# The Effect of Advertisement Frequency on Price Sensitivity through Explicit Memory，Implicit Memory and the Goods＇Relative Preference among Students of Isfahan University 

Dr Hamid Reza Oreyzi ${ }^{1}$ ，Narges Sadat Mortazavi Najafabadi ${ }^{2}$<br>${ }^{1}$ Associate Professor，Faculty Member in Isfahan University，Hezar Jaribst，Isfahan University，Isfahan，the school of educational sciences and psychology<br>${ }^{2}$ MA in industrial clinical psychology，Isfahan University，Hezar Jaribst，Isfahan University，Isfahan，the school of educational sciences and psychology


#### Abstract

One of the most important questions regarding investment on advertising is whether frequency of exposure to advertisement increases its effect on price elasticity．Two divergent theoretical viewpoints about economic effects of advertising contradict namely＂market power＂and＂economics of information＂．The aim of present paper was to investigate if these perspectives on advertising could be separate part of generalized theoretical framework by two different type of information provided by advertising namely consideration set size and relative strength of preference．Statistical population of the current research was 128 graduate and postgraduate of psychology and educational sciences faculty of university of Isfahan．Who were selected randomly to low and high advertisement frequency groups．Two distinct forms of ads memory（explicit and implicit）were constructed plus questionnaires for relative strength of preference．Price sensitivity was measured subjectively by direct question of participant about how much they pay．Advertisements were made for fictitious candy， chocolate，biscuits and nonalcoholic drinking．Low frequency was 1－3 and high frequency was 4－6 exposure to advertising．Findings indicate that relative strength of preference and consideration set size were mediating and moderating variables between advertising and price elasticity．While in the former route decrease and in the latter path increase price elasticity，two routes demonstrate competitive mediation as noted by Zhao，Lynch and Chen（1）．While Mitra\＆Lynch（3）study quality of ads，this paper notices the quantity of ads．As another view． Our research support the view of information school that advertising does have some economic value beyond providing information on the existence of substitutes，beyond recall cues and thereby increases the number of effective substitutes considered at the time of choice．So the generalized conceptual model reconciles the conflicting theoretical predictions of information and market power schools．


KEY WORD：Strength of preference，Frequency of ads，Price elasticity

## INTRODUCTION

Today due to the market competition，the company managers attempt to consume the sources in a way that it makes value for the company．One of the activities making value for the companies is the marketing．One important question regarding the goods＇marketing is that whether the massages sent to the customer for buying the product are effective（3）．Promotion and advertisements are two most tangible marketing activities that because of their effect on the development and improvement of the organization，relate to the improvement of its level．Moreover，they also associate with the price，product and place．One basic question regarding the cost paid for the advertisements is that whether charging for the advertisement is profitable？In other words＂if the good appears desirable，the buyers will have such interest to buy that they are ready to pay whatever price to access to the good？The purpose is rendering an effective advertisement and finding the answer of the question of when，how and why it is effective？$(4,5)$ ．

The range of the cost acceptance is called＂price elasticity＂（6）．Consider that you are the subscriber of a magazine which increases its price in the next volumes．The price elasticity variable is the level up to which you accept its increase in price．On the contrary，＂Price Sensitivity＂is the inflexibility of the price range which you don＇t accept the price rise．Mitra and Lynch（2）found out that the advertisement affects price elasticity in two ways．On the one hand，with putting the related issue into the buyers＇mind，at the time of buying the name of that good is available for the customer and it increases the probability of its sale，hence the price elasticity will decrease；but on the other，every feature advertised concomitant with the good，necessarily exaggerates the features which are not in the good，therefore other preferences are formed which causes the increase in price elasticity（or decrease the good＇s price）．Literally the word＂advertisement＂is reaching something to its ultimate place（7）．The term＂advertising＂or＂advertisement＂is derived from middle ages Latin＂advertere＂meaning ＂directing someone＇s attention to＂．Now the question israised that what is the persons＇attention directed to？Here the important element is attention，since if to a massage is not paid attention，it will not be effective（8）．The

[^0]variable affecting good's attention is the frequency of rendering the advertisement. For instance imagine that to understand the massage, the person should be in a suitable place to understand it; and the probability of attention to it will increase through the good's increase in advertisement frequency. However in every extra rendering of the advertisement, the person is likely to think about the aspects which has not attended to so far and emphasizes on the "out of frame" aspects, i.e. the elements which explicitly and not implicitly emphasizes on the other aspect.

As an example, if the natural sweetness of a specific kind of biscuit is advertised the person pays more attention to less sweetness (and so healthier). According to the above reasoning, the attention is directed toward the same good and toward other goods, exactly like an image in a film which, at the same time, with attending to the factors in the film our attention is also directed toward the factors out of the film. The first concept is enforcement and the second is the stimulus differentiation which the advertisements usually include both. Much experimental research shows that the promotion and advertisements affect the buying behavior of the consumers. In fact, the advertisements and their applications can have effective role on life style, attaining social rituals and accessing to the welfare.

