

# *Study on the Development of the Film Industry from 2013 to 2022*

Jing Zeng<sup>a</sup>, Zhao Kaiwen<sup>b,\*</sup>

*School of Business, Xi'an International Studies University, Xi'an, Shaanxi, China*

*<sup>a</sup>11295596700@qq.com, <sup>b</sup>1799366039@qq.com*

*\*Corresponding author*

**Keywords:** Film, Informatization Digital Economy, High-Quality Development

**Abstract:** The State Administration of Press, Publication, Radio, Film and Television (SARFT) was formed in March 2013, while the Film Bureau was set up under the SARFT to undertake the supervision and management of film production, distribution and projection units and businesses, among other functions. So far, the movie industry has gradually come into a new era of development. With the improvement and support of the policy and the continuous development of the times, the scale of the film industry is rapidly expanding, and the degree of its informatization and digitization is also increasing. The digital economy, a new type of economic form generated on the basis of digital technology, has increasingly become an important driving force to promote the high-quality development of the film industry. This paper mainly carries out in-depth research and analysis on China's film industry in the past ten years regarding the economic and financial market situation, the development and impact of technology, and the risks and opportunities faced in the future by means of literature research and data analysis of the financial market.

## **1. Introduction**

Prior to 2013, the competent authority for the film industry was the State Administration of Radio, Film and Television (SARFT), under which there was a Film Administration Bureau. In March 2013, the First Session of the Twelfth National People's Congress (NPC) considered and adopted the Decision on the Program of Institutional Reform and Functional Transformation of the State Council (Draft), which, in order to further promote the reform of the cultural system and coordinate the resources of the State Press, Publication. The State Administration of Press, Publication, Radio, Film and Television (SARFT) was merged into the State Administration of Press, Publication, Radio, Film and Television (SARFT), and the State Administration of Radio, Film and Television was abolished. At the same time, the State Administration of Press, Publication, Radio, Film and Television established the Film Bureau under the State Administration of Press, Publication, Radio, Film and Television to supervise and manage film production, distribution and exhibition units and enterprises. So far, the film industry has gradually entered a new era of development. In 2014, the Notice on Certain Economic Policies to Support Film Development was jointly issued by the Ministry of Finance, the National Development and Reform Commission and the State Administration of Press, Publication, Radio, Film and Television, which clarified eight specific policies, leading to further

stimulation of market vitality and improvement of the quality and level of public services. The Law of the People's Republic of China on the Promotion of the Film Industry of the People's Republic of China in 2017, the Law of the People's Republic of China on the Promotion of the Film Industry was enacted for the first time as a national law to comprehensively regulate films, bringing legalized confidentiality. In addition, in 2021, "implementing a strategy for digitization of the cultural industry" was included in the 14th Five-Year Plan, and in 2022, the Central Government issued the Opinions on Promoting the Implementation of the National Strategy for Digitization of Culture<sup>[1]</sup>. As an important part of the cultural industry, it is foreseeable that movies will have a deeper impact and role in China in the future, and at the same time, the plan will become the most important guideline for the development of China's movie industry in the future.

The film industry has experienced accelerated expansion alongside enhanced informatization and digital transformation, driven by progressive policy support and technological evolution. Since 2013, the third-generation digital cinema projection systems - characterized by cutting-edge technological configurations including high-definition audiovisual performance, laser projection technology, and Integrated Media Block (IMB) equipped digital cinema projectors - have been progressively commercialized and gained significant market traction<sup>[2]</sup>. Since 2017, in order to adapt to the trends of technological evolution and industrial development, and under the general trend and background of improving quality and efficiency as well as the strong drive of high technologies, China has prioritized promoting the improvement and high-quality development of the film industry. The country has placed great emphasis on the independent innovation and the development and application of high technologies across the entire film industry chain. Not only has it coordinated and emphasized the production of high-tech format films and the construction of immersive comprehensive experience theaters, but it has also actively promoted the innovative application of the "film + internet" model and the construction of a diversified, cross-platform film-watching pattern. These efforts aim to accelerate the construction of a strong film nation to meet the significant changes in the main social contradictions in the new era. Today, in the context of the digital economy, the precise data calculation capabilities of big data technology can provide a safeguard for the success of films, with broad application prospects in areas such as box office prediction, marketing, audience research, and evaluation and recommendation intelligent systems<sup>[3]</sup>. The new economic form based on digital technology—digital economy—has increasingly become an important driving force for the high-quality development of the film industry<sup>[4]</sup>. This paper primarily conducts an in-depth study and analysis of the economic and financial market conditions, technological development and impact, as well as the risks and opportunities that the Chinese film industry has faced over the past decade.

