

Construction and Research of Self-choosing & Fee-paid Advertising Model

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Abstract

The traditional modes of advertisement are usually unproductive with huge input. And consumers are often forced to watch ads that are not useful to them. This paper provides a new way of advertising to improve both the producers' and consumers' utility. The new mode allows audience to choose the ads that they think are attractive or useful to them. And consumers will get paid after watching an ad. The new mode is more effective in promoting products compared to old ones, which is also helpful to the producers.

Keywords: Advertising Model, Self-choosing, Fee-paid, Utility

1. Introduction

In the past century, different types of traditional media such as newspapers, magazines, television and radio were used to deliver messages and attract customers' attention. However web advertisement has clearly become a mainstream medium and one that can no longer be ignored as a critical piece of any marketing mix due to its low cost and more precise interaction (Ya-Li Lin, Ya-Wen Chen, 2008). According to a survey conducted by iResearch, the market size of web advertisement reached RMB20.61 billion in 2009, and saw year-on-year rises of 21.2%. In the next few years, the industry will continue to maintain the annual growth rate of more than 60%. The market size re-

sults reported for year 2009 confirmed a healthy environment for Web advertising, for both direct marketers seeking immediate performance results, as well as brand advertisers looking to create or strengthen an image, product or service.

However, the online advertising, as well as other traditional modes of advertisement, pours the ads to consumers violently. That means consumers are in a passive position when receiving the ads. For traditional media such as television and newspaper, it is impossible to create an active environment for consumers. The utility of customers will be decreased if they are forced to see ads that they take no interest in. In other words, lots of the information that ads deliver is inefficient and bring deadweight loss to the whole society. Is just repeating the information the best choice for advertisers? Should the customers get paid if they accept the ads passively?

We know that online advertising has many new characteristics and we wonder if with some new incentives, for example, money, the active advertising environment can be realized on the Internet. The aim of our study is to explore the model for active advertising mode on the Internet. We want to determine whether money compensation, the feeling of self-choosing and the attraction of the mode itself have a distinct impact in this active advertising mode on the Internet

2. Literature review

2.1. Advertisement processing model

Through the history of advertising research, several different models have been developed to explain how advertisement works in various situations. The main models include market response model, intermediate effect model, pure affect model, hierarchy effect model and hierarchy-free model.

In this research, we build our model based on some conclusions of previous researches and models.

2.2. Factors affecting the effect of ads

The factors that have a significant influence on the effect of advertising can be divided into three categories; advertisement factors, environmental factors, and audience factors.

2.2.1. Advertisement factors

2.2.1.1 Design factors

Design factors are related to the question of how to design the advertisement effectively. They include the size of the advertisement, use of color, music/sound effects, and presence of animation and length of the commercial.

2.2.1.2 Content

Content is mainly about the storyline and presentation of the message. The content of the advertisement can be divided into two groups, cognitive one and affective one, according to the relative focus to which the message appeals.

2.2.1.3 Media

Researchers have showed that the attitude towards the media of advertisement has a distinct effect on the efficiency of the advertisement (Cho 2003). For example, compared with e-mailed advertisement, people tend to believe the TV commercials, although the contents of the advertisement are the same.

2.2.2. Environment

2.2.2.1 Context and distracter

The context of the advertisement and distracters in its surroundings has been considered as a primary environmental factor. Many studies deal with the effect of context in web banner advertising. The majority of them show that the complexity of the website and background is an important factor in banner-style web ads (Danaher and Mullarkey 2003). In addition, the environment in which the advertisement is presented has been found to work as a distracter.

2.2.2.2 Exposure time and repetition

Several studies show that the recall rate increases as the exposure time increases. For the web banner advertisement, web page exposure duration makes a significant influence on the recall and recognition of an advertisement (Mayer and Moreno 2002, Danaher and Mullarkey 2003). Repetition of the advertisement was found to be positively related to the rate of recall. When an advertisement is first launched, the effectiveness increases as the number of repetitions increases. After a number of repetitions, however, the effect of the advertisement is saturated and subsequently starts to decrease after the repetition exceeds a certain point.