Two important theories explain two effects of the advertisement in different directions on the price tendency (price sensitivity) which the first is the theory of market power and the second is the theory of economics of information. In the theory of "market power" the principle of "convincing" is proposed. In fact, the market economy view, the degree of perceived differentiation among brands is suggested. According to this view "the person's loyalty toward the brand" increases and due to the increase of marginal costs, the customers' satisfaction will decrease. In this approach, the advertisements decrease the price tendency from demand $(9,10)$. One basic view suggests that the advertisements affect price tendency in two utterly different ways. First: the advertisements might affect the parameters of more or less sensitivity to the price. Second: the advertisements might affect a combination of a set of customers who buy from an individual brand (11).

Two aspects of advertisement which affect in two different directions on price effectiveness are keeping the good active in the mind ( with recalling mechanism) and the other attending to the factors out of the scene (other goods) (with stimulating differentiation mechanism). These two effects of advertisement can be compared to Andre Bazan's (12) two artistic, theatre and cinema tendencies. Andre Bazan, one of the most outstanding theoreticians and critics of cinema, has made a distinction between theatre and cinema. He states that cinema differs from theatre, in a way that cinema is an art which escapes from the center, while theatre is a tending to center art; that is, in theatre when a person comes to the scene all the elements in the scene are watched by the viewers; but in cinema the viewers consider all the elements out of the scene and frame. What Andre Bazan said can be used to make explicit two current theories regarding the economic effects of advertisements, i.e. the theory of "market power" and the theory of "economics of information".

The theory of market power can be compared to theatre. As stated in theatre all the elements which exist in the frame are attended to and consequently they become important. The above issue is true about this theory too. According to this theory, when a good is advertised just the good in the advertisement is attended to, as a result, the importance and the value of that good rise and it leads to the increase in its price. In this approach every time a good is advertised the intensity of its recall will increase and therefore the price sensitivity will decrease. Here the focus is more on the role of explicit memory (13).

The theory of economics of information can be compared to the cinema, that is, all the elements which exist out of the frame are also taken into account. The above issue can be adaptedto the theory of economics of information in a way that according to this theory, the advertisement considers other competitive goods besides informing regarding the good under advertisement, in other words, even the goods not advertised are taken into account and in fact provides a hierarchy of goods for the customer and the result is the decrease of the good's price under advertisement. In this approach every time a good is advertised the other goods are advertised implicitly and the price elasticity increases. Here the advertisement emphasizes on the role of implicit memory as well as explicit memory $(14,15)$.

When the advertisement increases the customer's price sensitivity that the number of customers who are satisfied to buy the brand whatever the price will decrease, that is, the price elasticity decreases (price sensitivity increases) (11). On the contrary to previous research which found no relation between the customers' features and the price elasticity, Elrod, Terry, Russell and winer (16) found a weak relationship between price elasticity and demographic and social- economic variables. They perceived that the price elasticity would increase with the increase of age and education level. Lashman and Raj (17) in their study concluded that loyal customers choose less price elasticity at the time of selection comparing to the customers who are not loyal.

Generally according to the view of market power, the more (with higher frequency) a good is advertised, the more its effect grows and the more its price sensitivity would decrease, while on the contrary, Horner and Henson (18) indicated that the higher frequency and more repetition of advertisement causes the extinction of its effect. Frequent advertisement of a good, provides a secure and safe environment for the customers and this security leads to the spread of trust among customers and finally trust causes the creation of value specific for the brand through affecting on loyalty, maybe with this imagination that if the good had any problem it would not be allowed to advertise (19). Being loyal to the brand can be defined as the degree of customers' attachment
toward a specific brand (20). The organizations can achieve a larger share of the market through being loyal toward the brand. Since the loyal customers frequently buy that brand and resist situational factors and marketing attempts of the competitors (21). The positive and negative effects of consumer view toward advertisement have extensively been investigated by marketing and advertising researchers. For instance, in a study by Beharta, et.al. the researchers concluded that generally the more positive the customer's view toward the advertisement is, the more likely it will be to remember it (22). The customers pass at least a two-step process. In fact, the customers apply a simple exploratory rule for choosing the brand confronting to numerous brands until they make a related set called "consideration set size" (23). The decision to buy occurs among the brands of this set $(24,25)$.

Consideration set size, theoretically, includes the brands the customers seriously attends to at the time of buying, and, experimentally, apply the terms such as: "summoned set" and "related set". However the consideration set size is defined as a rather small set from all brands which are examined (26). In this outlook the focus is just on memory while it is not only the memory but also this fact that how people's minds involve in the judgment about the good whose brand name is in the memory (27).

In commercial terms, frequent confrontation with an advertisement helps accessing to multiple marketing goals through a low-cost method. Frequent confrontation of the customers with an advertisement, is a good method of introducing a new good through remembering the value of an old good to the customers (28).