## **2. Economic and Financial Market Conditions**

### **2.1. China's Movie Box Office**

Over the past decade, China's movie market has shown strong growth momentum. In 2014, the national box office revenue of movies reached 29.639 billion yuan, a 28.9% increase from the previous year. In the years since, the prosperity of the movie market has continued to gain momentum, and by 2018, the national movie box office revenue had reached 60.976 billion yuan, up 16.9% from the previous year. This growth momentum demonstrated the vitality and potential of China's movie market. 2019 saw the peak of the last decade, with national box office receipts reaching 64.266 billion yuan.

However, behind the growth also lies challenges. 2020, due to the impact of the new crown epidemic, the national box office revenue of the movie once slumped to 20.417 billion yuan, which is undoubtedly a heavy blow to the movie industry. However, even in the midst of hardship, the movie

industry still showed resilience. With the epidemic under control, the movie market gradually recovered in 2021 and 2022, and the national movie box office revenue returned to over 40 billion yuan. In the post epidemic era in 2021, China's movie market grossed the world's largest box office, and China's movie market box office continued to lead the world, with the total number of screens in the cinema having been 1.7 times that of North America, and, as the world's first cinema end market, continued to move towards the movie powerhouse's The goal is to become a movie power.

*Unit: Billions of dollars*



Data source: Guangxuntong Digital Platform

Figure 1: National box office receipts, 2013-2022.

The total box office of movies in the first half of 2023 amounted to 26.271 billion yuan, an increase of 52.91% compared with the same period in 2022. Among them, the box office of domestic films amounted to 19.944-billion-yuan, accounting for 75.92% of the total national box office; the total number of moviegoers in China was 604 million, an increase of 51.76% year-on-year. It can be seen that the year-on-year growth rate of both box office and moviegoers showed a clear trend of increase. In the first half of the year, China Film invested and participated in 20 projects, realizing a cumulative box office of 14.671-billion-yuan, accounting for 73.56% of the total box office of domestic films in the same period. Among them, "Wandering Earth 2", which was mainly invested in and produced by China Film, was the runner-up in the box office of the Spring Festival slot with 4.029 billion yuan<sup>[5]</sup>.

While box office revenues have increased, we have also witnessed the growth and transformation of China's movies. From "Wolf Warrior 2" to "Wandering Earth 2", from "Catching Demons" to "Lake Changjin" and so on, these high box office earning films have not only made breakthroughs and innovations in terms of story content, but also realized breakthroughs in terms of production technology and visual effects. The success of these films not only highlights the consumption potential of China's film market, but also enhances the status and influence of Chinese films on the international stage, and pushes Chinese films towards the world.

## 2.2. China's Movie Finance Market Situation

This paper selects financial report data from 41 listed companies in the communication and cultural industries. After effective data screening, the data from 39 listed companies over the 10-year period from 2013 to 2022 are used, as shown in Table 1. In terms of profitability, the return on equity (ROE), earnings per share (EPS), and net profit margin are selected. For capital structure, the debt-to-asset ratio and interest-bearing debt ratio are chosen. For debt repayment ability, the current ratio is selected. For operational ability, the total asset turnover rate is chosen. For financial risk, the Z-score is selected.

According to the data listed in Table 1, the average values of return on equity, earnings per share, and net profit margin are 3.967, 0.28, and 3.401, respectively. This indicates that, overall, there has been growth over the past decade, with a relatively high degree of increase and strong profitability. However, the presence of negative minimum values suggests that some listed companies experienced negative growth in certain years. The average values of the debt-to-asset ratio and interest-bearing debt ratio are 34.77 and 19.832, respectively. The overall capital structure is relatively low, and the minimum value of the interest-bearing debt ratio is 0, indicating a cautious approach to business operations. The current ratio and total asset turnover rate are 2.974 and 0.66, respectively, suggesting good debt repayment and operational abilities. The average Z-score is 7.365, with a maximum value of 108.871 and a minimum value of -0.407, indicating significant differences in financial risk among different companies.

Table 1: Financial Data of Listed Companies in the Communication and Culture Industry, 2013-2022.

