

Research on Innovation and Development of Multimedia Industry Agglomeration Mode under the Background of Big Data

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Abstract: In recent years, the application of information technology and the development of the information industry have surrounded our lives. Among them, the industry represented by multimedia, the mutual penetration and rapid development in the context of big data, has an increasingly obvious impact on human society. With the advent of the information age, big data technology is booming, all aspects of the multimedia industry are infiltrated, and big data analysis has become an important resource, technology and thinking, driving the development and transformation of the multimedia industry. However, the research on the innovation and development of the multimedia industry in the era of big data has not been involved. The purpose of this paper is to analyze the transformation of the multimedia industry from the traditional multimedia industry to the multimedia industry in the big data environment, and finally to put forward the reality in the context of big data. Coping strategies for industry development and research on the impact of complementary industry agglomeration on technological innovation. By studying the opportunities and challenges brought by big data to the multimedia industry and the development of multimedia industry in the context of big data, this paper concludes that big data has great significance for multimedia innovation, and expands multimedia industry and enhances competitiveness through big data technology.

Keywords: Multimedia industry, Industrial agglomeration, Innovative development, Big data

1. Introduction

As the construction of various big data industries progresses steadily, the big data industry will be agglomerated. Industrial agglomeration is the product of industrialization after a certain stage of development. The strong correlation between industrial agglomeration and industrial competitiveness will be strengthened with the passage of time. Through industrial agglomeration, we will pay more attention to the source and overall planning of data resources, strengthen the gathering of big data industry, play the role of radiation, promote regional coordinated development, and achieve economic growth and efficiency. Industrial agglomeration is one of the most important and key research issues in the field of industrial innovation and development. The realization of the agglomeration mode of the industry plays a vital role in the transformation and innovation of the industry. With the continuous research and development of industrial agglomeration, the application fields of industrial agglomeration are becoming more and more extensive, such as economic, agricultural, environmental protection and multimedia, and many other fields are inseparable from industrial agglomeration [1-4].

With the deepening of research, the multimedia industry has made great progress. In 2008, Jianhua Jian, Wang Mingfeng and Luo Shougui conducted research on many multimedia industries in Shanghai. The detailed analysis of the spatial layout characteristics of the five multimedia industrial parks in Shanghai area was carried out. It was concluded that the development of multimedia industry should be in the government. The policy support is prevalent [5]. In 2014, Jin Hua and Chen Cai analyzed the development of multimedia and multimedia technology from the four levels of terminal, network, platform and application, and combined with the smart home system architecture to summarize the current smart family. The development status of multimedia entertainment business, in view of its existing problems, proposes the future development trend of smart home multimedia business [6]. In 2016, Masu conducted a problem analysis from the visualization of broadcasting under the transformation of multimedia industry, and proposed a feasible strategy to promote the visualization of broadcast programs and solve the problem of video playback in broadcasting [7]. In 2018, in order to

innovate the teaching model, Liu Wei applied multimedia technology to the innovative mode of modern teaching to achieve the improvement of teaching efficiency [8].

Nowadays, the multimedia industry is gradually maturing and developing, using digital media TV, broadcasting and other carriers as the carrier, using core technologies such as animation, graphics, video and sound, in the information industry, broadcasting, advertising planning, electronic communication, online education, entertainment. In many fields, such as newspapers and periodicals, it is a collection of industries in many industries such as computers, film and television, media, and education. However, the difficulty of resource management data is enormous. The main reason is that because of the different sources and different data formats of these data, big data has been successfully applied as a method for efficiently and quickly collecting and managing data information. A classification study of many studies. In 2014, Chen Gaohuan promoted the healthy development of cultural and creative industries in order to improve the quality and sales of cultural and creative products, and used the application of big data to draw the importance of big data to the development of cultural and creative industries [9]. In 2014, in order to solve the development of the health service industry, Cao Yu used big data to conduct research on China's health service industry, analyzed the problems existing in the development of the industry under the conditions of big data, and proposed a series of related policy recommendations [10]. In 2015, Zhu Ruiquan also had limitations and practical difficulties in solving the application in the Chinese animation film industry. The use of big data analysis brought great value to all walks of life, and the use of big data for the domestic animation film industry from investment and financing, topic selection Almost the entire industry chain brings great value to development and design, marketing and distribution, and development of derivative products [11]. In 2017, in order to solve the problem of the gap in the training of sports professionals in the traditional sports teaching in the era of big data, Wang Hao analyzed the influence of big data on sports competition performance, the development of sports science and technology, the development of physical education and the development of sports industry. The influence of sports in China has drawn the importance of training talents in the field of sports knowing big data [12]. In 2017, Wang Lin, Chen Hao and Wang Caihong used big data technology to analyze the development status and economic impact under big data, and got the result of the development of big data industry actively driving the economic and social life of their location [13].

