

Analysis on the development and influencing factors of animation industry in China

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Abstract: With the arrival of the new media era, animation has become an important way of entertainment. This article first from the animation industry output value and imports, analysis the current situation of the development of animation industry, then take the measurement model of stepwise regression to analyze the influence factors. The empirical results show that our country animation industry output value and the national culture and related value added of industry were positively correlated, and negatively correlated with animation TV imports. Finally, this paper puts forward countermeasures and suggestions from three aspects of grasping consumer demand, creating extreme animation and innovating business model.

Keywords: animation industry, influencing factors, empirical analysis

1. The introduction

As a form of inheritance of Chinese national culture, animation not only has unique national characteristics, but also contains rich cultural deposits. With the proposal of the slogan of cultural power, China attaches more and more importance to the construction and development of culture. Animation is an important part of China's cultural industry, and its sustainable and stable development plays a decisive role in the rise and prosperity of China's cultural industry. At the same time, as an important form of entertainment for today's people, animation has great significance for stimulating national consumption, increasing GDP and promoting the sustained and stable growth of China's economy.

Since 2015, China's animation industry has entered a period of rapid development. With the emergence of high-quality animation works at home and abroad, the market scale has further expanded, and the number of pan-two-dimensional users has exceeded 400 million. However, the year 2019 ushered in the cold winter effect of capital, the investment of China's animation industry dropped significantly, and the investment system of the animation industry is not perfect, and investors face further increased risks, leading to the financing difficulties of the animation industry, and the development is limited. In the face of such a dilemma, what measures will China's animation industry take to highlight the market competitive advantage and maintain the original growth trend has become a problem that animation industry producers must seriously consider. This paper analyzes the economic, cultural and market aspects of the animation industry, establishes a stepwise regression econometric model, and makes an empirical analysis of the factors affecting the animation industry.

2. Analysis of the development status of China's animation industry

(1) Analysis of the current situation of China's animation industry

As can be seen from Figure 1, China's animation industry is in a period of steady growth, and the total output value of animation industry is increasing year by year. According to the data analysis of the National Bureau of Statistics, the total value of animation production in 2014 reached about 100 billion yuan, which achieved a growth rate of 13.4% compared with 2013. In 2018, the growth rate slowed down to around 11.5 percent. Except for a large decline in the growth rate in 2018, the total output value of the animation industry increased at a good growth rate from 2013 to 2019. The total output value of the animation industry continued to increase at a steady speed and maintained a good development trend.

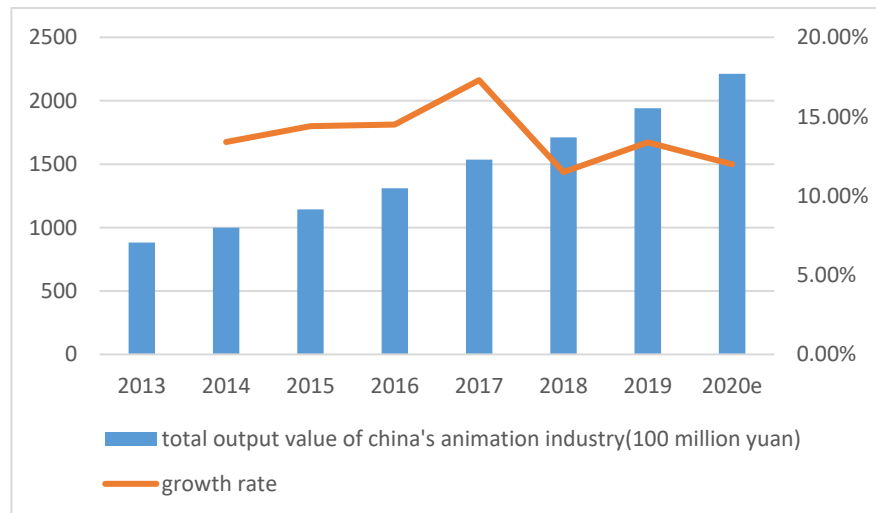


Figure 1: Change trend of total output value of China's animation industry

(2) Analysis of Chinese animation market environment

Due to the mature animation production mode, advanced technology, large-scale production and other factors, leading to the invasion of foreign animation industry, the domestic animation market competition is fierce. Moreover, there is a lack of well-known domestic animation works, lack of Chinese cultural elements, it is difficult to arouse the resonance of the people, and lack of market appeal. As can be seen from Figure 2, China's demand for foreign animation works is increasing year by year, and there is a strong dependence on foreign animation works, indicating that China's original animation market is not strong in competition, and the ability to develop and innovate needs to be strengthened.