Variant	Variable description	Total sample	Average value	Standard deviation	Minimum value	Maximum values
ROE	Return on net assets	390	3.967	17.153	-116.016	65.94
EPS	Earnings per share	390	0.28	0.607	-4.206	1.95
NET	Net sales margin	390	3.401	42.434	-543.125	106.395
LEV	Gearing	390	34.77	18.187	3.109	96.708
IBDR	Interest-bearing debt ratio	390	19.832	23.183	0	86.682
CR	Current ratio	390	2.974	3.306	0.175	23.315
TAT	Total asset turnover	390	0.66	1.306	0.065	12.373
Z	Z-value	390	7.365	11.545	-0.407	108.871

Using Stata to take the average value of the financial report data of 39 listed companies each year to make a line graph, and observe the trend of its indicators from 2013 to 2022, as shown in Figure 2.

The return on net assets slowly fluctuates and declines, the largest decline in 2018, and falls into negative value, and then fluctuates back and forth above and below 0, and 2022 is a new low in the past ten years; the earnings per share is basically constant in the past ten years; the net sales interest rate fluctuates little in 2012-2017, and then falls sharply to the bottom in 2018, and then the fluctuation is still large; the above data shows that in 2018, the communication and cultural industries The financial market may have suffered a heavy blow, and it may be difficult to recover quickly afterwards due to the new crown epidemic and other reasons.

Asset-liability ratio tends to stabilize, with a slow increase since 2019; interest-bearing liabilities ratio fluctuates and stabilizes before 2020, with a significant increase since 2020; the above data indicates that since the outbreak of the New Crown Epidemic, the communication and culture industry has been subjected to a certain degree of negative impact, and the operating liabilities have increased significantly.

The current ratio and total asset turnover ratio have remained stable over the past ten years, and the overall Z value has decreased slightly, indicating that the overall operation of the enterprise has always been good, and that the changes in the general environment and the impact of the epidemic have not had a great negative impact on the long-term development of the communication and culture industry.

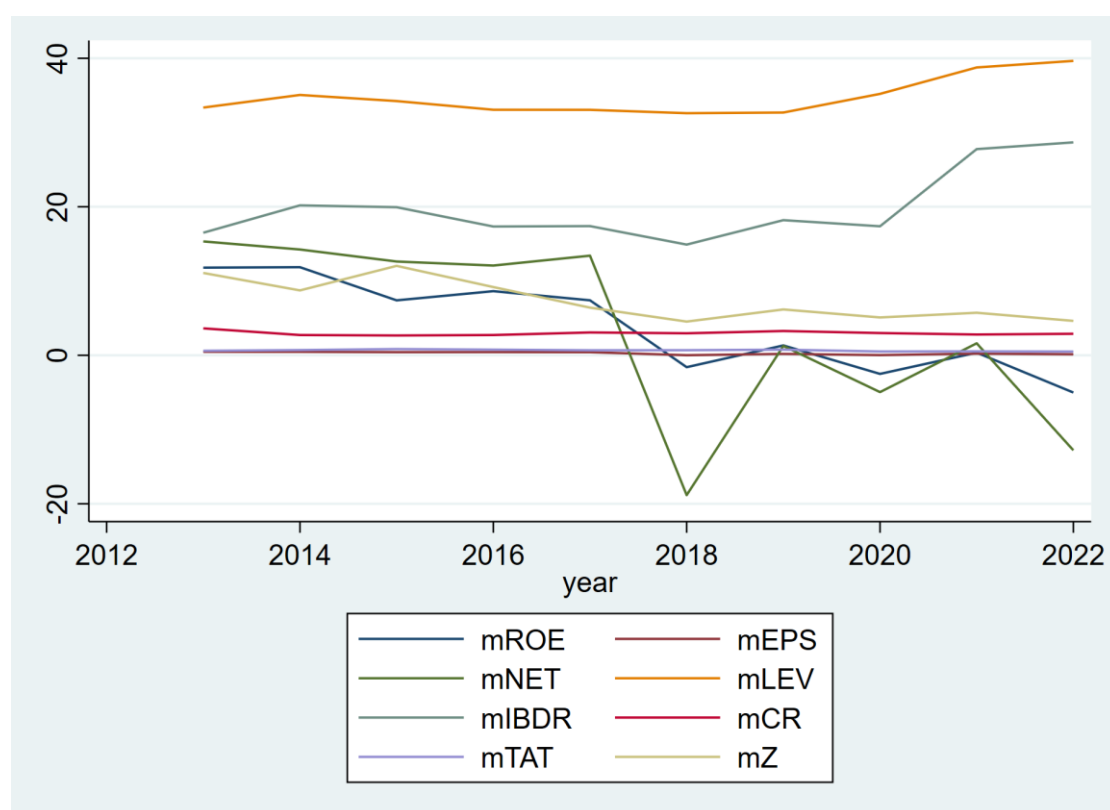


Figure 2: Trend of Financial Indicators of Listed Companies in Media and Culture Industry, 2013-2022.