The second theory is the "theory of economics of information" developed by Stigler (29) and Telser (30). In this theory the assumption is that the price tendency is a function of the consumer's awareness and knowledge regarding the advertised good alternatives. In the view of information, Stigler (29), Nelson (31, 32) and Grossman and Shapiro (33) suggest that the advertisements render the information about the existence of a brand or the quality of a brand which causes the increase of the customer's awareness toward the ratio of available brands and as a result the decrease of searching costs. According to this view, advertisements can increase the customer's satisfaction through the decrease of marginal costs and better adaptation to the customer's taste and the ratio of selecting brands (11). The creator of the advertisement should make and create awareness toward the brand taking these theories into account (34). The basic principle in this approach is "the advertisement as the information" which states that the advertisements provide the information about other options and this leads to the increase of price tendency (30). Today advertisers as those who order the advertisement start to advertise what they want to sell (e.g. good, services and design) or summon the people to it (e.g. voting to nominee) by paying high prices and buying media opportunities which might involve a part of a page or a short time of the media time. Every advertiser's purpose is the maximum application of all the media devices to develop and spread the thought, behavior and generally consumption market (information). The term consumption at media level refers to the concept of information consumption (35). In fact one of the strategies to raise the level of people's awareness is doing extensive promotions about the product. In arranging advertisement plans, the purposes should be determined according to the previous decisions in terms of the aim market and market subject.

One of major goals of industrial relations is rendering, probably professional, information specific for the customers regarding one product or service (36). The results of a research which emphasize on the concept of specific brand value according to the customer indicate that the awareness of the brand has positive effect on the experience of brand use and also the experience of brand use has positive effect on brand value (37). Since in the field of media communications the addressee or media user is assumed as information consumer, it is predicted that each consumer (of information) refers to the media which can satisfy his/her need depending on the degree of his/her need (35). The advertisements provide the information regarding the prices, features of goods, the existence of products and sellers, etc. and the manager should simultaneously provide the suitable level of advertisements and price to maximize the profit. It occurs when the extra profit from selling an extra unit of a product through using advertisements, from expenditures of extra advertisements necessary to sell one more unit grows more (38). In fact it uses the advertisements as an effective factor for selling and making profit. Recently the theoreticians stated that besides the effects of advertisement costs on selling income and profitability, these costs affect the value of invisible incomes and the ability of participation to increase the cash flows and the value of shareholders.

Many writers identified the importance of good price regarding profitability of the companies (39, 40, 41). Shoemaker(41)suggests that price and pricing are strong powers for absorbing people and consequently the increase of sale; and it enormously affects the customers' loyalty (42). Gijensberg, Van Heerde, Dekimpe and Steenkamp (43) consider awareness and price effectiveness as two major variables influencing good success. However there is an important question that to what extent is the customer ready to pay for the price of a good? Two important variables are: relative preference of the good over the others and remembering the name of the good by the customer at the time of buying. This exactly is two mediator variables formed in the minds of customers and determines the relationship between awareness and price. Mitra (2) was the first researcher who found out the significant role of these two psychological variables on the goods price. As stated along the research, according to the market power theory, the major goal of advertising a good is establishing its name in
customer's mind, so the good advertised decreases its price sensitivity since there is no other option in the mind of the customer. While in the theory of economics of information, the advertisement of a specific good unconsciously causes the differentiation between the goods and implicitly (hidden) leads to informing regarding competitor goods, therefore the price of the good under advertisement decreases and its sensitivity increases. Introducing individual variables in the current study which have been implemented interdisciplinary between economics and psychology indicate that each of the previously mentioned theories are specific forms of this more general theory. The variables of this theory can be described through the following model. (Figure 1)


Figure 1.Mitra and Linch (1995)
In our model the relationship between the advertisements and price sensitivity hasbeen studied by investigating the effects of advertisement on two mediator structures: the consideration set size and relative preference of the goods. As depicted in figure (1), according to link 1 when there are many advertisements regarding an individual brand and that brand is well known, it is highly probable for that mentioned brand to be the ones the customers like, so reminding the advertised brand is facilitated at the time of selection (44). Link 2 shows the effects of advertisement on good preference. The study on the preferences of customer claims that the existing differences in the customers interest toward different brands can be explained through the customer's belief regarding differences between these brands in some important or valuable features $(45,46,47)$. This is shown by the positive sign in relation 2 of figure 1. Exposing the customers to "differentiating advertising" causes the preference over the good. According to link 2 the information taken from the advertisement directly increase the relative power of the preferences which can indirectly (link 3) decrease the number of assumed brands. As mentioned in link 1, the advertisements can increase the consideration set size and decrease relative strength of preference which causes the decrease of expected difference among many preferred brands and other competitive brands, so the consumers' sensitivity will rise. Therefore it can generally be said that the increase in the consideration set size leads to the increase of price elasticity. This effect is shown by positive sign of link 4. The effect of relative preference of price sensitivity (link 5), as it is clear, if the consumer prefers a good he/she is ready to accept every price for it, so the price sensitivity will decrease.