This paper compares the opportunities and challenges brought by big data to the multimedia industry and the development of multimedia industry in the context of big data, and then compares the traditional development of multimedia industry such as radio, television and journals with the development of big data. It is concluded that big data has a huge impact on the innovation and development of the media industry. In the face of the arrival of the era of big data, what we need to do is to seize the opportunity and use the big data analysis tools to make the development of the media industry take advantage of the new market competition environment and promote the development to a higher level.

2. The Opportunities Brought by Big Data to the Multimedia Industry

With the rise of the Internet industry, technologies such as cloud computing and big data have gradually become mainstream, and big data has great power for the development of information technology, and its value is immeasurable [14-17]. As a powerful analysis technology, big data can classify an unlimited amount of data according to a specific feature. This powerful resource technology is becoming an important driving force for innovation and development in various fields. For example, big data acts on the public domain to analyze the user's portrait field. Big data can draw portraits from multiple dimensions, and the results are accurate, and the user's behavior habits can be understood. The multimedia industry is an industry that collects and analyzes mining data, and it has significant big data genes [18-20]. By realizing the reuse and reuse of data, big data technology continuously analyzes and researches a large number of data, thereby improving the efficiency of people's use of data, thereby greatly reducing transaction costs, and greatly helping people develop their own potential space. . Through big data, people can perform holographic vertical history comparison and horizontal reality comparison of transaction information at low cost or zero cost, and extract information hidden in a large amount of disorganized data. Big data is not only convenient for personal life, but also used in various industries, including manufacturing, economics, information, entertainment, and catering. For example, the solution that optimizes the big data platform according to the customer's needs, product recommendation and targeted advertising, all need to use big data technology to collect information and process information through market research, internal management, and strategic planning. research. Through big data analysis, the bank analyzes the user's consumption behavior, purchasing

ability and repayment ability, which is used to reduce the risk of loans provided to users and reduce the repayment rate. The application of big data in smart cities, according to the flow of people controlling the brightness of street lamps, can achieve the effect of power saving, control the traffic lights through the car to reduce road congestion as show in Figure 1.