2.2.3. Audience factors

2.2.3.1 Experience and attitude

The exposure to advertisements, together with real experience, tends to build the attitude of consumers, which can be reinforced or weakened over time.

The attitude of consumers is divided into attitude to brand, advertising media and the advertisement itself.

The integrated web advertising attitude model was developed based on the premise that the perceived entertainment, informativeness, irritation and credibility of an advertisement affect the consumer's attitude (Brackett and Carr 2001). Be-

sides, it is widely believed that attitude will influence purchase intent.

2.2.3.2 Involvement

Involvement was defined in terms of the number of personal connections between the stimulus and the viewer. According to the level of involvement, the process of receiving information in advertisements is quite different (Krugman et al. 1995). When audiences are highly involved with a product, they tend to be very receptive to most information related to it and pay more attention to the content of the ad (Bloch et al. 1986, Houston 1979).

2.3. Self-choosing & fee-paid advertising model

To analyze and realize the active environment of advertising, we add two main features into the previous models. And we call this model the self-choosing and fee-paid advertising model. Self-choosing means consumer is free in choosing advertisement and is at an active position, while fee-paid means for each advertisement the consumer looks at, he or she can

receive a certain amount of money from the company who issues the advertisement.

Combining previous researches, the work of Petty (1981), Cacioppo (1983), Vakratsas and Tim (1999), and the two new elements, we build the following model (Figure1).

This model can be divided into three categories; advertisement factors, environmental factors, and audience factors. The first group of factors is related to the advertisement itself. These parts contain five elements: design factors, content, media, fee-paid and advertising mode. The first three factors are derived from previous researches. Fee-paid is treated as compensation to consumers. Though the amount of the fee may be small, but this compensation may delight the consumers a lot, thus affecting the affect perception of the consumers. Besides, we think that this mode itself can attract consumers, so we put advertising mode as an important fact in advertisement factor.

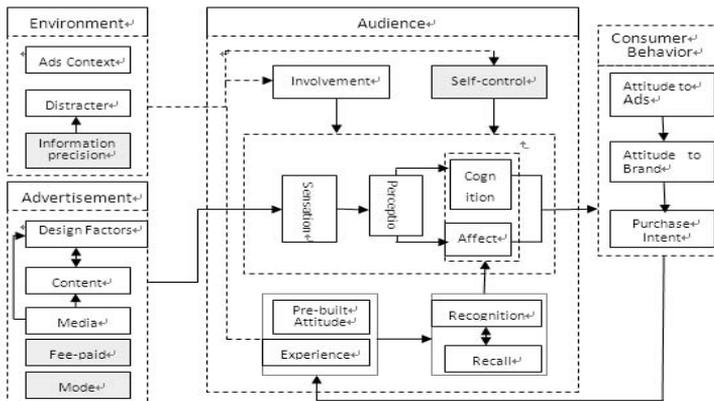


Fig. 1: Conceptual framework for self-choosing and fee-paid advertising model.

The second category is related to environment, within which the advertisement is presented. According to the literature review, the environment element contains

ads context, distracter, exposure time and repetition. In the new mode, consumers make their own decision to choose the advertisement, so the impact of exposure

time and repetition can be omitted. Here we add information precision.

Because the consumers should focus on the advertisement so as to make their choice and ensure precision, they will move their attention

From the complex background, weakening the distracter's effect and thus improving consumers' attitude towards the advertisement.

The third group is related to the audience. It is very hard to estimate the effect of an advertisement on an individual because information processing of a person varies widely according to one's own experiences, attitude and many other characteristics. Advertising is perceived as a stimulus in the sensation stage. The design factors of an advertisement are most influential in this stage. Multi-model stimulus also plays a role in this stage. The contents of the advertisement then have an effect in the perception stage. Sensory input builds a perceived image and it works as a cue for retrieving memories stored in the long-term memory. Also the perceived image is recognized as a message, that is, an advertisement. The attitude and experience of audiences have an effect on the recall of the advertisement through the long-term memory. In our model, we think that the sense of self-control will give consumers a good impression at the first stage and then influence the perception process.