## Research hypotheses:

First hypothesis: the consideration set size in memory and the perceived preference in their profitability is different in two groups of people who receive awareness with higher frequency and those who did it with lower frequency.

Second hypothesis: the price sensitivity of the goods is different in two groups of people who received awareness with higher frequency and those who did it with lower frequency.

Third hypothesis: the relative preference of the goods is different in two groups who received advertisement and those who didn't.

Forth hypothesis: with the increase in the consideration set size the price sensitivity will decrease (theory of market power)

Fifth hypothesis: the price elasticity will increase with the increase in the degree of relative preference of the goods (theory of economics of information).

Sixth hypothesis: there is a relationship between the consideration set size and the degree of goods preference.

Seventh hypothesis: the relationship between the size of advertisement frequency with the goods price is different in group with small and large consideration set size.

Eighth hypothesis: the relationship between the frequency of advertisement and the good price is different in the group with high good preference and low preference

Ninth hypothesis: in the sum of two groups, the consideration set size is the mediator of the relationship between advertisement frequency and price sensitivity.

Tenth hypothesis: in the sum of two groups, the relative preference of the goods, are the mediator of the relationship between the advertisement frequency and price sensitivity.

## RESEARCH METHOD

The research design is experimental and in the form of two-group comparison and RCT design. The intervention includes the advertisement which focuses both on good differentiation (through the aspects of difference of the good with others) and the buyers' memory when selecting a good and they do it by the advertisement frequency. The participants of the study in the group with lower frequency are exposed to the advertisement once to three times, while in the group with higher frequency, they are exposed to it four to six times; then they are asked to remember the set of goods (in this case the sweet goods such as biscuit, sweet, drink and chocolate). Afterwards, they recognize the degree of assumed good preference on 7 grades scale from 1 to 10 and comment on the degree whereon they are ready to pay more in case of rising the price of the good. It should be mentioned that in determining the good preference and also in price sensitivity, the whole scale of goods are available for the participants again and just in the stage of memorizing the goods, the list is not available for them. In the second part, the intervention variable is applied as the predictive variable and the advertisement frequency for predicting the price sensitivity has been investigated through two variables (i.e. the consideration set size and relative preference of the good) which have been in the form of a structural equations model and examining indirect effects. Oreyzi and Mortazavi (48) indicated that the advertisement quality which is helping or differentiator memory affects the price elasticity in correspondent contexts. In the present study the attention is on the advertisement frequency (the number of rendering the advertisement) instead of its quality. It is imagined that through increasing the rendering of advertisement, the customer's imagination, would add them to the consideration set size in the memory and also pay more attention to its features. The hypotheses of the current research have been made according to this principle.

The participant s of the study included 128 students of Isfahan University who responded to the present research instruments. The students were equally selected from two genders, 64 female and 64 males. These students were selected at BA and MA levels from faculties of the schools of educational sciences and psychology. The samples were selected from the students who didn't finish their studies through simple random sampling.

## Instruments

To make the advertisement 50 types of goods were used. Some of them were not related to the study and they were just used in order not to guess the hypotheses and they were randomly put within advertisements; however, 24 related to the kinds of sweets. The names of sweets were not real and every 10 second advertisement has been shown on 15inch television monitor. Different frequencies of advertisement broadcast for the students (from 1 to 8 times) have been used, and then they answered to the research instruments. In order to evaluate the consideration set size, two types of instrument were applied, the first related to explicit and second to implicit memory. After rendering the advertisement from 1 to 7 times, in two weeks for the students, in the following four days they were asked to remember (in their explicit memory) the goods advertised in tenminute time. The number of correctly remembered goods made the subject's score on this scale. In implicit memory they were asked to write down a text for the advertisement of the sweet (biscuit, sweet, drink, and chocolate). They were told there is no problem to use the name of the good they heard everywhere before, even they didn't see them. To accept the price one scale with four items had been made. The examples of the items include: "I don't accept the price change" (equals to 1), "if I prefer one good over the other, I will be ready to pay $20 \%$ more than the acceptable level" (equals to 2 ) to "I am ready to pay $200 \%$ more than the acceptable level" (equals to 10) and "if I need a good and I understand in the advertisement that I prefer it over the others I'm ready to pay $20 \%$ more than the acceptable level to buy it" (equals to 1 ) to "I am ready to pay $200 \%$ more the acceptable level". In fact the price sensitivity is scored in opposite direction. For the preference of the good, the name of the good advertised is told and they were asked to consider ten goods which they are more interested in and then order them according to obligatory option based on their own preference hierarchy, that is, they score one good with very low preference and the other with very high preference, two goods with low preference, two goods at high preference level and 4 goods at medium preference level to have a normal distribution in the form of selection. In table 1 the mean, standard deviation and the applied instruments and the indicators of their reliability and validity in the present study have been given. As it can be seen all the instruments have suitable reliability and validity (reliability 0.8 and higher and validity coefficient higher than 0.5 ).

