

Analysis on the Reasons of Internet Celebrity Economic Growth during COVID-19

Changrui Gong^a and Xinyue Miao^{b*}

University College Dublin, Dublin Ireland

^agongchangrui@foxmail.com, ^bxinyue.miao0427@gmail.com

*corresponding author

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Abstract: Under the impact of covid-19, the epidemic has weakened market demand in most countries and regions around the world, affecting their industrial chains and supply chains. As the nation began to prepare for the epidemic at home, the traditional brick-and-mortar sector suffered a huge impact, and the 'internet celebrity economy', catalyzed by both the rapid development of internet technology and the outbreak of the epidemic, developed rapidly and had a significant impact on the country's economic development. At the same time the internet celebrity economy, to a certain extent, effectively mitigated the impact on the overall economy during the epidemic. This paper elaborates on the development of the internet celebrity economy before and after the epidemic, and analyses the supply and demand relationship of the internet celebrity economy from the supply side and the demand side respectively. Through analysis, it is concluded that the important reasons for the booming internet celebrity economy during the economic downturn during the epidemic. This is mainly due to the increase in consumer leisure time, the shift from the real economy to the internet economy, the wide range of services, technological advances and the development of new media industries, as well as the state's support for economic recovery. The study of the internet celebrity economy will allow us to analyse the changing trends in consumer behaviour and promote the optimisation and upgrading of traditional industries.

Literature Review

The internet celebrity economy can be classified according to online and offline criteria, and the positive impact of the internet celebrity economy in stimulating consumption, promoting employment and driving the development of related industries [1]. At the same time, the regulatory mechanism cannot keep up with the development speed of internet celebrity economy and other reasons also bring a lot of adverse effects to internet celebrity economy, such as the tax system needs to be improved, the quality of products and services is uneven, the influence of social atmosphere, investment overheating and so on. The scale of "internet celebrity economy" would grow rapidly, the industrial chain would be perfected, and MCN would gradually become the core [2]. Internet celebrity economy has a positive impact on the transformation of traditional e-commerce structure, improvement of economic structure and increase of social employment.

The digital economy is an important path to effectively integrate epidemic prevention and control with economic and social development. The overall scale of China's digital economy is currently expanding, and the digitisation of industries has become the main engine of the digital economy. China's digital economy is expected to show rapid and high-quality development, and this rapid development of the digital economy is an important factor in promoting the internet celebrity economy [5]. During the covid-19 pandemic, e-commerce became an alternative source of consumption. People avoided going out, stayed socially distant and shopped from home leading to an overall increase in e-commerce sales. The use of media increased significantly during this period and as a result e-commerce internetsites grew rapidly during this time. This consumer behaviour and the rapid growth of e-commerce is thought to influence future consumer behaviour[8].

1 Internet Celebrity Economic Definition

With the deepening of the application and penetration of information technology in different life scenarios, while changing residents' living and consumption habits, different new economic industries have also been spawned, bringing new business forms, business models and development space, among which internet celebrity economy is particularly prominent. Internet celebrity is the abbreviation of Internet celebrities. Internet celebrities refer to those who become popular and have a certain amount of social assets on social platforms because of a certain event or behavior in real or online life that attracts the attention of netizens. Internet celebrity economy, is an economic phenomenon born in the Internet era. It means that network celebrities gather traffic and heat on social media, carry out marketing to huge fan groups, and convert fans' attention to them into purchasing power, so as to turn traffic into cash

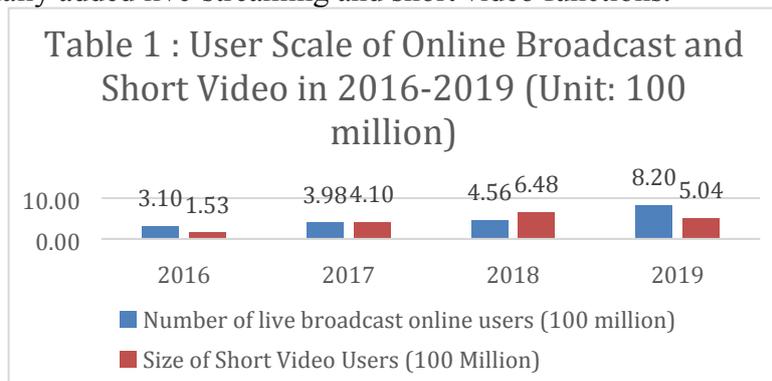
2 Internet Celebrity Economic Development during the Epidemic