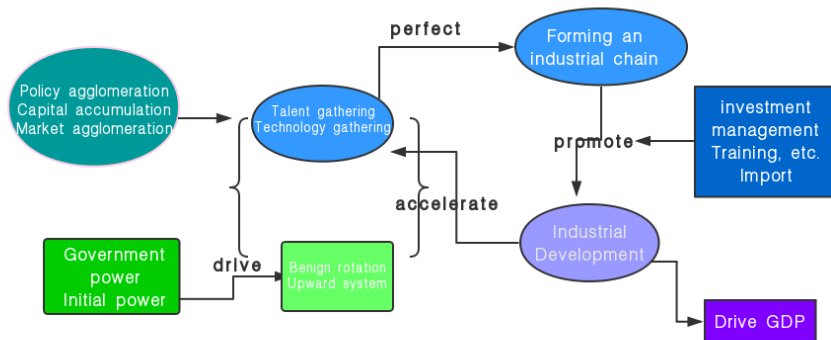


Figure 1: Multimedia Industry Development System

3. The Challenge of Big Data to the Multimedia Industry

The dissemination of information requires a lot of new challenges in the application of big data technology. The selection of data sources, the talents of technology and the channels of data application have brought new thinking to the mass media [21-23]. The essence of big data is ubiquitous data. By quantifying everything, recording everything, collecting and storing data indiscriminately, and improving the access and processing capabilities of data. In the era of big data, the amount of data is increasing more and more, the speed of generating data is getting faster and faster, and the format of data formed is more diverse. How to improve computing power to deal with the increase in data volume, to obtain value from data, and to use different methods to extract processing data is an important issue facing the media industry in the context of big data. Big data is based on the analysis of the user's browsing click-through rate data, and it is recommended to recommend the content of interest, and it is also easy to cause information martial phenomenon. Convenience also brings a limitation. If you don't take the initiative to find a new point, you will always wander in this small circle. What we see is just what we want to see. At the same time, it will cause its own data contribution, bringing privacy risks. The main body of big data analysis is data, and the source of the data is still from our own, so in the vast data, it is easy to lose your own data. The big data platform itself is an open source model, lacking overall security planning and bringing potential security risks. Multi-channel collection of data, data types, user roles and application requirements are more diverse, and access control faces many problems. In data collection, the large amount of data, the wide variety, the complex source and the difficulty of verifying the authenticity and integrity of the data as show in Figure 2.

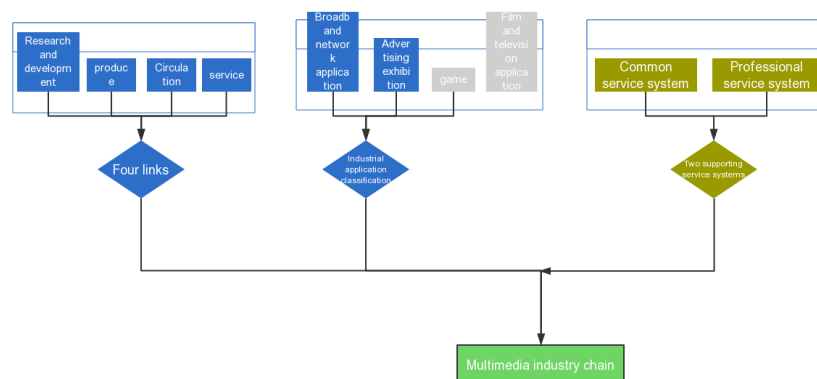


Figure 2: New media industry flow chart

Big data is an important means to promote the conversion of old and new kinetic energy. Big data through the deep integration with the traditional multimedia industry, throughout the traditional industry of production, distribution, sales, services and other links, has brought a series of challenges to the media industry. The multimedia industry has responded to the industry impact it has brought. In a large amount of unknown data, the generation of key content may be hidden. In the face of a large amount of data, how to use big data technology for analysis is worth exploring. In addition, for a news report, it is based not only on the results of the data, whether an event can be confirmed as news, or whether it is worth reporting, more importantly, based on the timeliness of the news and the current background conditions. Think and judge the value of the news. According to the analysis of the response rate and popularity of big data on certain types of content, although it shows that such content is very attractive to the public's topic, the news value needs journalists to make human judgments based on the principle. To ensure the civilization and reliability of the content. As a summary of the law of news reporting in a long period of time, the theory of news value is a useful supplement to the application of big data and an important guiding ideology for the application of big data.

4. The Development and Change of Some Multimedia Industries under the Background of Big Data

4.1. Development of Broadcasting Industry

China's broadcasting industry began in 1923 and was transmitted through transmission media such as radio waves and cable fibers. Its main route of transmission is the radio, which has a single form of transmission and can only be transmitted by means of listening. Moreover, the traditional information carrying capacity of broadcasting is weak, and it is impossible to transmit more abundant and multi-faceted information to the audience. The transmission speed is slow, and the user's acceptance of the message cannot be timely, and it is easy to cause message transmission hindrance. From the perspective of the amount of information, the amount of information on a broadcast program may be narrower, and there is less content to be broadcast. There is no way to deliver a complete message for an era of rapid change. Judging from the content of the broadcast, the broadcast of traditional broadcast can only follow the time from the beginning to the end, there is no way to suspend and play back the operation, the problem is that the information received by the user is very fragmentary, the time of mandatory acceptance and The way to limit the user's acceptance of a complete message can only be partial.