From the modal we can forecast that our new online advertising mode can improve advertising efficiency through advertising mode, fee-paid, information precision and self-control.

3. Study of consumer

3.1. Analysis of consumer utility

3.1.1. Model of questionnaire

We abstract information precision, advertising mode, self-efficacy, fee-paid from self-choosing and fee-paid platform, in order to conduct quantitative analysis on consumer attitude.

3.1.2. Model assumption

Information precision:

There are differences between information that an ad wants to convey and that consumer actually receives. This index measures the degree of information received by consumers.

According to Hierarchy effect models, the understanding of the product can enhance rational cognitive process cognitive information model (Lavidge and Steiner 1961). Besides, the increase of involvement can advance the message processing of consumers. Advertisements of information matching are often ones that the consumer knows or wants to know, so it can increase rational cognition or involvement or both, and finally improve the consumer's likeability towards advertisement. So

Assumption 1: information precision of an advertisement is positively correlated with consumer attitude.

Assumption 2: information precision of an advertisement is positively correlated with consumer purchase intention.

Advertising mode:

Advertising mode includes pop-up, interstitial, etc. Different models have different attraction for consumers.

According to pure affect models, the attitude of consumers towards an advertisement is affected by emotion of advertising feelings, emotions and familiarities (Aaker et al. 1986, Batra and Ray 1986).

An attractive advertising mode can increase the positive opinion of consumers towards the advertisement, and then increase likeability. So

Assumption 3: attraction of advertising mode is positively correlated with consumer attitude,

Assumption 4: attraction of advertising mode is positively correlated with consumer purchase intention.

Self-efficacy:

It is a degree that measures the free right of consumer choosing advertisement. Under the model of passively accepting advertising model, consumers have low self-efficacy.

As described in the self-choosing and fee-paid advertising model, environmental factors mainly include ad context and distracters. Self-efficacy can concentrate consumer’s attention effectively. Therefore the influence of distracter is minimized. Involvement increases with this process. So does likeability. So

Assumption 5: customer’s self-efficacy is positively correlated with consumer attitude.

Assumption 6: customer’s self-efficacy is positively correlated with consumer purchase intention.

Fee-paid:

As described in the self-choosing and fee-paid advertising model, compensation can bring satisfaction and happiness to consumers, and positively improve consumers’ emotion toward the advertisement. Thus it increases consumer attitude towards advertisement. So

Assumption 7: fees compensated to consumers for their deadweight loss is positively correlated with consumer attitude.

Assumption 8: fees compensated to consumers for their deadweight loss positively correlated with consumer purchase intention.

3.1.3. Form of questionnaire

Based on these four factors, we design a questionnaire on consumer utility. This scale questionnaire includes 25 questions, adopting 5points likert, in order to compare consumer attitudes towards the old and new advertising models. There were 1107 questionnaires submitted, 823 of which were usable.

3.1.4. Results Analysis

3.1.4.1 “Degree of Content” as the dependent variable

Model	Standardized	t	Sig.
	Coefficients		
	Beta		
(Constant)		10.047	.000
Factor1	.194	5.349	.000
Factor2	.189	5.202	.000
Factor3	.045	1.409	.159
Factor4	.265	8.314	.000

Table1: Coefficients Results (Dependent Variable: Content).

The result of the regression is that (after standardization):

$$\text{Content} = 0.194 * \text{information precision} + 0.189 * \text{mode} + 0.045 * \text{self-efficacy} + 0.265 * \text{fee-paid}$$

The t-tests investigating the null hypothesis that each of the coefficients is equal to zero shows that the fee-paid, information precision, mode contributes significantly to the degree of content. However, we reject the hypothesis in that the coefficient of self-efficacy equals 0.

