The Impact of Advertising Visibility on Consumers' Online Impulse Buying Behavior

Zijie Chen [1] , Rosita Binti Mohd Tajuddin , Jing Deng and Benhui Ren
College of Creative Arts, University Technology Mara (UiTM), 40450 Shah Alam, Malaysia

Abstract. With the popularization of online shopping, more and more advertisements are being placed on online shopping platforms. The impact of advertisements on consumers' online impulsive buying behavior has attracted much attention, and the phenomenon of consumers making online impulsive purchases is becoming more and more common. This field has become a hot research topic for scholars. This article aims to summarize the connotation of visible advertising, summarize indicators of consumer online impulse buying behavior, compare and analyze the impact of visible advertising on consumer online impulse buying behavior, and provide management decision-making reference for advertisers and e-commerce platforms.

Keywords. Online shopping, Advertising visibility, Impulsive buying behavior

1. Introduction

Impulsive buying is caused by a sudden desire to purchase, usually without a detailed purchase plan in advance, without considering long-term needs, and is an irrational behavior [1]. In the process of impulsive purchasing, consumers tend to focus their attention on the advantages of the product and overlook its drawbacks, resulting in the inability to objectively recognize and evaluate the product's attributes [2]. In impulse buying, there are many conflicting considerations. Impulsive buying refers to consumers who make purchases without a plan and cannot avoid it [3]. After being stimulated by the external environment, consumers ignite a strong and uncontrollable desire to purchase, which is a purchasing behavior that occurs as self-control weakens [4]. In addition, it may also be affected by advertising visibility, as advances in information technology and the rapid development of e-commerce have led to a shift from offline to online purchasing behavior. Transforming consumers to meet their daily needs through online shopping [5]. Therefore, this opens up opportunities for traders in the market to meet consumer shopping needs through online systems without having to go to the market location [5]. Every company must adjust its marketing strategy by entering online systems to sell its products [6]. Nowadays, online impulse buying is increasingly becoming a trend. It is estimated that approximately 40% of online consumer spending

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[1] Corresponding author, Zijie Chen, College of Creative Arts, University Technology Mara (UiTM), 40450 Shah Alam, Malaysia; E-mail: huang87956673@163.com.

is caused by impulsive online purchases [7]. Online impulse buying is a sudden, immediate, and unplanned behavior of consumers online [8]. It can be concluded that online shopping is an increasingly growing trend today, especially impulse buying. Therefore, with the rapid competition between online stores today, ideal online marketers need to consider the factors that affect consumers' online shopping. One factor to consider is advertising visibility. This study suggests that the effectiveness of advertising and brand awareness has a direct positive and meaningful impact on purchase intention [9]. Social media marketing and advertising effects indirectly have a positive and significant impact on brand awareness purchasing intentions.

2. Analysis of current research status

2.1. *Analysis of Research on Visible Advertising*

Advertising visibility is an important component of measuring the effectiveness of display advertising. Advertisements on e-commerce platform web pages are not seen by consumers on the internet, and invisible or only partially visible advertisements do not have the opportunity to reach consumers, which will lead to ineffective advertising placement. Therefore, an increasing number of advertisements mainly seek to evaluate the value of displayed advertisements from the perspective of whether they are visible, and hope to pay only through visible exposure, rather than web page access requests for exposure. Advertisers are also beginning to try to measure whether the advertisements they display are visible.

The industry average reported by ComScore in 2013 was 54% of online advertising that is invisible, while Google's average by media is 50.2%. After intense discussions and experiments in mature foreign markets, in 2014, The Media Rating Council (MRC), in collaboration with the Interactive Advertising Bureau (IAB) of the United States, has jointly released the industry's advertising visibility measurement standards [10]: "For PC display advertisements, display at least 50% pixels in the visual area and display at least 1 second, especially for video advertisements, the display time is set to at least 2 seconds. The standards proposed by MRC have been understood and recognized by mainstream internet advertising platforms.