But in the context of big data, the development of broadcast media has undergone a huge transformation. Broadcasters can use large data analytics to collect and analyze large amounts of listening data. Figure 3 is a longitudinal analysis of the same column at different times of the day, it can be clearly seen that the listening rate fluctuates greatly in different time periods. The listening rate is higher in the morning between 9:00 and 10:00 and the evening from 8:00 to 9:00, so that you can use this conclusion to plan the content of the game. Figure 4 is a horizontal analysis of the ratings of different broadcast categories at the same time. It can be seen that the listening rate in news, traffic and music is relatively high, and the choice of these aspects can be emphasized in the content. With big data technology, the audience's age, gender, listening time, listening form, geographic location, social status, knowledge level and other aspects are analyzed to judge the viewer's favorite bias, to play the content selection, and to develop the program broadcast. Content, broadcast time, and broadcast mode increase the appeal of content playback, thereby increasing the listening rate of the broadcast. In addition, in the selection and innovation of broadcast content, Big Data has opened the era of "user innovation", that is, the theme selection and playback time of the program are displayed according to the results of big data analysis technology, and reasonable arrangements are made to comply with the general wishes of the audience. In line with the audience's preferences, we truly achieve "innovation." By improving content accuracy and enhancing content innovation, the homogenization of content is greatly reduced and innovation is enhanced. In addition, in the future, the spread of broadcasting can be combined with the Internet, and the current popular form of APP can be used to transform the mode of communication from traditional singularity to pluralism, which can be played by the APP, so that the listener does not have to limit the choice of listening to the broadcast program. In the geographical and broadcast form, it is even possible to "see" the scene of the broadcast program on various live broadcast platforms. With the hot live broadcast form, the audience can communicate face-to-face with the broadcast host to carry out more diversified interactions and exchanges to meet the audience's requirements for interactive experience and interactive fun. In the context of big data, broadcasters can use big data analysis technology to analyze data such as user's click rate and viewing type, and

effectively classify broadcast content according to audience preference. 1 You can judge viewers based on listening rate. More preference to the type of program, so as to push the relevant content, so that the user's appeal is improved; 2 can set the on-demand column, allowing users to choose to play the broadcast content they need, anytime, anywhere, improve the user's efficiency; 3 increase the broadcast The function of storing and downloading the content of the content makes the user no longer limited by the time and content playing form, and can perform content income according to its own time schedule, and can no longer only accept the fragmented information, thereby improving the user's favorite degree.