Fee-paid is the most important factor affecting the degree of content. Information precision and mode of ad also affect the degree of content to some extent. The effect of self-efficacy is minor.

The equation implies that if consumers get paid when they watch ads, they will

be more satisfied. And if the ad is more useful or more attractive to them, they will also feel happier or less bothered.

3.1.4.2 “Purchase Intention” as the dependent variable

Model	Standardized Coefficients	t	Sig.
	Beta		
(Constant)		5.458	.000
Factor1	.220	6.050	.000
Factor2	.277	7.590	.000
Factor3	.012	.383	.702
Factor4	.121	3.789	.000

Table 2: Coefficients Results (Dependent Variable: Buy).

The result of the regression is that (after standardization):

$$\text{Purchase} = 0.220 * \text{information precision} + 0.277 * \text{mode} + 0.012 * \text{self-efficacy} + 0.121 * \text{fee-paid}$$

The t-tests investigating the null hypothesis that each of the coefficients is equal to zero shows fee-paid, information precision, mode contributes significantly to the degree of content. However, we cannot reject the hypothesis that the coefficient of self-efficacy equals 0.

The mode of the advertisement is the most important factor affecting the purchase intention. Information precision and fee-paid affect purchase intention to some extent. Similar to the previous part, self-efficacy is a minor factor.

The result implies that the mode of the ad, in other words, the way the information reaches the audience, plays an important role. The more violently the ad reaches the audience, the less satisfied they will be.

3.1.4.3 Review of the hypothesis

Hypothesis	Result
H1: The matching degree of the info is positively related to degree of content	Support
H2: The matching degree of the info is positively related to purchase intention	Support
H3: The attraction of the model of ad is positively related to degree of content	Support
H4: The attraction of the model of ad is positively related to purchase intention	Support
H5: Self-efficacy is positively related to degree of content	Reject
H6: Self-efficacy is positively related to purchase intention	Reject
H7: Compensation is positively related to degree of content	Support
H8: Compensation is positively related to purchase intention	Support

Table 3: Research hypothesis.

3.1.4.4 Analysis

1. Degree of content

In the case where “degree of content” is the dependent variable, the result of the regression shows that fee-paid is the most important factor. From this we can see that the traditional ad models decrease consumers’ utility without compensation, and will have a negative effect on the promotion. The new model takes compensation into consideration and will improve consumers’ degree of content, adding strength to the promotion of the products.

With regard to the degree of information precision and the ad mode, the traditional modes don’t do well in both aspects, either. By improving the two factors, the new mode will bring better promotion with lower input.

2. Purchase intention

The regression demonstrates that the ad mode has the highest weight in the four factors. With a more attractive form of promotion, the new mode will affect the consumers' purchase intention positively.

Information precision and fee-paid are also significantly positively related to purchase intention. Compared to the old modes, the new mode will improve the matching between consumers' needs and ads. This way, the increased accuracy and attractiveness can stimulate higher consumption of the products promoted.

3.2. Consumer behavior experiment

3.2.1. Test participants positioning

The participants are young people between 16 and 25 years old, mostly college students.

There are two reasons for such sampling. Firstly, previous investigations show that young people aged between 18 and 24 account for highest proportion of netizens, making up 37.7%, followed by people aged between 25 and 30 (17.4%), and teenagers under 18 (15.8%). So we can focus on Young netizens who are the main force of Chinese Internet users. Secondly, young people are regarded as a positive recipient population of online advertising. They have more touch on different types of online advertisements. For the above two main reasons, we concentrated on this group as our participants.

The survey was left open for a month and over 1000 visits were logged in during that period. Of the 400 questionnaires submitted, 364 were usable, which represents a 91% valid rate in traditional survey terminology. To satisfy basic assumptions of statistical techniques and to avoid other problems caused by unequal cell sizes, we combined three experimental groups and calculated weighted average results for different dimensions.

3.2.2. Selection of stimulus

The reasons why we chose a beverage advertisement as the behavior stimulus are as follows.