### 2.3. Market Analysis

Combined with China's movie box office situation and China's movie financial market situation, it can be seen that in the past ten years, the economic and financial market of the movie industry has been in a state of overall growth, with a faster growth rate in 2013-2017, and a gradual weakening trend in the latter five years.

In 2013-2015, the Internet giants represented by BAT began to be deeply involved in the movie industry from capital operation to business strategic cooperation, and the structural influence on the movie industry began to show, for example, Ali subverted the production, distribution and financing of the movie by relying on the e-commerce platform and payment system, and focused on directly integrating the resources of the movie industry through capital operation. BAT has achieved a major breakthrough through its powerful enterprise operation capability and huge capital advantage, and has become an important force in China's movie industry. BAT has made significant breakthroughs through its powerful enterprise operation ability and huge capital advantage, and has become an important force in China's film industry. In August 2016, as the representative of the "national team", China Film and Shanghai Film landed on the Shanghai Stock Exchange successively, marking that the securitization of China's film industry has become mainstream. With the listing of Hengdian Film and TV and Jinyi Film and TV in the second half of 2017, the securitization rate of the top ten domestic cinema enterprises has reached 90%, symbolizing the upgrading period of China's film industry securitization [6].

Although China's movie box office in 2018 still shows high-speed growth, but the financial market suffered a heavy blow, the market's "three twists and turns", reflecting the ups and downs of the whole industry in the past year: although a large number of explosive, but the lack of upstream capacity to

continue to output high-quality content has been exposed to the problem is very obvious, the annual box office of six months year-on-year decline, and two months even declined. In April 2018, the People's Bank of China (PBOC), in conjunction with the China Banking Regulatory Commission (CBRC), the China Insurance Regulatory Commission (CIRC), and the Foreign Exchange Bureau (FXB), issued the Guiding Opinions on Regulating the Asset Management Business of Financial Institutions, and the authorities began to formally tighten the regulation of the asset management business of financial institutions. Departments began to formally tighten the regulation of financial institutions' asset management business, the difficulty of fundraising began to increase, investors began to be more cautious, the more unstable entertainment industry naturally bore the brunt of the new policy on the cancellation of the e-commerce ticket subsidy, completely announced that the film industry is about to enter the "winter period".

At the end of 2019, the global outbreak of the new crown pneumonia epidemic, the film industry is subject to control, so it will seriously affect investors' judgment on the future earnings of film and television enterprises, so as to reassess the value of the investment company, resulting in the company's share price with the theoretical valuation of the change and change. After the outbreak of the COVID-19 pandemic, investors generally expected a significant decline in the revenue of listed companies in the film and television industry, due to the severe disruption of the film and television industry chain during the early stages of the pandemic. Even if policies such as "resumption of production" were implemented later, many film and television enterprises would find it difficult to resume normal operations in a short period of time. In addition, due to significant differences among investors in terms of professionalism, knowledge, experience, cognitive models, risk appetite, etc., there may be different interpretations of the same adverse events, which would also have a significant impact on the volatility of financial markets in the post-epidemic period<sup>[7]</sup>.

### 3. Development and Impact of Technology

Since the 18th National Congress of the CPC, China's film technology has achieved leapfrog development. Movie production has entered an industrialized track, giving birth to the first CG movie with full special effects, and the first sci-fi blockbuster of international standard has been released, proving to the world the strength of Chinese technology. A batch of domestic movie equipment with independent intellectual property rights, based on the local market, went to the international market at the same time. For the first time, digital movie projection equipment realized zero breakthrough. In the field of international movie technology standard-setting, the discourse power of China's movie standard-setting has been further enhanced. In 2019, the number of Chinese patents related to film and television has exceeded 30,000 items. Among them, the first proposal for a new work project on international standards for Chinese films was approved at the 25th meeting of the International Organization for Standardization's Film Technical Committee, putting Chinese film technical standards on the international stage and providing more possibilities for changing the situation in which Chinese film standards are always followed and passively accepted.