With the increasing attention paid to advertising in the industry, domestic and foreign scholars have also published some literature on technology. Zhang Weinan and others conducted empirical research on the measurement of visible exposure in display advertisements [11]. Usually, when an advertisement is loaded into a browser's webpage, it is considered an advertisement exposure. The article measures and determines the precise exposure times of displayed advertisements from two dimensions: the percentage of displayed pixels and the exposure time. It is concluded that more than 75% of displayed advertisements are displayed, and the display duration is at least 2 consecutive seconds, which can be considered as visible exposure. Wang Chong and others proposed collecting data from the media side to study the visual prediction of users' scrolling depth on the page, that is, there may be advertisements at the scrolling position of the page, which can predict the visibility of advertisements [12]. This article proposes two new models to predict the visibility probability under specific surface depths and verifies their advantages compared to other models. Bounie David and others conducted a comprehensive economic analysis of online advertising revenue after the use of visual technology. They discussed the impact of visual technology on advertising display,

advertising prices, media revenue, and user experience [13]. Xie Xing and others introduced the process of image advertising platforms for image search and image upload. This platform can set different weights for images or image hotspots, and combine them with the platform's advertising library for advertising matching or bidding [14].

In addition, advertisers envision the practical use of visual display advertising: for example, visible exposure serves as the basis for purchasing in display advertising purchasing activities; Alternatively, by measuring the visibility of media advertising space, optimizing page layout design to balance advertising revenue and user experience; The data related to display advertising visibility is applied to the real-time advertising bidding process, which means that for exposure with high visibility, higher bids can be made [15]. However, ultimately, the importance of display advertising lies in its feasibility. Google refers to the standard of measuring whether displayed advertisements are actually viewed as "visible", increasing its visibility as the universal currency for advertising purchases, and making some progress in its business processes [16]. Since Google launched a visual based advertising purchasing service in its display advertising network, it has become an important factor for advertisers and advertising agencies to purchase advertisements.

At present, there is relatively little research on advertising visibility in the Chinese market. Only a few advertising platforms in the advertising ecosystem provide visibility measurement data, and due to differences in measurement methods, visibility data lacks transparency. The use of visible exposure as a delivery indicator has not yet formed a unified understanding, so it is necessary to introduce foreign theories and research results, in order to trigger further research and practical applications in different situations.

2.2. Analysis of Research on Impulsive Buying Behavior

Hawkins Stern's impulse buying theory, named after its proposer, Hawkins Stern, was proposed in 1962. This theory provides a different perspective on consumer purchasing behavior from most contemporary consumer behavior theories. Stern claims that customers' impulsive buying behavior is caused by external influences. According to this theory, marketers may persuade customers to purchase more products than they expected [17]. A recent survey targeting American customers found that 80% of respondents made impulsive purchases online, confirming previous findings [18]. Digital marketers are skillfully blending technology with their marketing goals to induce spontaneous purchases by the target audience [19]. Impulsive buying is a complex consumer behavior. In this process, consumers often make sudden decisions due to the attractiveness of external things. Due to strong sudden attraction, consumers often lack detailed and repetitive thinking in the decision-making process, often making quick and temporary decisions with strong impulsiveness. Cobb and Hoyer found that when consumers do not have a clear purchasing awareness, impulse buying is usually a temporary decision made by consumers [20]. Rook believes that impulsive buying behavior is caused by fluctuations in consumer emotions, which is usually a form of uncontrollable behavior. From the perspective of psychology, the impulsive purchasing behavior of consumers can be divided into two aspects: psychological impulse and impulsive behavior [21]. Wood found that impulse buying is mainly due to consumers lacking a certain degree of willpower. He believes that impulse buying generally includes two forms: free choice of purchasing behavior but lack of optimal judgment; Another type is compulsive impulse buying caused by compulsive will [22]. Therefore, this theory supports the impact of advertising visibility on customer impulse buying behavior.