1. The competition of the beverage industry is so fierce that the influence of brand bias, consumer expectation and other interference factors can be limited to a low extent.

2. Data from iResearch indicates that in beverage industry, "young people are more easily affected by external factors than old people". As our participants are young people, the various responses to stimulus can be more obvious.

Taking these reasons into consideration, we chose the advertisement "President Orange Juice" for the experiment.

3.2.3. Experiment process

We randomly divided the participants into four groups (G1-G4) with each group assigned to a specific situation (S1-S4).

Group 1 (S1) is the control group. It is a simulation of the current advertising model, i.e. the passively accepted advertising model. Each participant firstly watches a video and then answers a questionnaire. There is an advertisement break in the middle of the video.

Groups 2, 3 and 4 (S2, S3, S4) are experimental groups. Participants are told that they have the right to choose whether or not to watch an advertisement while those chose yes can get reward (0.05 yuan per ad in S2, 0.1 yuan in S3, 0.15 yuan in S4). Every participant is required to answer a questionnaire after they make the choice (and watch the advertisement). The questionnaires are designed respectively for different situations. The questions of questionnaires measures participants' response from two dimensions: Attitude (Question1,3,4) and Behavior (Question2,5,6).

3.2.4. Result Analysis

"Attitude" dimension t-test: paired observations		
	Controlled group	Experimental group
Mean	3.144444	4.637037
Std.dev	1.618102	1.275017
Hypothesized value	0	
df	89	
t Stat	-8.83729	
P(T<=t) (two-tailed)	8.16E-14	

Table 4: T-Test Result of "Attitude".

"Behavior" dimension t-test: paired observations		
	Controlled group	Experimental group
Mean	2.988889	4.122222
Std.dev	1.269538	1.316979
Hypothesized value	0	
df	89	
t Stat	-7.13357	
P(T<=t) (two-tailed)	2.5E-10	

Table 5: T-Test Result of "Behavior".

From the t-test statistics, we can see a significant difference between the control group and the experimental groups. The subjects in experimental group give more positive reactions to the ad than the other group.

The results of the experiment are consistent with the predictions of our model. The conclusion that the new mode can improve the consumers' degree of content and promote consumption is further supported.

4. Study of Company

4.1. Questionnaire about company attitude

The self-choosing and fee-paid advertising platform increases variable cost of companies, so feasibility of new model is tied to company attitude. We design questionnaire to test the attitude of companies towards old and new advertising model.

Questions are all multiple-choices, including current advertising forms, advertising cost, attitudes towards current TV commercials and on-line advertising, as well as attitudes and reasons towards self-choosing and fee-paid advertising. A total of 38 usable responses were received out of an eligible sample of 40, representing a 95% response rate. Subjects are EMBA from School of Economics and Management, Tsinghua University, who represent their companies to fill in the questionnaire.

4.2. Conclusion

As for attitudes towards online advertising, 26.3% companies think it of low cost. On comparison, 52.6% companies think that the cost of tradition advertising is high. Besides, 42.1% companies believe they should increase input for online advertising, due to its broad market and prospective future.

As for new advertising model we discuss in this paper, 53.3% companies show interest of the model, while 56.8% of the platform. The reason is that they regard the new model as a way to increase the accuracy of information and the participation of consumers.

Some companies are concerned about the new model for the following reasons.

Practicability: some companies think consumers can only accept advertising information passively. If consumers really want to know a product, they can visit its official website or use search engine.

Fraudulence: some companies think there are technology problems for the implement of fee-paid. It's hard to avoid fraudulence caused by repeated click without purpose. Besides, paying process is not mature enough, problems like how to pay and manage safely remained to be solved.

Considering that our study only comes up with an idea and doesn't structure a specific platform, the concern of practicability and fraudulence is beyond the scope of this essay. If we do not take practicability and fraudulence into account, the support level for new advertising model and platform increase to 73.0%.

In conclusion, the idea of self-choosing and fee-paid advertising model is welcomed by most companies. However, there are still some technology problems to be solved, which are key factors for the model to go real.

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