

# Analysis of Consumer Demand in the Advertising Industry under the Development of the Internet Big Data and the Enterprise Precision Marketing

Yeshen Liu

Nanjing University of Finance & Economics, Nanjing, Jiangsu, 210023, China

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**Abstract:** The Internet and big data technologies are profoundly changing all areas of social life, and the advertising industry is undergoing huge impacts and facing severe challenges. On the one hand, the development of the Internet and big data is deconstructing the traditional advertising system, which has caused a great impact on the advertising industry; on the other hand, the development of the Internet and big data has also brought huge opportunities to the advertising industry. This paper analyzes the pain points of the traditional advertising industry and the empowerment of big data to the advertising industry through the literature survey method, and gives corresponding countermeasures and suggestions on the issue of “how relevant companies in the advertising industry chain use big data to achieve precise promotion”.

## 1. Introduction

Big data and the Internet are profoundly changing all areas of social life. The traditional advertising industry is undergoing a huge impact, facing severe challenges and rare opportunities. On the one hand, the rapid development of the Internet has accelerated the process of audience fragmentation, which has had a huge impact on the traditional advertising and marketing system. Since then, a series of chain reactions are gradually causing the traditional advertising industry to decline. At the same time, the networked media exposes various information and data of the audience on the Internet, their behavior can be monitored, and their needs can be insighted through interactive platforms. They are reuniting due to their interests and needs and become brand-new advertisements. The cornerstone of the birth of the system [1].

The scientific nature of the traditional advertising industry is established on three levels. One is to help advertisers to effectively control, plan and package information; the second is to accurately use appropriate media channels to deliver advertising information to appropriate target audiences; Finally, these methods and methods can be reused.

Based on these three foundations, the traditional advertising industry has been trying to detect audiences and grasp their needs through scientific means, make market predictions, and carry out effective and low-cost communication through mass media, and ultimately help producers to conduct marketable matches. The production, while meeting the various needs of consumers, to achieve the matching between production and demand. This kind of scientificity is finally manifested in the ability to be carried out in large quantities, and with data information as the core point to give the media and enterprises certain decision support, and to change the process of marketing decision-making from “experience” to “science”. In such a process, it is undoubtedly necessary to discover demand and understand the market based on a large amount of data analysis. Market research and analysis have also become an important part of the advertising system. Various related data investigations and databases help the traditional advertising system to achieve Has achieved the highest degree of scientization.

## 2. Literature Review

Precision marketing refers to the use of various new media to push marketing information to more accurate audiences, so as to save marketing costs and maximize marketing effects; precision promotion is relative to mass communication. The promotion that can accurately find the target user

is precision promotion. Although the two are slightly different in name, there is no difference in essence. Both require the use of big data, Internet of Things, AI, cloud computing and other technologies to find the audience accurately with the help of various new media. This chapter systematically sorts out a large amount of literature, and summarizes the previous research results from two aspects: “problems in the traditional advertising industry” and “big data empowers the advertising industry”.

## **2.1 Problems in the Traditional Advertising Industry**

### **2.1.1 Industrial Structure Imbalance**

The imbalance of the advertising industry structure is mainly manifested in the imbalance between the strong position of the media and the weak position of the advertising company. Under the conditions of a demand-led buyer's market, advertisers undoubtedly occupy an advantageous position, and the advertising of advertisers determines the scale of the advertising market. [5]. In the trilateral game of advertisers, advertising media and advertising companies, advertising companies are at the most vulnerable side. With the emergence of large media buying companies, the structural imbalance between the three parties has been exacerbated [6].

### **2.1.2 The Added Value of the Traditional Advertising Industry Continues to Decrease**

In the course of nearly two hundred years of development, the traditional advertising industry has formed a relatively stable operating process: based on advertising surveys, advertising planning creativity as the core, using photography, painting and other expression methods to design and produce advertising products, and through advertising Media placement realizes the dissemination of advertising information. On this basis, forms of advertising products represented by newspaper advertisements, film and television advertisements and outdoor advertisements have been formed. According to the business form of traditional advertising companies, its income sources are mainly divided into three parts: one is media agency fees; the other is creativity and production costs; the third is customer service costs [6]. Among them, media agency fees are the most important source of income for advertising companies. However, in recent years, under the impact of digital advertising, the revenue of traditional advertising has grown slowly, and its proportion has been declining. In particular, the revenue of newspaper media advertising has increased. With the rise of digital media, advertisers are gradually reducing the advertising of traditional media. In other words, advertisers' demand for low-value-added traditional advertising products and services is gradually decreasing. Competition is a process of ebb and flow. When innovative technology companies rely on their powerful data resources and data processing capabilities to expand to the advertising industry, the traditional advertising industry is facing a shrinking situation [7].