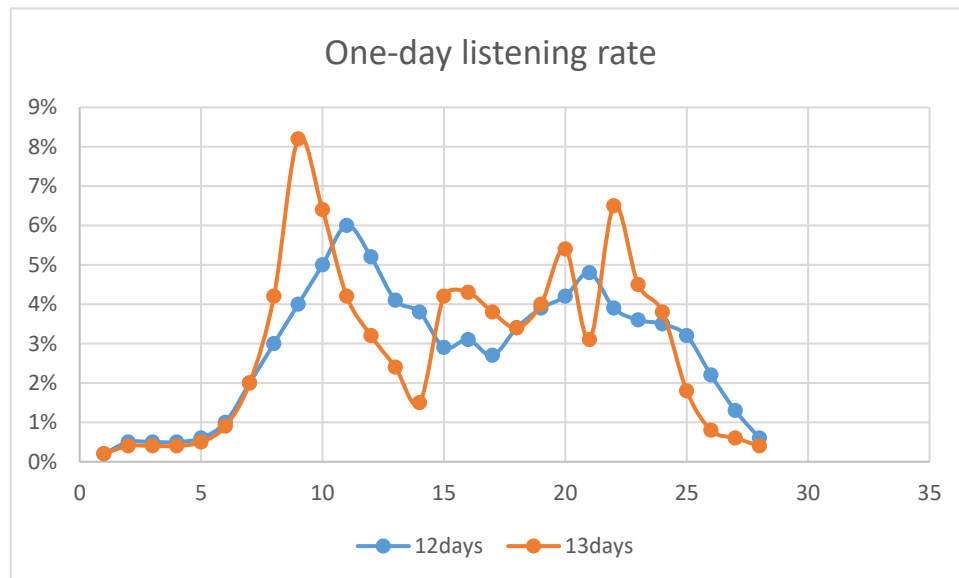


Figure 3: Listening Rate at Different Time Periods in a Day

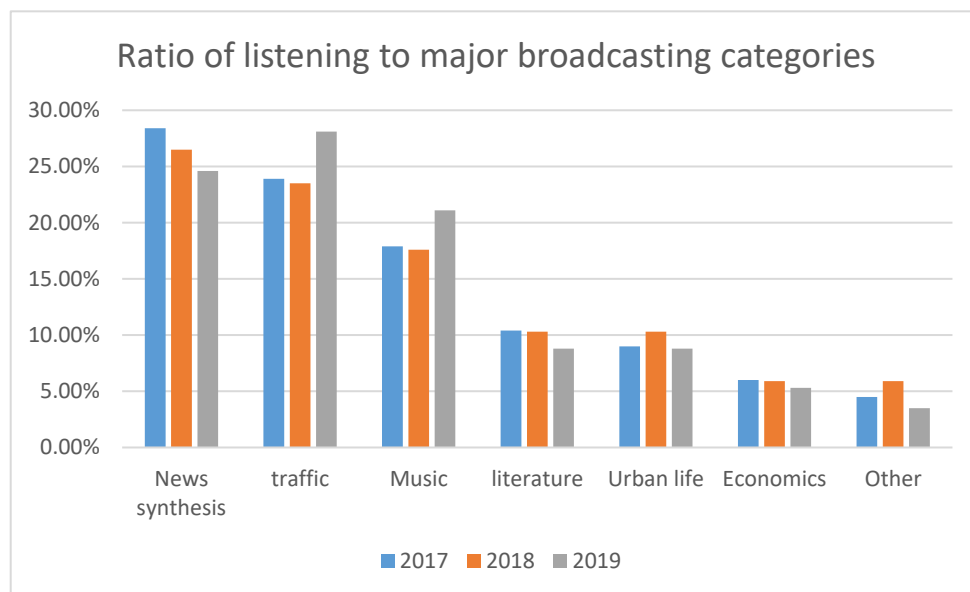


Figure 4: Ratio of listening in different broadcast categories and years

4.2. Development of TV Industry

With the development of TV technology, from the initial black and white picture tube TV to ultra-thick color TV to digital TV to today's flat-panel TV, the development of more and more intelligent. In the traditional TV industry, first of all, the TV set is heavy, the picture quality of the TV is not clear, and the TV program is more single and less. In addition, the traditional television industry's advertising is generally the direct purchase of media resources by investors, or through the agency of advertising agencies, this cost model is likely to cause price differences for investors. In the program selection of the traditional TV industry, the theme of the program is relatively aging, and the degree of

preference for the audience is small, resulting in a low audience rating.

The combination of the TV industry and Internet technology is a huge change in multimedia in the context of big data. Big data can analyze user preferences and provide more personalized, accurate, and content that appeals to viewers. And in the context of big data networks, the industry of online advertising in China has changed. With the docking of advertising and trading platforms to obtain media resources, the effectiveness of such Internet advertising is recognized by investors, and big data based on user behavior. Apply real-time bid optimization algorithm and consumer insight algorithm to obtain more reasonable pricing and optimized advertising effects for investors. In addition, the use of big data to analyze the ratings of individual TV stations can increase the incentives for investors to choose advertising. Figure 5 is a study of the number of people watching TV stations in 2019. It can be seen that most TV stations have a population of 100-500 million. The number of TV stations with a rating of more than 10 million is very lacking, which can be used as a basis for investors to choose an investment station. In addition, big data is conducive to enhancing the communication between the audience and the media. Like the popular scanning code format, it is a combination of big data-based network innovation. By using the "two-dimensional code" to synchronize the TV interaction, the viewer can scan the code through the mobile phone and connect with the television, so that the user's participation is enhanced and brings more fun, so that the user's TV usage rate is higher. Using big data analysis, you can explore the audience's click rate on the TV channel category, collect the user's future preferences, and push the program to the user.