2.1 Development History

With the acceleration of 5G business, internet celebrity economy will also usher in a golden period in the future. From 1997 to 2002, the whole society was in the PC Internet (2G era), the network technology was not mature, and the penetration rate was not high. During this period, many people would also become Internet celebrities by publishing some language comments and novels on the Internet. During the period of 2011-2014, with the development of China's 3 g network, all kinds of jokes hand big V video original content rise, they are WeChat microblogging platforms such as personality, knowledge of speech. From 2015 to now, China has entered the 4G era. The internet celebrity economy has been fully popularized by the network. Short videos of We Media are mainly used by them through videos. Audio content forms "We Media", which quickly becomes popular on the Internet through Tiktalk, microblog, Kuaishou and other platforms Typical representatives include Li Jia Qi and other well-known internet celebrity.

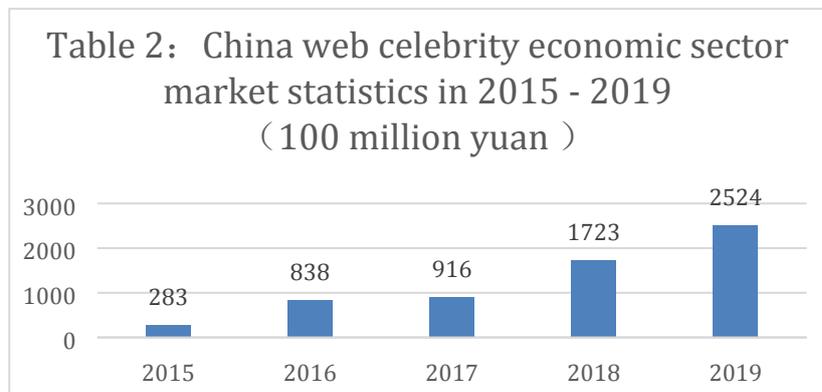
2.2 Market Size

As 5G commercial speeds up, the internet celebrity economy will also have a golden age. In recent years, due to the rapid rise of video platforms, as shown in Figure 1, the number of online live broadcast people increased from 310 million in 2015 to 504 million, an increase of about 1.62 times. In 2019, the market size of China's short video users has reached 820 million people, and the increase of short video users is about 5.35 times that of 2015. Video platform has also become one of the important platforms for internet celebrity e-commerce in China. Since e-commerce platforms have "goods and consumers" and video platforms have "content and consumers", the two platforms have been constantly converging in recent years. Major e-commerce platforms such as Alibaba, JD.com have gradually added live-streaming and short video functions.



Data source: Qianzhan Industrial Research Institute

Figure 1. User Scale of Online Broadcast and Short Video in 2016-2019



Data source: Qianzhan Industrial Research Institute

Figure 2. China web celebrity economic sector market statistics in 2015 - 2019

According to the data in Figure 2, the economic market size of internet celebrity in China exceeded 250 billion yuan in 2019, and it is expected to exceed 500 billion yuan in 2022. At the present stage, China internet celebrity economic scale advantage is obvious. The advertising industry is one of the main ways to realize internet celebrity economy. With the rise of private traffic, with the advantages of accurate customer matching and strong conversion power, internet celebrity advertising marketing has been attached great importance to by brand owners, and the market size has continued to grow. Relevant data show that in 2019, the scale of internet celebrity advertising marketing market in China reached 49 billion yuan, with a growth rate of 63.3%, and it is expected to reach 75 billion yuan in 2020, with a year-on-year growth rate of 53.1%. With the rapid development of China's live broadcasting business, the market size and penetration rate still have broad room for growth. In 2019, the market size of China's live streaming e-commerce is about 315 billion yuan, and the penetration rate of live streaming e-commerce is about 3.7%. With the entry of major traffic into the Bureau's live streaming e-commerce, it is expected that the market space will be close to trillion in 2022.