Table 1.the descriptive and psychometric indices of research instruments

|  | The number of <br> the items | Mean | Standard <br> deviation | Reliability of <br> the retest | Cronbach's alpha <br> reliability | Reliability <br> coefficient |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| The explicit consideration <br> set size | - | $8 / 43$ | $1 / 11$ | - | - | - |
| The implicit consideration <br> set size | - | $6 / 45$ | $0 / 94$ | - | - | - |
| Price sensitivity | 3 | $5 / 22$ | $0 / 89$ | $0 / 92$ | $0 / 84$ | $0 / 52$ |
| Relative preference of the <br> good | 3 | $5 / 15$ | $1 / 16$ | $0 / 89$ | $0 / 86$ | $0 / 54$ |

## Findings

According to table 2, the hypotheses 1,2 and 3 are confirmed; that is,the consideration set size in the memory and the perceived preference, there is difference in their profitability between two groups of people who received the advertisement with higher frequency and those who did it with lower frequency. Moreover, there is difference in high price elasticity of the good between two groups of people who received the advertisement with higher frequency and those who did it with lower frequency. And the relative good preference in two groups of people who received the advertisement and those who didn't is different.

Table 2.comparison between the research variables in two groups with high and low frequency

| Group <br> Variable | advertisement with high frequency |  | advertisement with low frequency |  | sum | T |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean | Standard deviation | Mean | Standard deviation |  |  |
| Consideration Explicit | 11/23 | 1/49 | 5/63 | 0/94 | 128 | 31/19*** |
| set size Implicit | 8/42 | 1/15 | 4/49 | 0/86 | 128 | 18/30*** |
| The good's price elasticity | 7/26 | 1/24 | 3/18 | 0/78 | 128 | 22/28*** |
| The good's relative preference | 7/11 | 1/33 | 3/19 | 0/93 | 128 | 19/32*** |

Table 3.Correlation coefficient between research variables

| Variable <br> Variable | The implicit consideration set size | The explicit consideration set size | The good's price elasticity | The good's relative preference |
| :---: | :---: | :---: | :---: | :---: |
| Advertisement frequency | 0/39*** | 0/42*** | 0/14* | 0/39*** |
| The implicit consideration set size | - | 0/74*** | $-0 / 31^{* * *}$ | $-0 / 27^{* *}$ |
| The explicit consideration set size | - | - | $-0 / 36 * * *$ | $-0 / 24 * *$ |
| The good's price elasticity | - | - | - | $-0 / 41^{* * *}$ |
| ***= $\mathrm{P}<0 / 001 \quad * *=\mathrm{P}<0$ | * $=\mathrm{P}<0 / 05$ |  |  |  |

According to table 3 by increasing the implicit consideration set size, the price sensitivity would decrease and the result is the confirmation of the forth hypothesis. Further, through increasing the good preference, the price elasticity would increase and the fifth hypothesis is confirmed too. According to the sixth hypothesis and the results of the table, there is a relationship between the consideration set size and the degree of good preference.

Table 4.investigating the adjusting effect of consideration set size and relative preference in terms of price frequency and elasticity

| Group | Evaluation | Subgroup | Number | The relationship <br> between the <br> frequency and <br> price sensitivity | Relationships <br> difference (z) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| The group with <br> consideration set <br> size | Implicit | Small set | 64 | $0 / 28^{*}$ |  |
| The group with <br> consideration set <br> size | Explicit | Large set | Small set | 64 | $2 / 05^{*}$ |
| Group based on <br> relative preference |  | Large set | 64 | $-0 / 09$ |  |
| *=P<0/05 | High preference <br> Low preference | 64 | $0 / 31^{*}$ |  |  |

In table 4 the amounts above 1.96 are significant
In table 4 the relations have changed into z fisher. Taking the findings of this table into account, the hypotheses 7 and 8 are also confirmed and it can be mentioned that the relationship between the size of advertisement frequency and good price in small and large group with set of consideration set sizeand the relationship between the advertisement frequency with the good price in the group with high or small good preference are different. In table 5 the significance of direct and indirect effect indicates the probability of mediating role ofthe consideration set size and relative preference of the good.

Figure 2.significance of the path and Beta coefficient


In (Figure 2) in every path the given amount in parenthesis related to $t$ (the significance of the path) and the amount out of the parenthesis is Beta coefficient. For the size of the set of goods two path coefficients were offered wherein the first relates to explicit part and the second relates to implicit part. The indirect effects between the advertisement frequency and price sensitivity through the consideration set size (explicit evaluation) equals to 0.189 and the direct amount is 0.162 ; and both of them are significant and from the total is 0.35 ; through implicit method the size of indirect effect, 0.187 and the amount of direct effect, 0.147 and both of them are significant.For the indirect effects to be significant the Boot strap method was applied which its results are shown in table 6.