The support of movie technology has driven the Chinese movie industry to run at a high quality and fast pace. With the continuous development of the Internet, the ecology of literature and art has undergone tremendous and profound changes, giving rise to a large number of new types of literature and art, and bringing about profound changes in the concept and practice of literature and art. With the continuous maturity of streaming media technology and platforms, the influence of the Internet on film art and the film industry has become more and more obvious, bringing about various changes in the dissemination of content media ports, and accelerating the integration of innovative forces into the film industry with "Internet+" as a distinctive feature, realizing in-depth integration, and giving rise to a rich variety of new business forms. Internet enterprises have entered the traditional film and



television industry through investment, shareholding, acquisition, etc., and at the same time reconstructed the audience's ticketing and movie watching habits through the information services they specialize in, infiltrating the Internet thinking into the entire film industry upstream, downstream and downstream, and giving the audience more choices and convenience. This change has not only altered the audience's viewing habits, but also promoted the digital transformation of the film industry, providing a new impetus for the structural upgrading and long-term development of China's film industry. At the same time, the continuous maturation of big data algorithms has enabled Internet enterprises to more accurately grasp user profiles, so that they can produce films that are more in line with users' needs through IP conversion, customization and other means. In the construction of film shooting and production bases, since the digitalization of facilities such as the National China Film Digital Base, Wuxi National Digital Film Industry Park, Zhejiang Hengdian Film and Television Industry Pilot Zone, and Tianjin 3D Industrial Park, these bases have leveraged their respective strengths and pursued differentiated development paths. Together with other domestic production companies, they have formed a film technology services industry with a clear division of labor and increasingly diverse offerings. In the projection level, the development of technology is to make China's cinema from the traditional cinema overall upgrade to modern cinema. China's film market has not only achieved a high degree of digitization, with almost 100% digitization of its cinema screens, but its digital ratio has also exceeded that of the world's largest film market, North America<sup>[8]</sup>. These digital screens not only bring the convenience of projection, but also bring the stability of projection quality, and at the same time bring the possibility of upgrading the projection. 3D screens, IMAX, China's giant screen, especially the number and quality of China's own CINITY projection system, have made China's cinema, China's projection market to become the world's most active and most extensive application of the new technology area<sup>[9]</sup>.

Under the influence of a variety of new technologies, the future of film will produce some major changes that can be expected: first, the film will be more visual effects, the film already has more and more visual content is presented by the later digital technology, technology for the visual presentation of the film has brought unlimited possibilities; secondly, the film will be more immersive, VR, AR, MR, and Artificial Intelligence (AI) to bring about the emergence of simulated reality, will bring a more immersive viewing experience; again, the form of film dissemination will change, technology is changing the way of film dissemination, the network greatly extends the long-tail effect of the film and the ability of precise placement, but because the theater broadcasting technology also produces some significant changes can be expected. Will bring a more immersive viewing experience; again, the form of film distribution will change, technology is changing the way of film distribution, the network greatly extends the long-tail effect of the film and the ability to accurately place, but because the theater's playback technology is also improving, so in the short term, the theater will not be completely replaced. Ultimately, film production methods will become increasingly intelligent. The advanced concepts, philosophies, and key technologies of the metaverse, as well as the cloud-based and intelligent upgrades of the film industry, are essential components in advancing the construction of a strong film nation<sup>[10]</sup>.

#### 4. Risks and Opportunities for the Future

Now that we have entered the era of the digital economy, the film industry's recovery pace remains slow. In the first half of 2023, the net profit of major cinema film enterprises showed a modest recovery. However, as seen from the interim financial reports of listed companies, major firms have substantial post-market reserves, which have become the strongest pillar supporting the industry's development. The three years of the epidemic prompted major companies to accelerate inventory clearance, and the backlog of films has gradually been digested. As a result, the industry bubble has

been further squeezed out, positioning China's film industry at a new starting point with a promising aftermarket<sup>[5]</sup>.

From a technical point of view, on the supply side, digital technology has significantly reduced the production, distribution and distribution costs of cultural products, which in turn lowers the market entry threshold. The quality of cultural products is difficult to accurately predict beforehand, and the cultural products that enter the market due to the lowering of the market threshold are not only in greater quantity, but also may be of higher quality. As digital technology increases the supply of quality cultural products, the level of well-being of society as a whole can be significantly increased. The entry of a large number of new products into the market raises concerns about rising search costs for consumers. But in reality, digital technology has also given rise to a number of digital platforms. On these platforms, users can share their consumption experiences so that other consumers can access valid information about the quality of cultural products. Digital technology has facilitated the upgrading of the cultural consumption structure by reducing search costs<sup>[4]</sup>.