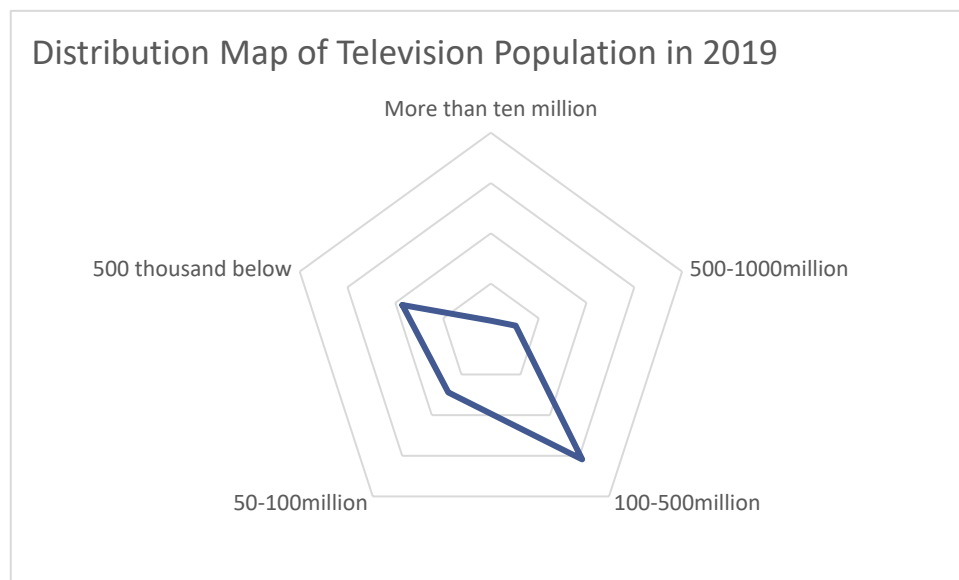


Figure 5: Distribution of TV viewing population in 2019

4.3. Development of Periodical Industry

Traditional journals have a long production cycle and require manual layout and content division. The carrier has a single form, only a paper medium, which is inconvenient for the form of propagation. The size of the general journals is fixed, the amount of information is limited, and all the content is bound by a limited number of words and the number of pictures in the specified layout. Only the streamlined information can be delivered to the reader, and there are certain difficulties in understanding. Sex. Readers are not selective about the receipt of journal content, all content is fixed and unified, and can not be compared with the powerful information retrieval function of online media. Readers generally only have access to the source of the information reported in the journal's information, and it is extremely difficult to obtain more detailed information and extensions. On the other hand, traditional journals are limited in presentation and inconvenient to carry. The size of the journals causes discomfort during reading, and the paper form is not easy to store. The traditional journal system and mechanism also serves the traditional content production and dissemination. It is difficult to integrate the media and the news report, and its management mode restricts the innovation form of the journal. In addition, the transformation of traditional journals faces many practical bottlenecks and challenges such as technology, talent, and capital.

In the context of big data, the development of journals wants to last longer and must conform to the

development of the network. Do not want to unite with network technology to establish an Internet mindset. The thinking of journal media In the big data model, the network construction of journals is to build a professional and competitive journal website is the primary task to adapt to the development of social digital information. It is the most direct platform for the public. The development of sci-tech periodicals portals, from the very beginning of the release of information, the introduction of the basic content of the journal, to the digitalization of journal products, the construction of readers, author databases, to the realization of various types of users online work and content submission, release, evaluation. The realization of the bibliographical link between the literature cited in a journal and the literature citing the journal has greatly enhanced the dissemination capability of the journal. The sales model of journals has also become a printing and sales model with the development of digital technology and modern high-speed printing technology. The content is first stored in an electronic version, and production is produced according to the demand for the paper version. Using big data technology, statistics on demand can make it easier to calculate production requirements. The implementation of the first sale and post-print mode, order-based on-demand printing and small-volume digital printing, can be printed in one or more, providing users with an integrated global service. Sci-tech journals adapt to the development requirements of the network era, build a multi-product platform and on-demand printing mode, digitize and integrate content resources and all work processes such as submission, review, editing, production, printing, sales, marketing, etc., to obtain the greatest economy, Social benefits. Make full use of the Internet and information technology in the era of big data to carry out the mutual development of journal media and big data technology through literature and knowledge transmission as show in Figure 6.