2.3 Internet Celebrity Economic Development in China after the Outbreak of the Epidemic

In 2020, the COVID-19 hit most countries and regions in the world, affecting the global industrial and supply chains, weakening market demand and putting downward pressure on the Chinese economy. Internet celebrity economy has become a dark horse in this epidemic, becoming a sharp weapon for all walks of life to break through the trend. It not only ushered in explosive growth in the first half of the year, but also became a bright landscape in the capital market.

Around the Spring Festival in 2020, the average daily active users of video software such as Tiktok and Mango TV are between 10 million and 50 million. With the increase of Chinese residents' purchasing power, cultural and entertainment consumption and other spiritual entertainment input shows an upward trend, and new economic forms such as "house economy" and "internet celebrity economy" are developing rapidly. According to statistics, after the Spring Festival, the playback volume of Tiktok increased by 76%, and the playback volume of Mango TV increased by 58.20%.

In 2020, a sudden COVID-19 epidemic forced most offline businesses to suspend business, and e-commerce live broadcast became the central hub connecting suspended businesses with consumers who stay at home. The era of nationwide live broadcast selling goods may be accelerated. During the epidemic, a large number of people stayed indoors, and the short video became an important window for information from the outside world. At the same time, its role in the prevention of the epidemic also contributed a lot. Since many agricultural products were unsalable during the epidemic, many county magistrates took the lead in live broadcasting to help sell local agricultural products and promote the development of local economy. At the same time, many internet celebrity's cooperated with farmers in remote areas to help solve the problem of unsalable agricultural products in remote areas. In addition, affected by the epidemic, many factories piled up thousands of inventory, most of the factories began to shift their marketing

strategy to internet celebrity economy, through the influence of internet celebrity, to solve the problem of unsalable products.

3 Analysis of Supply-demand Relationship Model of Internet Celebrity Economy during Epidemic Period

3.1 Supply-side Analysis

Influenced by the covid-19, China's GDP growth rate dropped sharply in 2020, and there would be downward pressure on China's economic development, among which catering industry, tourism, entertainment industry[3]. At the same time, in order to prevent the rapid spread of the epidemic, the whole country implemented a strict lockdown policy, all factories stopped production, all enterprises switched from offline office to online office, all schools were closed, and the offline education industry was also severely impacted. Therefore, from a macro point of view, China's social market supply greatly decreased during the epidemic, resulting in a left shift in the supply curve of the whole society. However, due to the impact of the epidemic, residents are isolated at home and have more time for leisure and entertainment. Many people begin to share various types of short videos through platforms such as Tiktok, Kuaishou and microblog, such as funny videos, loving relatives, the latest situation of the epidemic, and delicious food, which quickly become popular on the Internet. From the supply side of internet celebrity economy, a large number of popular internet celebrity became one of the important driving forces to promote the development of internet celebrity economy during the epidemic. Except during the outbreak of popular internet celebrity, every Internet broadcast platform is also the another reason to promote internet celebrity economic supply side shift to the right Shopping software such as Taobao and Jingdong add live broadcasting function, while live broadcasting software such as Douyin and Weibo add shopping function. The integration and support of each software provide a good shopping environment for consumers to shop during the epidemic.

3.2 Demand-side Analysis

Influenced by the epidemic in 2020, the total social demand declined, leading to a left shift in the social demand curve. As a result of the epidemic, the catering, tourism and entertainment industries cannot operate normally, resulting in reduced consumption and thereby reducing the total social demand. In addition, due to the fact that most people are unemployed at home and the increase of unemployment rate and other reasons, the decrease of residents' income leads to the decrease of purchasing power, which is also an important reason for the decrease of total social demand. From the perspective of consumption, the contribution rate of final consumption expenditure to GDP growth in 2020 will drop directly from 63.5% in the first quarter to negative. It is obvious that the total social demand showed a downward trend in 2020.

