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Modeling the Effectiveness of Electronic Advertising in Cities

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Abstract
The basic objective of this study is to design the model of effectiveness of electronic advertisement on consumer buying behavior. The research population is customers and consumers of large food stores in Shiraz that used a store's website. The sample of this study is as big as 400 people. Cluster random sampling method based on visible traits in the population with the highest estimated number of customers with a cautionary view was carried out. To evaluate the reliability of the questionnaire in this study, Cronbach's alpha was used. Cronbach's alpha was estimated 92%for the whole questionnaires and fluctuated between76%and 98% for its subscales. In order to analyze the data of questionnaires and to test the hypotheses, factor analysis and structural equation modeling techniques were used. The results show that by rejecting the first hypothesis and confirming the rest of assumptions and other relationships between the independent, mediator and dependent variables, the whole model is generally acceptable. This means that content and communication stimuli would get to the behavioral reaction phase after the process of influencing.

Key words: *electronic, advertisement, consumer, behavior, food*

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Introduction

In the age of information technology and globalization, effective advertising to influence consumer buying behavior is useful (Hussaiy et al., 2008). In other words, critical advertising affects consumers' purchases behavior substantially (Arshad et al., 2014). So understanding the impressive ways of advertising on the consumers` selection is essential for scholars and business owners. Therefore, no company can be considered as a market operator, unless it spends a lot of investment and budget on advertising strategies (Hussainy et al., 2008). Hence, many companies spend billions of dollars to advertise in various media annually (Lages, 2010).Consequently, business owners consider advertising as the best way to communicate with consumers and convince them to buy their product and services which is much more beneficial than any other idea (Farooq et al., 2011).Many studies have been conducted about this issue and many advertising models are developed about how people understand internet advertisements and what their attitudes are towards the advertisements (Lages, 2010).

Different communities use a variety of symbols to promote their products and services to attract consumers (Hussainy et al., 2008). In Iran, the number of internet users has increased recently and as long as the users, market flood, intensified competition, changes in customers' tastes and needs have inclined, Iranian companies have faced different challenges regarding commercial and industrial activities (Bagheri and Ranjbari, 2011). So in such a situation, the importance of internet advertising and the best use of the money spent are highlighted. According to the new trend formed in the process of spreading propaganda, as well as introducing new concepts such as web, real time, interaction, etc., it is vital for advertisers and advertisers' to know and understand the conditions and requirements of the new environment and how to spread advertisements that can affect consumers behavior through finding the capabilities and effectiveness of the process of electronic advertisement.

Based on the above mentioned points, the fundamental aim of this research is to investigate and analyze the capabilities and the process of advertising in new media (i.e. internet) So, explaining the process of electronic advertising and how to influence consumers behavior is mainly considered here.

Literature Review

Advertisement plays an important role in promoting any product and the information spread about it through advertising. It has a vital role in changing the viewpoints of consumers and their buying behavior (Usman et al., 2010). However, electronic advertising has shown substantial growth in recent years. Electronic advertising is a form of mass communication that is based on traditional forms of advertising, that with the development of communication strategies and taking into account the technical requirements and new media ,is increasingly being replaced traditional advertising. In other words, the rapid development of information technology and communication and the emergence of new media and many communication channels lead to change the business landscape of advertisement (Bakshi and Gupta, 2013). However, a growing dependence on the internet as a final source of information and communication has made it a leading advertising platform (Deshwal, 2016). In fact, the internet is considered as a key business infrastructure that helps business owners to understand and meet the diverse needs of consumers (Constantinid es, 2002). And advertising revenues out of business website shows also were changed to a crucial element in many business plans (Chatterjee et al., 2003).

On the other hand, consumer behavior is a psychological process in which consumers know their needs, find ways to estimate them, make decisions to buy, analyze, plan and know their purchasing program (Perner, 2008). In the simplest way, consumer behavior is defined as purchase units and exchange processes that

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involve the acquisition, use and withdrawal of goods and services, experiences and ideas. Part of the activities targeted at consumer behavior was raising consumer awareness with respect to the features and benefits of products. In this line, promoting an idea or a message in the form of commercial advertisements about goods and services among potential consumers via mass media plays an important role in the fulfillment of these tasks (Minor and Moon, 2011: 87). In other words, given the intense competition between companies with rapid changes in consumer behavior in a society that is consumer-based, advertising is regarded as the main tool in creating awareness among consumers (Mohammadian, 2009: 2).

The transfer factor of advertising messages can also influence the behavior of a variety of media including newspapers, radio, television and modern media like the internet and billboards. Have had access to many people at the same time in the way that people are not safe anywhere from commercial ads today and are always subject to bombing commercial advertisements (Doroudi, 2012). So, advertising messages through the mass media reach a vast range of potential consumers and persuade the audience to actualize and affect their minds (Bushman and Bonacci, 2002: 557-558).