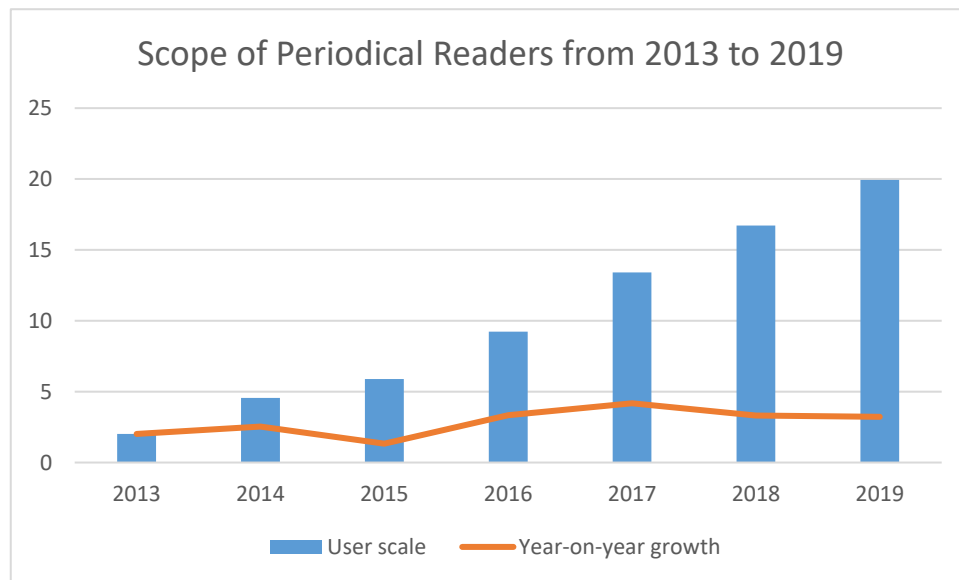


Figure 6: Scope of Periodical Readers from 2013 to 2019

5. Conclusion

The advent of big data technology is a huge impact on the Internet field. It is similar to a revolution. The transformations that have been made in the context of all industries such as communications and media in the traditional era and the current information technology are vast. In the transition period of this transition, making full use of big data technology to improve the frequency of innovation and its own quality, in order to comply with the development of this trend to maintain the continuation of the industry. For the multimedia industry, the transformation of the broadcasting industry is inevitable and the most important. With the advanced technology of big data, it is very important to carry out innovation and development in terms of content form, propaganda mode and development mode. In the era of big data, the continuous integration of television and information technology has resulted in more intelligent and convenient Internet TV, network video, mobile TV and other TV media. For the data analysis of the viewer's favorite programs, that is, big data applications, the selection of ratings and popular themes through the display of data has become a tool for TV media to meet the competition challenge.

Big data technology has a driving role in the intelligentization of life, and the analysis of massive

data not only provides a basis for the industry to judge, but also poses a new challenge to industrial development. Big data is the transformation of business value creation methods by collecting and analyzing huge and intricate data and discovering important hidden phenomena. With the gradual utilization of big data, its convenience and accuracy have provided development promotion for enterprises. The competitive advantage brought by big data to enterprises has gradually emerged, and many enterprises have begun to use big data for analysis. Today, the Internet has a profound impact on the era of our lives. Only by mastering the data can we better understand the characteristics of users' preferences and understand the consumer's propensity to demand. For enterprises, making full use of good data can avoid the twists and turns of enterprises like blind people. Only by leveraging big data and making efficient use of the information obtained can the company's development maintain a strong momentum and endure.

In recent years, China's big data industry has grown from scratch, and the development of big data across the country is highly motivated. Among them, the successive introduction of national policies encourages the development of big data and brings a good development environment and huge safeguard measures for the development of China's big data industry. In this continuous wave of big data entrepreneurship, it has stimulated the entrepreneurial boom in the information technology industry. For financial, medical, transportation, entertainment, electronics and many other fields, financing companies are increasing. With the development of Internet technology and the popularity of mobile terminals, such as the continuous innovation of social communication and communication media such as WeChat, QQ, Weibo, etc., social relations has an effective platform for demand maintenance. Through the operation of these media platforms, users exchange information and expand social relationships, becoming a communication link. Through this form, social relations and content production can be more integrated. It can be seen that the processing and analysis of data is the value of big data, and for the transformation of the media industry, improving the core competitiveness of the big data era is one of the most crucial.

Today, big data is gradually being applied to various industries, and big data applications will continue to increase and expand, which will become the leader of the future life era. In the context of big data, big data is gradually permeating the lives of each of us, from the changes brought about by individual ways of thinking and living habits to the work development system that affects various industries. Under the background of big data, the multimedia industry has great opportunities and faces new challenges. The development of the multimedia industry is still in the long run. Research and explore the new challenges brought about by big data, find out the current situation of the problems that need to be faced and the solutions to them, so that the development of the multimedia industry will be longer.

In the context of big data, the innovation and development of the multimedia industry will be based on the development defects of traditional industries, and the combination of big data analysis technology will be used to innovate and transform the multimedia industry. As for the cumbersome and safe data, we will continue to study and make breakthroughs to make it develop in the long run. Using the big data resources to expand the multimedia industry, exploring the problems and solutions faced by the industry from the aspects of data analysis and data types is what we need to do now.

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