Table 5.The indices associated with the model

|  | X ${ }^{2} / \mathrm{df}$ | GFI | AGFI | NFI | NNFI | TLI | CFI | IFI | PSI | RMSEA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Model (the size of explicit set) | 2/86 | 0/86 | 0/87 | 0/85 | 0/86 | 0/87 | 0/84 | 0/87 | 0/86 | 0/04 |
| Model (the size of implicit set) | 2/11 | 0/89 | 0/89 | 0/87 | 0/88 | 0/89 | 0/86 | 0/88 | 0/88 | 0/04 |

The model presented in figure 2 is given looking at standardized indices in table 5. For the explicit and implicit assessment two models have been offered all of them are suitable.

Table 6.Boot strap results for mediating paths of proposed model

| Path | Quantity | Boot | Direction | standard error of <br> measurement |
| :--- | :---: | :---: | :---: | :---: |
| The advertisement <br> frequency- The <br> consideration set <br> size- the price <br> Elasticity | $0 / 18$ | $0 / 18$ | $0 / 001$ |  |
| The advertisement <br> frequency- Relative <br> preference of the <br> good- the price <br> Elasticity |  |  | $0 / 03$ | Upper <br> Limit |
| Limit |  |  |  |  |

## DISCUSSION AND CONCLUSION

As proved in the findings when an advertisement is rendered with high frequency the consideration set size increases in the customers' minds which indicates the effect of advertisement on customers' mind model. In fact this effect was seen in both explicit and implicit memory. To put it another way, it is both consciously directed to the customers' awareness to the consideration set size and unconsciously they are in customers' minds. Moreover by increasing the advertisement frequency, the preference hierarchy between the goods are formed and by decreasing the frequency, the customers' preferences over the good decrease. It is clear that rendering the advertisement in the next stages causes differentiation of the good from the others which corresponds to the theory of operational conditioning in which more numbers of offering stimulus, the differentiation from the stimulus increases. These findings have important implications for industry owners and companies and for the researchers. About company principals this fact is very important that by increasing the advertisement rendering not only its effect doesn't decrease (e.g. through habituation or accustoming to stimulus) but also differentiating of stimulus is increased and is remained in the customers' minds, therefore broadcasting an advertisement with high frequency is advantageous for them. With regard to the price elasticity it was observed that the advertisement with high frequency, would increase the good's price elasticity and this is to some extent natural, since with increasing the rendering, the people are more careful in the way they pay for the good and compare the goods' features. On the contrary, the advertisement with high frequency would increase price elasticity. Because of that, it was observed that there is a significant positive relationship between the advertisement frequency and all these variables, while there is a negative relationship between elasticity and the good's preference which is natural, hence when the people believe that a specific good is better than others and attach to it, its value lose its importance for them and they are ready to pay for it whatever the price; in other words, with increasing the preference, its price elasticity would decrease (or price sensitivity would increase). This issue is frequently seen in Persian poetry wherein the poet whose sweetheart who is extremely loved by him is ready to pay all his wealth for her. In adjusting analysis of two variables, i.e. consideration setsize and the basis of good's relative preference, were applied as the adjusting variable. It was seen that whenthe consideration set size is small in the customer's mind model, the relationship between frequency and elasticity is more than the time it is large. Why? In a small consideration set size, each good has fewer competitors, so the relationship between the frequency and price elasticity would increase; because the goods have few competitors or they have no alternative and the advertisement plays the role of a sign which guides them to the suitable good, the price the customer pays is not much of importance. Opposite to it, in a large set of assumed goods, because every good has numerous competitors, the relationship between frequency and price elasticity would decrease and the good which is rendered more in the advertisement cannot affect the range of the customer's acceptance in buying a good and move the price elasticity. These results are both confirmed in evaluating implicit memory and the evaluation of explicit memory and the difference between the large and small consideration set size was significant. Therefore the managers of the companies which provide services should consider the effect of advertisement more serious when there are fewer competitor goods, and opposite to the common thought that considers advertisement effective in a large consideration, in a small consideration set size the relationship between the frequency and price elasticity is more. More preference is also effective in the relationship between frequency and price elasticity while in low preference it is not the case that is related to the stimulus differentiation. When the preference between the goods is low, the stimulus differentiation is low too, and in this condition the relationship between the frequency and price elasticity would decrease. The path analysis relationship was performed twice wherein the first was related to the explicit memory and the second to the implicit memory and in both models, the path analysis models had standard which showed that the advertisement affects the consideration set size on price sensitivity and the other mechanism affects price elasticity through relative good preference. The second mechanism on the contrary to the first one, which increases the price elasticity, decreases the price elasticity and in this manner, the advertisement has two opposite effects with each other on price elasticity. The next investigations to examine the mediating role of the consideration set size and the good's relative preference were conducted through the results of Boot Strap method. Here the direct effect was not significant and its indirect effect was significant and the Boot Strap analysis confirmed the mediating role in both cases. To put it another way, if the advertisement is effective on price elasticity, it occurs by way of these two variables; and the customer's mind model should be considered a combination of memory (conscious and unconscious)of the good and the relative preference between them. One of the implications of the present study is advising advertisement makers to design them in a way that can be recalled in the minds of customers and its relative benefits over the other goods be introduced. So the present study agrees with the findings of Oreyzi, Mortazavi (49) in which two decision making environments were related to two types of advertisement, that is, decision making according to the memory as an environment corresponding to recalling advertisement is in conformity with the decision making environment based on stimulus corresponding with differentiation making advertisement. However there is a difference here that in that study the price elasticity index was an objective index, price elasticity, while in the present study the price
elasticity was made according to the customer's perception from his preference hierarchy. The other advantage of the current study is that renders an example of mediating analysis in which the indirect effect is in the form of competitive mediating analysis. In fact, if both direct and indirect effects are both significant, it was before assumed that the kind of mediation achieved is the partial mediator. In fact Zhao, Lynchand Chen (1) proved that partial mediation is expressed in two competitive and complementary mediations which in competitive mediation, the multiplication of indirect path into direct path is negative. In the current study the effect of advertisement frequency through the severity of preferences on the price sensitivity is negative whereas, on the other hand, the consideration set appears as the complementary mediation. The findings indicate that the advertisement appears through two different and various forms of partial mediation which this kind of differentiation was not clear before.