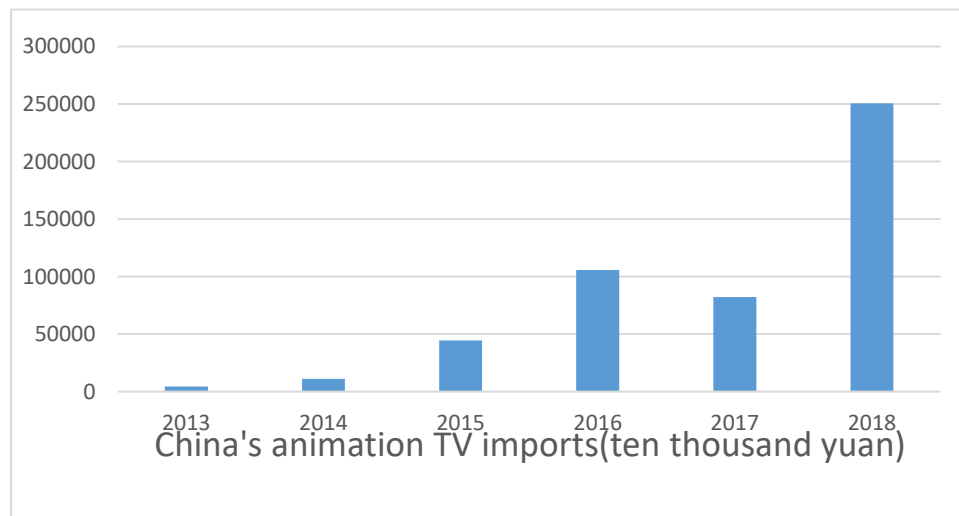


Figure 2: Change trend of import value of Chinese animation TV

3. Empirical analysis of influencing factors of China's animation industry

There are many factors affecting the development of China's animation industry. This paper mainly discusses the factors from three perspectives: economy, culture and market.

(1) Variable description and econometric model

Based on the current situation of the development of the animation industry, this paper explores the factors affecting the development of the industry. According to the comparability of data, it conforms to the principle of economic significance. Taking the total output value of animation industry as the explanatory variable (y), five factors are selected from three aspects of economy, culture and market as explanatory variables. That is the per capita consumption expenditure of education, culture and entertainment (x_1), financing capital (x_2), the added value of national culture and related industries

(x_3), the user scale of pan-quadratic yuan (x_4), and the import amount of Chinese animation TV (x_5). In order to establish a more accurate econometric model, considering the possibility of multicollinearity among variables, a simple correlation coefficient test between explanatory variables was first carried out, and the results were analyzed by STATA software as shown in the figure below:

Table 1: Table of Phase Relationship Numbers

	x_1	x_2	x_3	x_4	x_5
x_1	1.0000	0.9858	0.9835	0.9936	0.8737
x_2	0.9858	1.0000	0.9845	0.9683	0.9192
x_3	0.9835	0.9845	1.0000	0.9661	0.9350
x_4	0.9936	0.9683	0.9661	1.0000	0.8500
x_5	0.8737	0.9192	0.9350	0.8500	1.0000

It can be seen from the table that there is a high correlation between the five explanatory variables, so we adopted the stepwise regression method to eliminate the multicollinearity among the variables. The three variables x_1 , x_2 and x_4 are excluded by SPSS software for calculation. The results are as follows:

Table 2: Results of multiple regression analysis

Model Summary									
Model	R	R Square	Adjusted R Square	Std Error of the Estimate	R Square Change	F Change	df1	df2	Sig.F Change
1	0.999 ^a	0.999	0.998	15.644	0.999	1033.924	2	3	0.000

