The results

In this section, we present details of our findings on testing various hypotheses of the survey.

#### 3.1. The results of correlation ratio

Table 1 shows details of our survey on applying Spearman test.

**Table 1**

The summary of testing various hypotheses

Hyp.	Description	r	Sig.	Result
1	The relationship between Neuroticism behavior and WOM advertisement	0.146	0.001	Confirmed
2	The relationship between Extraversion behavior and WOM advertisement	0.207	0.006	Confirmed
3	The relationship between Openness to experience behavior and WOM advertisement	0.165	0.001	Confirmed
4	The relationship between Conscientiousness behavior and WOM advertisement	0.112	0.154	Not-confirmed
5	The relationship between Agreeableness behavior and WOM advertisement	-0.228	0.003	Confirmed

As we can observe from the results of Table 1, there are positive and meaningful relationships between three personal characteristics of the participants, namely Neuroticism ( $r=0.146$ , Sig. = 0.001), Extraversion ( $r=0.207$ , Sig. = 0.006) and Openness to experience ( $r=0.165$ , Sig. = 0.001) with WOM advertisement. In addition, there was a negative and meaningful relationship between Agreeableness behavior and WOM advertisement ( $r=-0.228$ , Sig. = 0.003). However, the survey did not find any relationship between Conscientiousness behavior and WOM advertisement.

#### 3.2. The results of Stepwise regression

We have also performed stepwise regression analysis to study the relationship between WOM as dependent variable and participants' personal characteristics. Table 2 demonstrates the results of our findings.

**Table 2**

The summary of stepwise regression analysis

Variable	Coefficient	Standard Error	Standard value	t-value	Sig.
Intercept	58.342	4.937		21.982	0.000
Neuroticism	0.516	0.171	0.206	3.478	0.000
Agreeableness	-0.573	0.194	-0.279	-4.257	0.009
Extraversion	0.389	0.152	0.188	2.564	0.0013

The results of Table 2 indicate that WOM advertisement maintained positive and meaningful relationships with Neuroticism and Extraversion and there was a negative and meaningful relationship with Agreeableness.

#### 4. Conclusion

In this paper, we have presented a study to measure the effect of personal characteristics including neuroticism, extraversion, openness to experience, conscientiousness and agreeableness on word of mouth advertisement. The proposed study has been implemented among people who regularly use mobile devices in city of Tehran, Iran. The study has indicated that there were positive and meaningful relationships between three personal characteristics of the participants, namely Neuroticism ( $r=0.146$ , Sig. = 0.001), Extraversion ( $r=0.207$ , Sig. = 0.006) and Openness to experience ( $r=0.165$ , Sig. = 0.001) with WOM advertisement. In addition, there was a negative and meaningful relationship between Agreeableness behavior and WOM advertisement ( $r=-0.228$ , Sig. = 0.003). However, the survey did not find any relationship between Conscientiousness behavior and WOM advertisement. The implementation of regression analysis also indicated that WOM advertisement had positive and meaningful relationships with Neuroticism and Extraversion and a negative and meaningful relationship with Agreeableness.

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