## REFERENCES

1. Zhao, X , Lynch, J. G \& Chen, Q.(2010). "Reconsidering Baron and Kenny: Myths and Truth about mediation analysis". Journal of Consumer Research. 37: 197-206.
2. Mitra, A. John, G and Lynch, JR. (1995)." Toward a reconciliation of market power and information theories of advertising effects on price elasticity," Journal of Consumer research, 21: 644-659.
3. Northop, T, Mulligan, N. (2013). "Conceptual implicit memory in advertising research". Applied Cognitive Psychology, 27: 127-136.
4. Tellis, G. J.(2004). Effective advertising: Understanding when, how and why advertising works. Thousand Oaks, CA, USA: Sage Publications.
5. Tellis, G. J., \&Tellis, K.(2009). A critical review and synthesis of research on advertising in a recession. Journal of Advertising Research, 49: 304-327.
6. Ivan, P, Lehman, D .(1999). Managerial Economics, Blackwell Publishing Ltd.
7. HoseiniPakdehi, A. (2002).The basics of satisfaction and promotion. Tehran: An pub(center of programming and educating human resources).
8. Grimes, A.(2008). Towards an integrated model of low attention advertising effects: A perceptual-conceptual framework. European Journal of Marketing, 42: 69-86.
9. Bain, Joseph S. (1956). Barriers to new competition: their character and consequences in manufacturing industries, Harvard University press.
10. Comanor and Thomas A. Wilson. (1979), " The effects of advertising on competition: A survey, " Journal of economic literature, Volume 17:453-476.
11. Erdem, T.,Keane, M \&Sun, B. (2008). The impact of advertising on consumer price sensitivity in experience goods markets. Journal of Quant Market Econ. 6:139-176.
12. Bazan, A. (2003). What is cinema? Translated by Shahba, M. Tehran: Hermes
13. Herman, J., Walliser, B., Kacha, M.(2011). Consumer consideration of sponsor brands they do not remember: Taking a wider look at the memorization effects of sponsorship. International Journal of Advertising, 30: 259-281.
14. Yang, M., \&Roskos-Ewoldsen, D. R.(2007). The effectiveness of brand placements in the movies: Levels of placements, explicit and implicit memory, and brand-choice behavior. Journal of communication, 57: 469489.
15. Mulligan, N. W. (2004). Memory: Implicit versus explicit. In L. Nadel (Ed.), Encyclopedia of cognitive science: Nature Publishing Group.
16. Elrod, Terry and Russell S. Winer.(1982). An empirical evaluation of aggregation approaches for developing market segments. Journal of marketing , 46: 65-74.
17. Lakshman, K and S .P.Raj.(1985)," The effect of advertising on consumer price sensitivity," Journal of marketing research, Volume 22: 119-129.
18. Horner, A. J., \& Henson, R. N.(2008). Priming, Response learning and repetition suppression.Neuropsychologia, 46:1979-1991.
19. Rios, R., and Riquelme, H.E. (2008). "Brand equity for online companies", Journal of Intelligence \& Planning, 26: 719-742.
20. Bowen, H.T., and Chen, S.L. (2007). "The relationship between customer loyalty and customer satisfaction", International Journal of Contemporary Hospitality Management: 213-217.
21. Yoo, B. (2008). "Cross-national invariance of the effect of personal collectivistic orientation on brand loyalty and equity", Asia Pacific Journal of Marketing and Logistics, 21: 41-57.
22. Lee, S.F., Tsai, y. C., Wen-Jang J. (2006). "An empirical examination of customer perception of mobile advertising" Information resource management Journal.
23. Alba, Joseph W. and chattopadhyay, A.(1986), " Salience effects in brand recall", Journal of marketing research, 23(November),363-369.
24. Howard, A. and Sheth,J. N .(1969), The Theory Of Buyer Behavior, New York: John Wiley.