Many researchers have studied various aspects of electronic advertising and its effects on consumers` buying intention. Wu (2003) found that the quality of review and comment on the line has positive impact on purchase intent of consumers and the increase of their buying intentions. Brahim (2016) investigated the impact of online advertising on consumer`s purchase intention in Tunisia and showed that the value of online advertising positively affects value, reputation and its entertainment value. He also indicated that the validity and value of online advertising is effective on consumer in calcinations toward this type of advertising. He illustrated that attitudes play a mediating role among between the value of advertising and the intention to buy.

Arshadet al., (2014) also examined environmental and emotional responses against advertisement showed that television is the most effective advertising media among all other advertising media, because the findings have illustrated that consumers feel better by receiving immediate information, images, and texts on the ads. Afzal and Rabbani Khan (2015) examined and analyzed the effects of online and conventional advertising on consumer buying behavior of famous branded clothes. The results showed that the quality, design and content of advertisements, consumer loyalty to the brand and the consumer experience of previous purchases are important factors that affect consumer buying behavior.

Conceptual models and assumptions of research

According to the analysis of different models and reviewing their strengths and weaknesses, in this study, the following model is recommended as a research model for studying the effectiveness of electronic advertising.

1. Given that a systematic approach is used in this model, therefore, model inputs, as effective incentives, are in form of communicational and conceptual stimulants.

2. The above stimulants result in intellectual, cognitive and Sentimental-emotional reactions. In this process, beliefs, opinions and feelings (emotions) and finally, the consumer's attitudes are formed.

1. 3 - Finally, based on the communicational and conceptual stimulants of electronic advertising and the process of the effectiveness of the model, we arrived to the consumer's behavioral response which shows the assessment of the effectiveness of the model or in other words, its validation.

• Conceptual stimuli have significant impact on behavioral, emotional, cognitive and consumer attitudes.

• Communicative stimuli have significant impact on behavioral, emotional, cognitive and consumer attitudes.

• Cognitive reactions have significant impact

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on behavioral responses and emotional response of consumer.

• Emotional response has significant impact on the conduct and attitudinal response of consumer.

• Attitudinal reaction significantly affects behavioral responses of consumer.

• Content stimuli by cognitive, emotional and attitudinal reaction have a significant effect on consumer`s behavioral response.

• Communicative stimuli by cognitive, emotional and attitudinal reaction have a significant impact on consumer's behavioral response.

Research methodology

Concerning purpose, this study is an applied research. However, in terms of providing a new conceptual model for research and forming process of opinions and sentiments of consumer affecting his comments, this survey develops the existing ideas. In terms of activities and methods (data collection method) is descriptive (non-experimental) and a survey. Since descriptive research includes a set of methods whose purpose is to describe the conditions or phenomena investigated. The reason of conducting descriptive research can be purely due to understand the circumstances or to help decision making process. Concerning the relationship between variables, there is a causal relationship among them. Given that one of the types of descriptive research methods (non-experimental) is correlation, in this type of research the relationship between variables can be analyzed based on the research objective.

The population and sampling

The population of the study involves customers and consumer of large food supplier stores in Shiraz that the behavioral reaction of consumers toward online advertising and the effectiveness of these ads are investigated. Based on the visible traits among the customers of the said stores in the geographic areas of the city –Shiraz, sampling method in this study is Cluster random sampling. It is necessary to mention that the sample in this study is 400 since in statistical analysis, at least 5 participants is required for each item of questionnaire.

Cronbach Alpha	variables
0.98	Content stimulus
0.93	Communicative stimulus
0.76	Cognitive reaction
0.94	Emotional reaction
0.85	attitude
0.86	Behavioral reaction
0.92	total

Table1. Validity of the questionnaire and its subscales

Research Instruments

Given that the effects of electronic communicative advertisement on consumer behavior is investigated and validated in order to collect the original data from the valid questionnaires. In this study, Cronbach's alpha is applied to evaluate the reliability of the questionnaire which is presented in the results in Table 1. Cornbrash's alpha for the whole questionnaire is0/92 and for sub-scales fluctuate between 0.76 to 0.98 between that shows high reliability of the questionnaire. To determine the validity, professional experts confirmed content validity according to factor analysis.