### **2.1.3 The Impact of Audience Fragmentation on the Sampling Survey System**

All along, because of cost considerations, advertisers generally use scientific sampling instead of census. However, the emergence of big data has subverted traditional sampling. The platform-based communication methods brought about by the development of the Internet and the increasingly fragmented social structure make sampling difficult to be “accurate”, it is difficult to use “samples” to reflect “all”, and it is difficult to have sufficient representativeness. . On the one hand, this has led to the shrinking of the voice of the traditional advertising industry, and on the other hand, it has made its profit model unsustainable [8]. The shrinking of the right to speak comes from the fact that traditional media often draw conclusions based on vague understanding or description of facts, while big data has extremely high requirements for the accuracy of media reports. On the other hand, many advertisers have lost their trust in traditional media because they do not know how “nearly half of the advertising costs disappeared”.

## **2.2 Big Data Technology Empowers the Traditional Advertising Industry**

Traditional advertising is based on mass media, relying on human labor as the main information dissemination activity, and entering the intelligent society. The biggest change in the advertising

industry is based on data-driven intelligent operation. Driven by big data and artificial intelligence technology, the advertising industry follows the logic from data to intelligence, from core business intelligence to comprehensive intelligence [9].

### **2.2.1 The Optimization of the Advertising Industry Structure by Big Data**

The emergence of big data has brought huge opportunities for the optimization of the advertising industry structure. In the era of big data, the advertising industry promotes the rational development of the advertising industry structure through a data-driven symbiosis and synergy mechanism, and promotes the advancement of the advertising industry structure through technological innovation [7]. The relationship between advertisers, advertising media and advertising companies is a typical “mutually beneficial industry symbiosis model” [7]. In the mutual industrial symbiosis model, the relationship between industries is relatively stable. The industries are not directly competing and inhibiting each other, but forming a community of mutual benefit and coexistence and complementary advantages through various links. The essence is a relationship of competition and cooperation. Advertising companies use the advantages of big data analysis and mining technology and consumer insight to establish the core business form of “data dissemination management” and build a data management platform. On the one hand, it provides data support for advertisers' intelligent decision-making and precision marketing, and becomes an indispensable strategic partner for advertisers in the era of big data; on the other hand, it provides technical support for programmatic buying of advertising media, so that media audiences and advertising The main target consumers achieve precise matching, thereby improving the efficiency of advertising and marketing. The symbiotic collaborative operating mechanism realizes resource sharing and information exchange, which makes the three links of advertising companies, advertisers, and advertising media close, and achieves a mutually beneficial coexistence and complementary benefits community on an open platform, which enhances the overall vitality of the advertising industry structure and promotes the advertising industry structure tends to be reasonable [7].

### **2.2.2 The Advertising Industry Has Shifted from “Low Value-Added Marketing Tools” to “High Value-Added Data Services”**

In the past few years, a large number of data-service advertising companies have sprung up like mushrooms, accelerating the change of the original advertising industry structure. Such companies include Yoyi Interoperability, Pinyou Interaction, Chuanyang Technology, Allyes, Diyuanxin, Media, Click and so on. Different from traditional advertising companies, these new data service companies are no longer just intermediaries between advertisers and advertising media, but make full use of big data technology to conduct advertising operations through data mining and analysis[10] . Because its advertising activities such as advertising planning, media placement, and effect monitoring are supported by a massive sample data system, it makes full use of big data mining and analysis technology, crowd targeting technology, search engine technology and other means to target audience positioning and programmatic purchases. , So it can achieve accurate advertising dissemination, and achieve a more ideal advertising effect.

## **2.3 Countermeasures and Suggestions**

Big data has its own value as a “resource”, while the scale of data processing and application fields promote the value-added, and accurate push is based on the mining, processing and analysis of big data, and it is applied to the advertising system , To realize the increase in the value of big data. Related companies in the advertising industry chain can start from the following aspects to reduce costs and increase efficiency, and improve the accuracy of advertising push.

### **2.4 Relying on the Media Terminal to Establish a Personal Mobile Database**

In today's era of rapid development of the Internet, it is possible to obtain records of close to actual investigations through the use of Internet technology. These terminals used by audiences are equivalent to a recording instrument that records all their real behaviors and real information one by one. Technological changes This makes the cost of obtaining data through such close-to-verification

sampling extremely low. At the same time, these data also contain a large amount of information proactively released by users, which are interactive data [1].