Although digital technology can give a greater boost to the film industry, it is still important to realize that the development of the film digital industrial ecology still faces some problems and challenges: digital technology is not mature enough and popularized, and there are still many producers adopting the traditional mode of film production and screening; the market competition is fierce, the industrial chain is not perfect enough, the synergy and cooperation among enterprises are not close enough, and the virtuous cycle of the digital industrial ecosystem has not yet been really established; technological innovation and R&D are insufficient, and China's movie industry still has a lot of room for development in the application of virtual reality technology (VR), augmented reality technology (AR), artificial intelligence technology (AI), and so on. The success of the movie industry in the digital era requires the full cooperation of participants in the same ecosystem. China's film industry should actively adapt to the needs and changes of the digital era, and build a virtuous circle film digital industry ecosystem by strengthening technological innovation, promoting the construction of the digital industry chain, strengthening copyright protection, enhancing intra-industry synergy and cooperation, and cultivating excellent talents, so as to realize China's transformation from a big film country to a strong film country<sup>[11]</sup>.

## 5. Conclusions

Over the past decade, the Chinese film industry has achieved remarkable progress, propelled by policy support, technological advancements, and market expansion. National policies have provided a solid foundation for the development of the film industry, promoting its scaling up and standardization. The growth of the economy and financial markets has injected strong momentum into the film industry, which has quickly recovered and continued to grow despite the impact of the pandemic. The rapid development of technology has driven the digital transformation of the film industry, enhancing production quality and the viewing experience. However, the industry still faces many challenges, such as fluctuating profitability of some enterprises, insufficient popularization of digital technology, and lack of close collaboration within the industrial chain.

Looking ahead, the Chinese film industry stands at a new starting point in the digital economy era. The industry should seize the opportunities brought by technological progress, strengthen technological innovation, and promote the digital upgrade of film production, distribution, and screening. It should also improve the industrial chain, enhance cooperation among enterprises, and build a virtuous industrial ecosystem. At the same time, attention should be paid to copyright protection and talent cultivation to improve the overall quality and competitiveness of the film industry. Against the backdrop of globalization, Chinese films also need to strengthen international cooperation, promote Chinese cinema to the world, and enhance its international influence. In



summary, the Chinese film industry should actively meet challenges, seize opportunities, and achieve the transformation from a major film country to a strong film country, contributing to the prosperity and development of China's cultural industry.

## References

- [1] WALDFOGEL J. How digitization has created a golden age of music, movies, books, and television[J]. *Journal of Economic Perspectives*, 2017, 31(3): 195-214.
- [2] Fang Jiexin, Zhang Xue, Liu Da. A critical decade of digitization and informatization in the film industry[C]// Editorial Board of Film Blog-Impact. *Film blog-influence* (2017 No.05 Total 113). 2017:49-55.
- [3] E Guan'an, Jing Yi. Research on the application and value of big data in the movie industry[J]. *Satellite TV and Broadband Multimedia*, 2019(21):99-100.
- [4] Li Junbao, Zhang Tao, Shi Zhanzhong. High-quality development of cultural industry in the context of digital economy: theoretical extrapolation and empirical evidence based on the movie industry[J/OL]. *Journal of Systems Management*:1-13[2023-09-23].
- [5] Yang Wen. Performance repair weak recovery industry recovery to speed up[N]. *China Press, Publication, Radio and Television News*, 2023-09-13(008).
- [6] Zhou Zijun. Research on the capitalization process of China's film industry (1978-2018) [D]. Shandong University, 2019.
- [7] Zou Jiaxin. Research on the impact of the new crown pneumonia epidemic on the value of listed companies in China's film and television industry [D]. Shandong University, 2022.
- [8] Motion Picture Association of America (MPA). Theme Report 2021[R/OL].
- [9] Yin Hong. Technological empowerment: The path of China's movie power[J]. *Modern Film Technology*, 2022(10):4-8.
- [10] Liu Da. Reflections on the Cloudification and Intelligent Upgrade of the Film Industry in the Era [J]. *Modern Film Technology*, 2022, (04): 4-9.
- [11] Gao Rong. New opportunities for the development of Chinese film digitization[J]. *Culture Industry*, 2023(22):133-135.