Data analysis

In behavioral science studies, multivariate analysis methods are the strongest. Because the nature of most issues in behavioral science research is multivariate and cannot be evaluated using bivariate method (only one independent variable is considered with every dependent variable at a time). Hence, in the present study in order to examine the hypothesis, a structural equation model is used. Figures (1) and (2) show a structural equation model used in this study to estimate both standard and significant coefficients. As shown in the figures, except content stimuli effect on behavioral reaction, there is a positive and significant relationship between the variables. Summary of relationships between variables using struc-

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Pairwise correlation between variables		Impact factor	Significant coefficient	Result
Content stimuli	Cognitive reaction	0.50	8.14	+
Content stimuli	Emotional reaction	0.31	4.30	+
Content stimuli	Attitudes	0.26	4.10	+
Content stimuli	Behavioral reaction	0.04	0.88	-
Communicative stimuli	Cognitive reaction	0.46	7.89	+
Communicative stimuli	Emotional reaction	0.42	7.35	+
Communicative stimuli	Attitudes	0.72	9.85	+
Communicative stimuli	Behavioral reaction	0.40	7.81	+
Cognitive stimuli	Emotional reaction	0.27	4.06	+
Cognitive reaction	Behavioral reaction	0.52	8.29	+
Emotional reaction	Attitudes	0.41	7.82	+
Emotional reaction	Behavioral reaction	0.63	8.74	+
Attitudes	Behavioral reaction	0.52	8.30	+

Table2 .Summary of relationships between variables

tural equation model is provided in the table (2). AGFI(Adjusted Goodness of Fit indices) are illustrated in Table 3 which implies the relatively high suitable indices and fitted model.

In structural equation modeling, hidden structures of the measurement, which are generally shown in oval shape, become models based on their factor loadings through obvious variables, such as statements which are mostly shown in rectangular shape.

In structural equation modeling approach, one measurement error is considered for each of the observed variables and one structural error is considered for each of these hidden variables. Hence, the calculated values are less than the old method, however; obtained results can be more accurate (Ghasemi, 2011).

Values	Indices
0.05	RMSEA
2.29	df $\chi/2$
0.91	AGFI
0.93	GFI
0.94	NFI

Table3. Indices of structural equation model

In other words, in the goodness of fit test, we examined the appropriateness of the data set that root mean square error of approximation (RMSEA)is equal to 0.5 according to the table (3) and(x2/df)is 2/29. The indices of NFI =, CFI =, IFI = and GFI = model are confirmed. Therefore structural model of research con-

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cerning fit indices is appropriate and all the said factors can be gathered in the structural model of this study.

Figure (2) shows coefficients and parameters obtained from structural models of electronic advertising impacts on consumer buying behavior in the second rotation mode. According to the results, there is a significant loading in the electronic advertising effect on consumer shopping behavior. Hence, the structural model of the study showed that electronic advertising has a significant impact on consumer buying behavior.

Conclusion

The results indicate that electronic advertising as a key and important factor affects consumers' purchase behavior from large stores of food supply. Thus, according to the emotional, cognitive and attitudinal reactions of consumers are affected by content and communicative stimuli and consumer purchasing behavior is also resulted from emotional, attitudinal and cognitive responses of content and communicative stimuli which are all studied and analyzed in this research. The results of this study are as following:

The analysis of variables suggests that based on the responses of customers using the website of stores, it is essential for stores to create great changes in their websites to take advantage of customers` suggestions. So, in this way, stores can be better and acceptable in all aspect. The findings and the proposed model introduce two categories of affecting stimuli the internet space. Accordingly, if used desirably and entirely, it can in flounce the process of electronic advertising and take full advantage of them very effectively and fruit fully. So with the passage of time, in addition to fourteen stimuli listed, as other innovative and new ones in the form of content and communication increase, the strength and quality of work also incline. Mediatory variables, i.e. cognitive reaction, emotional reactions and attitudes, the dependent variable, i.e. behavioral response suggest that the use of this process during the effectiveness of electronic advertising can determine the process of effectiveness on consumers to finally achieve behavioral response through the specified path. Because for the most part, expecting short-term and immediate impact of advertising on customer or consumer is vain. The effectiveness needs to be done over time and through the right process. So, using this process in the model and the significance of them as intermediate and intervening variables can be used properly based on the level of involvement regarding various goods and services. Factor analysis of the independent variables (content and communication stimuli) indicates that the each of the seven stimuli in each category of content and communication has the favorable factor loadings in explaining the relevant variance. The indicators of the model show the appropriation of the measurement model. Therefore, it should be noted that if all stimuli are used well, they will have favorable effects on the process of electronic advertising effectiveness. In analyzing the results obtained and due to the lack of a direct impact of content stimulus on behavioral reaction, it can be asserted that consumers do not reach the behavior phase after obtaining information and awareness of online ads. And they should go through the process of influencing (cognition, emotion and attitude) then they can reach the behavioral reaction. In other words, online advertising does not affect immediately in many of the products that require higher level of involvement and more thinking. Therefore, effective steps must be taken according to the proposed model. In analyzing the obtained results, it can be stated that content and communicative stimuli (knowledge, feelings and attitudes) associated with reach behavioral response after the process of influencing stage. Taking full advantage of this model can help companies in the E-commerce and internet websites, especially in terms of improving content and communication stimuli. The model can be used in the hierarchy of high involvement of