25. Parkinson, T. L. and Reilly, M. (1979), "An Information Processing Approach to Evoked Set Formation, "in Advances in Consumer Research, 6: 227-231.
26. Hauser, R and Wernerfelt, B. (1990), "An evaluation cost model of evoked sets, "Journal of consumer research, 16: 393-408.
27. Srinivasan, S., Vanhuele, M., \&Pauwels, K. (2010). Do mind-set metrics explain brand sales? Journal of Marketing Research, 47:672-684.
28. Pratkanis, A. Aronson, E. (2000). The advertisement age: use and abuse of satisfaction, translated by SeyedEmami, K \&Abbasi, M.S. Tehran: Soroush.
29. Stigler, George. (1961), "The Economics of information," Journal of political economy,69: 213-225.
30. Telser, Lester G.(1964)," Advertising and competition," Journal of political Economy, 72: 537-562.
31. Nelson, H. (1974), "Advertising as information ", Journal of political economy, 81: 729-745.
32. Nelson, H. (1970). "Information and consumer behavior."Journal of Political Economy, 78:311-329.
33. Grossman, G., \& Shapiro, C. (1984). "Informative advertising with differentiated products.Review of Economic Studies, 51: 63-81.
34. Naik, P. A., Prasad, A., \&Sethi, S. P. (2008). Building brand awareness in dynamic oligopoly markets.Management Science, 54: 129-138.
35. Hakim Ara, MA. (2005). Satisfactory communications and promotion. Tehran: SAMT pub.
36. Katler, Ph. Peforch, V.(2010). Management of industrial brands: translated by Heidarzade, K. Tehran: SITE pub.
37. Boo, S., Busser, J., and Baloglu. (2009). "A model of customer-based brand equity and its application to multiple destinations", Journal of Tourism Management: 219-231.
38. Khorshidi, Gh. (1993). Economical discourses: $2^{\text {nd }}$ edition, Etelaat pub. $1^{\text {st }}$ print.
39. Kotler, P., Bowen, J., \&Makens, J. (2006). Marketing for hospitality and tourism., NJ: Prentice Hall.
40. O’Connor, P. (2003). On-line pricing: An analysis of hotel-company practices. Cornell Hotel and Restaurant Administration Quarterly, 44: 88-96.
41. Shoemaker, S., Lewis, R., \&Yesawich, P. (2006). Marketing leadership in hospitality and tourism, NJ: Prentice Hall.
42. Raab,C\&Mayer,K.\&Kim,S and Shoemaker,S.(2009). Price-Sensitivity Measurement: a Tool for Restaurant Menu Pricing. Journal of Hospitality \& Tourism Research, 33: 93.
43. Gijensberg, M.J., Van Heerde,H.J.,Dekimpe,M.G, Steenkamp,J.B.E.M. (2009). Advertising and priceeffectiveness over the business cycle. department of marketing and organisation studies.
44. Belch, G. E. and Belch, M. A. (1990), Introduction to advertising and promotion management, Homewood, IL: Irwin.
45. Yang, Jinchao, Mizerski, Dick, Lee, Alvin, Liu, Fang, Olaru, Doina and Chua, Hui Min. (2010)."Using brand knowledge to predict beer brand preference and loyalty for samples of new frequent users in Perth and Beijing," Journal of Marketing Academy Conference.
46. Ahmed, Alamro, Jennifer and Rowley, (2011) "Antecedents of brand preference for mobile Telecommunications services", Journal of Product \& Brand Management, Volume. 20: 475 - 486.
47. Deborah, T, Francis, L. (2013) "Branded product placement and pre-teenaged consumers: Influence on brand preference and choice," Young Consumers: Insight and Ideas for Responsible Marketers.
48. Oreyzi, H.R, Mortazavi,N. (2013). Interaction effect of advertisement and decision environment on consumer mental model considering price sensitivity and consideration set size, sent to the journal of Contemporary psychology.

[^0]:    ＂Corresponding Author：Dr Hamid Reza Oreyzi，Associate Professor，Faculty Member in Isfahan University，Hezar Jaribst，Isfahan University，Isfahan，the school of Educational Sciences and Psychology， 09132897637－narsis＿nm68＠yahoo．com