When R Square is adjusted to 0.998, the fitting effect is good. Two factors related to China's animation industry are screened out, namely, the added value of national culture and related industries (x_3) and the import amount of Chinese animation and TV (x_5). Therefore, the optimal linear regression function $y=f(x_3, x_5)$ is obtained, and the specific function form is as follows:

$$y = -292.548 + 0.55x_3 - 0.001x_5 \quad (1)$$

According to (1), the total output value of animation industry is positively correlated with the added value of culture-related industries in China. The domestic animation industry is a part of the cultural and entertainment industry, and a good environment will naturally promote the development of some industries. A good macro environment for culture and entertainment is not only reflected in the strengthening of government investment in the cultural industry, but also reflected in the great improvement of the copyright environment of the cultural industry. In today's era, China is committed to building a cultural power and improving its cultural soft power. Animation products, as a unique form of carrying national culture, show the national spirit and convey Chinese values. Therefore, paying attention to the protection of intellectual property rights is conducive to the marketing of animation and the dissemination of China's unique charm of Chinese culture.

The result of regression analysis shows that the animation industry is negatively correlated with the import amount. It is not difficult to understand that due to the lack of unique style of Chinese animation, imperfect industrial chain and high investment risk, many animation enterprises are often willing to acquire high-quality foreign animation works to increase their own cash flow. With the overall expansion of external demand, the market share of the domestic animation industry has decreased, and the animation industry has also fallen into a difficult business competition environment. On the contrary, Japan's exports to China are increasing year by year. The reason is that when Japan exports animation products to China, it pursues cross-cultural communication strategy, that is, it makes good use of Chinese elements and deeply explores Chinese cultural characteristics to create high-quality animation works, thus obtaining significant economic benefits in China. China's animation enterprises should also learn from this development path, make good use of their own cultural elements, enhance the carrying capacity of content and artistic expression, enhance cultural resonance, create the ultimate animation products, improve the core competitiveness of the animation industry, so as to break the trade deficit of China's

animation industry.

4. The development strategy of Chinese animation industry

Based on the analysis of the above situation, the author proposes three feasible strategies to promote the steady development of China's animation industry.

(1) Grasp the characteristics of consumer demand and highlight a good user experience

With the increasing popularity of the Internet, the original residents of the Internet are often young people. Animation entrepreneurs should have a deep understanding of the demand characteristics of this group of young consumers, and make customized animation works according to their needs, so as to win a good reputation among consumers. Clear the needs of animation consumers, highlight good user experience, and establish a good product perception impression.

(2) Create the ultimate animation works, seize the market opportunities

Domestic young animation works still occupy a certain market share, animation production level and animation industry capacity still need to be improved. With the advancement of technological revolution, technology is particularly important for the development of animation industry. To realize the integrated development of science and technology and culture, to use science and technology to innovate the form and content of animation, to realize the organic combination of vision and hearing, to deeply cultivate the core connotation of animation, to form a virtuous circle of animation industry chain. On the other hand, as a part of China's cultural and entertainment industry, animation industry is spreading China's excellent traditional culture. We should properly add the unique cultural elements of our country, make use of the excellent artistic expression forms of our country, creatively produce animation works in line with the national aesthetic style, and strive to build a high-quality "national cartoon" brand.

(3) Make good use of crowd-sourcing and collaboration to innovate business models

The so-called crowd-sourcing is the Internet collaboration mode with "collective thinking" and hierarchical structure as the core. With the advent of the Internet era, consumers are increasingly involved in product production. Customize product according to the demands of consumers tend to win the favor of the consumers, so if in the process of animation production, take the advice of the consumer, or letting customers involved in the production of the product, makes the animation enterprise to produce the product more relevant real market demand. At the same time, the use of crowd-sourcing transaction mode reduces the impact of the cold winter of capital. Compared with the traditional external mode, crowd-sourcing pays more attention to the integration and sharing of social resources, reduces labor, technology, capital and other production costs, thus improving the competitiveness of enterprises and creating greater value. In addition, the use of crowd-sourcing rather than outsourcing transaction mode is conducive to reducing the demand for foreign animation products, promoting the growth of the total output value of China's animation industry, and promoting the development of cultural cause.

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