In the actual advertising and marketing system, we need to more accurately lock the marketing goals to individuals. Use personal media terminals represented by smart phones to build a personal mobile database, and obtain addressable and real user information, behavior and feedback information by recording various information of users, and at the same time classify and package these data, Combined with the output of e-commerce platform to advertising agencies, advertisers and media, so that the latter can provide targeted advertising information, media content and product service information for these individual audiences, and achieve targeted advertising promotion [14].

## **2.5 Strengthen Data Mining Capabilities and Application Capabilities**

Big data puts forward new requirements for relevant agencies in the advertising system. For data service companies, they need to be able to master real-time/mass data detection technology, have the ability to build big data mining models, and enhance big data analysis capabilities; for media platforms For advertising agencies, they need to be able to record information traces, establish massive databases, and be able to use big data to analyze and optimize their own content, products and marketing services; for advertising agencies, they need to be able to track advertising effects through diversified means and apply big data. Analyze the advertising value of media and optimize advertising and marketing services; for third-party technology companies, they need to be able to provide technical support for the collection, storage and analysis of big data, as well as provide solutions for big data mining technology [11]. In general, data mining capabilities and application capabilities are necessary capabilities in the Internet and the era of big data.

## **2.6 Be Alert to Data Security and Privacy Protection Issues**

Although with the wide application of various sensing and detection technologies, smart terminals and mobile Internet, all aspects of social and economic life are presented in the form of more fine-grained data, the “pixels” of the entire society have been significantly improved [15]. At present, the policies and regulations supporting the development of big data resources are still immature, and relevant companies need to guard against corresponding legal and moral hazards and privacy infringement risks when using big data resources. For example, the ownership of big data resources should be clearly defined, the rights of big data owners should be effectively maintained, and the healthy development of the big data industry should be jointly promoted [16].

## **References**

- [1] Huang Shengmin, Liu Shan. The deconstruction and reconstruction of the marketing system under the background of “big data”. *Modern Communication (Journal of Communication University of China)*, 2012, 34(11): 13-20.
- [2] Huang Shengmin, Yang Xuerui: “New Changes and Development Trends of Consumer Behaviors under the Background of Fragmentation”, “Advertising Theory Edition”, Issue 2, 2006.
- [3] Tu Zipei: “Big Data”, Guangxi Normal University Press, 2012 edition.
- [4] Feng Zhiyan, Guo Xunhua, Zeng Dajun, Chen Yubo, Chen Guoqing. Several frontier topics in business management research under the background of big data. *Journal of Management Science*, 2013, 16(01):1-9.
- [5] Ma Erwei. Research on the optimization of advertising industry structure in the era of big data. *International Journalism*, 2016, 38(05): 153-168.
- [6] Yin Tiegang. Imbalance-Analysis of Structural Problems in China's Advertising Industry. *Advertising Grand View (Theoretical Edition)*, 2013(06): 25-38.
- [7] Ma Erwei. The transformation and reshaping of the core format of the advertising industry in the

era of big data. *Modern Communication (Journal of Communication University of China)*, 2016, 38(11): 121-124.

[8] How big data “landed”. China Press and Publication, 2014-09-11 (007).

[9] Ma Erwei. The intelligent development of advertising industry driven by data. *Modern Communication (Journal of Communication University of China)*, 2020, 42(05): 138-143.

[10] Ma Erwei. The crisis and reform of the advertising industry in the era of big data. China Publishing, 2016(17): 46-49.

[11] Ma Erwei. Analysis of the model and mechanism of the integrated development of the advertising industry in the era of big data. *News*, 2016(15): 47-50.

[12] Ma Erwei. Research on the Development of Advertising Industry in the Big Data Era[D]. Wuhan University, 2015.

[13] Ma Erwei. Big data and changes in the ecological environment of the advertising industry. *Contemporary Communication*, 2016(03):93-95.

[14] Wang Haoyu, Sun Qiming, Hu Kai. Application of signaling big data technology in precision marketing. *Journal of Beijing University of Posts and Telecommunications (Social Science Edition)*, 2016, 18(04): 70-76-107.

[15] Chen Guoqing, Wu Gang, Gu Yuandong, Lu Benjiang, Wei Qiang. Big data-driven research and application challenges in the context of management decision-making: paradigm shift and research direction. *Journal of Management Science*, 2018, 21(07):1 -10.

[16] Yang Shanlin, Zhou Kaile. Management issues in big data: a view of resources based on big data. *Journal of Management Science*, 2015, 18(05): 1-8.