The online impulse buying behavior of consumers may be caused by changes in external factors, thereby stimulating their emotions. Ning and others constructed a factor model for the impulse buying intention of online group buying consumers. Through questionnaire surveys and data analysis, it was concluded that consumer impulse buying has a positive impact on product characteristics, store environment, and consumer personality traits [23]. Li Yun studied the influencing factors of college students' impulse buying intention in the online purchasing environment, divided the environmental factors that promote college students' impulse buying into internal and external parts, and constructed corresponding theoretical models. The research results indicate that college students' personality traits, multi effect interactions, and diversity with the external world are more likely to encourage consumers to engage in impulsive consumption; The external factors of websites as shopping channels will not affect consumers' impulsive consumption [24]. Li Yifan conducted a study on impulsive consumption through online promotion methods. During the research process, we found that product factors, external environmental factors, individual characteristics of consumers, and consumption scenarios all affect consumers' impulsive purchasing behavior. Through a questionnaire survey of college students, it was found that promotional activities such as special offers, discounts, special offers, and lotteries have a positive impact on consumers' impulsive purchasing behavior [25]. Zhao and others explored the behavioral mechanism of consumers' online impulse buying. His research suggests that consumers' online impulse buying is influenced visually by website design, and product descriptions, website navigation, and visual display design of online stores can promote consumers' impulse buying [26]. Gan Xueping studied the impact of social media on consumers' impulse buying intention. Based on the influence of social media, it decomposes social media into six main influencing factors. Through empirical data research, social media has a positive impact on consumers' impulse buying intention through their perceived value. Research on consumer impulse buying behavior has shown that consumers' product characteristics, interests, attractiveness, interaction, and personal characteristics all affect their impulse buying intentions [27]. Gong and others studied the impact of online live streaming atmosphere on consumers' impulse consumption intention and found that atmosphere cues have a significant positive impact on impulse consumption intention; The atmosphere cues have a significant positive impact on the flow experience; The mobile experience has a positive impact on impulsive consumption intention[28].

3. Summary

Based on the above research analysis and summary, this article proposes certain marketing suggestions for e-commerce platforms and merchants, mainly in the following aspects:

Develop flexible and diverse online marketing strategies. Related studies have shown that product characteristics and store environment have a positive impact on consumers' impulsive purchase intention. Most consumers see advertisements and pages related to product features during online shopping, which stimulate their emotions and form impulsive purchasing behavior. Therefore, increasing the visibility of product features and store environment advertisements can attract more consumers' attention. On the other hand, in addition to increasing the visibility of regular discount advertisements during regular time periods, it is also possible to increase the visibility of event advertisements such as giving small gifts, sending coupons, and full discounts. In

addition, centralized advertising promotion activities will be carried out in conjunction with specific festivals, such as the Double Eleven and Double Twelve Shopping Carnival, Spring Festival, Christmas, etc. On the other hand, combined with the popular online shopping live streaming as a means of communication, visual marketing stimulation is added to create a sense of integration and experience for consumers. During live streaming, advertising arrangements should be concise, paired with warm colors to create a sense of comfort and generate more positive emotions.

Increase the visibility of interactive advertising in online shopping. The latest research has found that when consumers perceive high interactivity, it can lead to higher impulse buying intentions. Firstly, the page design of online shopping platforms should be hierarchical and easy to operate. Display and display information such as product types and promotional activities, in order to enable consumers to quickly and conveniently find the products they need. Secondly, when consumers watch interactive advertisements, businesses should respond quickly and form an effective interactive environment. In some online shopping platforms with high traffic, interactive advertising has high visibility, and consumers can interact more with merchants. Sometimes, questions raised by merchants are answered in a timely manner, which can improve the shopping experience of consumers. At the same time, combining the enthusiastic attitude and sincere expression of the host in modern live streaming can enhance consumers' liking for them. Finally, interactive advertising should have the function of providing personalized services, paying attention to consumers' needs, and then providing appropriate products based on their needs, so that consumers feel sufficient respect and attention.

Segmenting the characteristics of consumers and implementing differentiation strategies. Based on relevant research, it has been found that when consumers have high impulsive traits, they are more likely to be motivated to develop impulsive purchasing intentions and further transform into impulsive purchasing behavior. Therefore, enterprises should enhance their attention recognition and understanding of these consumers' purchasing preferences and habits. Based on information acquisition and analysis from several aspects such as the duration of consumers watching short advertising videos, the transaction duration of purchasing goods, and the types of goods purchased, appropriate marketing strategies can be adopted for different types of consumers to maintain customer stickiness.

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