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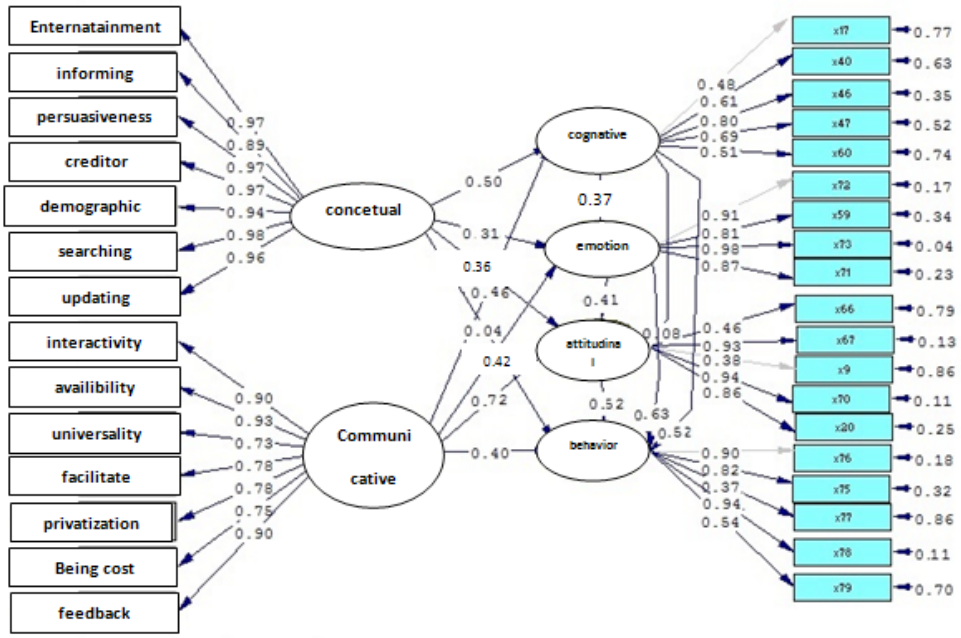


Figure1. Structural equation modeling in the standard estimate

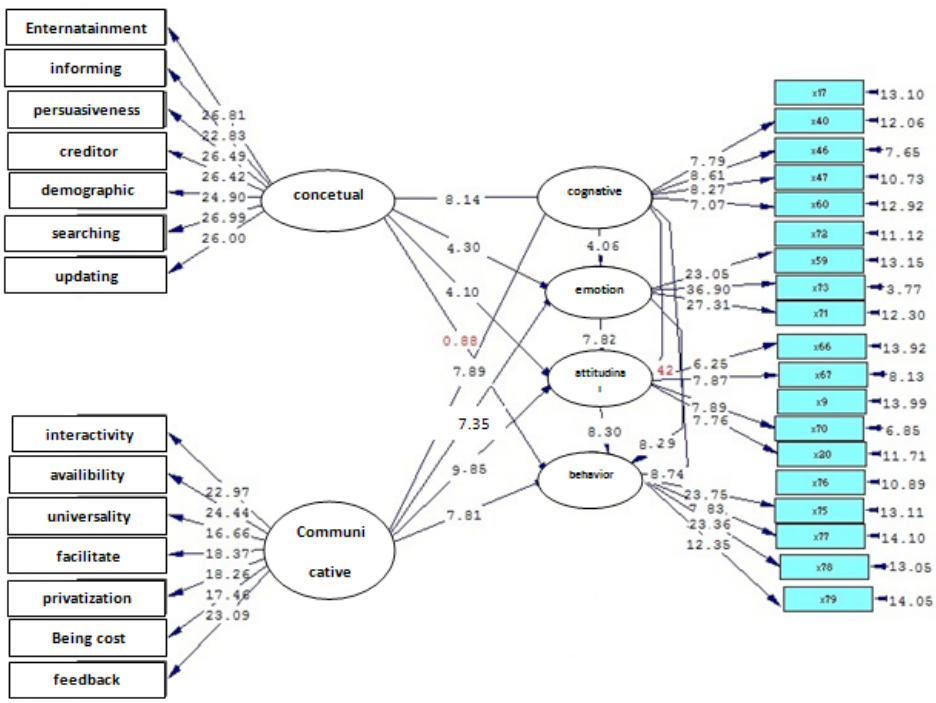


Figure2. Structural equation modeling in the case of significant coefficients

mind in decision-making process. In this case, consumers can increase problem solving activities and are highly looking for information about the product. As a result, many different beliefs about products will be formed. Any belief is tied to an emotion and the sum of these beliefs would form attitudes. After the formation of beliefs and attitudes, behavior comes out.

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