Although the outbreak period fluctuated to a certain degree of social total demand, but due to the residents during the period of the outbreak has more leisure time, people's leisure entertainment began to shift, mainly from offline to online, for example, before the outbreak, people would choose to go to the cinema. After the outbreak, people watched movies on the Internet through mobile terminals. Faced with the recommendation of various online broadcast platforms and internet celebrity, consumers can have a comprehensive understanding of the products through intuitive videos and detailed explanation of the products by internet celebrity, thus arousing consumer desire and purchasing behavior, leading to an upward trend in the demand side of internet celebrity economy[4]. In addition, due to the internet celebrity effect of internet celebrity, fans will blindly buy the products recommended by internet celebrity due to star chasing, which will lead to the increase in demand. However, these analyses are slightly one-sided. From the perspective of consumers' purchasing power, due to the decrease of residents' income during the epidemic period, their purchasing power declined, and most of the residents' consumption demands turned to daily necessities and medical and health supplies. Why, in this context, internet celebrity economic development during the epidemic period was not suppressed but increased significantly? The

following will analyze why internet celebrity economy can develop rapidly during the epidemic from four aspects.

4. Analysis of the Reasons for the Growth of the Internet Economy during the Epidemic

The internet economy has become a popular media form with its instantaneous, participatory, social and accompanying features. Driven by multiple factors such as policy, technology and market, network broadcast plays an important role in presenting daily life and promoting social and economic development. Especially during the epidemic, the internet economy played an important role in promoting social development with the collaborative participation of multiple subjects such as live streaming platforms, internet casters and live streaming guilds. In this paper, we analyse the overall development of the network broadcast industry and explore the main reasons for the growth of the internet economy during the epidemic.

Under the severe epidemic, people's work and lifestyle habits and attitudes towards consumption have changed dramatically[8]. Driven by user demand and technological innovation, the number of online consumer users has been increasing and the market size has been growing. As a result, most consumer buying attitudes and behaviours have shifted to online shopping during the pandemic. It is perceived as an efficient and positive way to shop because of the restrictive action control orders from the government. The growth of the digital industry has also been a major source of stimulation for the online economy. It is the retail industry that is changing and online shopping will gradually penetrate the market in the coming years as the way consumers prefer to buy changes.

4.1 Increase in Consumer Leisure Time

The 2020 epidemic has led to extended holidays and the government-led holiday extension policy has created unprecedented opportunities for the online chain. The additional holiday policy is an effective strategy to increase domestic demand in the economy[7]. The extended holiday period of this epidemic saw a huge increase in online consumer demand and an acceleration in the size of the online economy. 5G combined with the impact of extended holidays on consumer behaviour and other factors, the internet economy is expected to become a must-have for more consumers. During the epidemic, people spend less time travelling, partying and going out, and this time commitment is reduced by up to 98%, so using the internet and online platforms to get information is an important part of the user's time commitment.

As going out was somewhat restricted, consumers reduced their access to offline channels during the epidemic. This is where new retail, community supply and distribution services and online shopping stood out. According to the survey, the top 3 channels that consumers increased were vertical e-commerce or lifestyle service platforms (Daily Fresh, Jingdong To Home), community WeChat point-of-sale online channels and comprehensive e-commerce platforms (e.g. Taobao, Pinduoduo). This shift has had a huge impact on people's consumption behaviour. Overall, the willingness to use such online channels showed an increase after the epidemic. Time spent on online activities rose across the board during the epidemic, mainly including social networking, news and information, online education, video and online shopping. The increase in online shopping input was 40.6%. The increase in consumer leisure time is therefore an important reason why the online economy, especially in the form of short videos and live videos, which are both presented in this epidemic, showed rapid growth.

4.2 The Shift from the Real Economy to the Internet Economy

The outbreak of the epidemic has had a huge impact on the real economy, and the COVID outbreak may have triggered a new round of economic "take-off from the physical to the virtual", enabling a digital transformation of the real economy [10]. Since the outbreak of the new epidemic, the whole country has started to take precautions against the epidemic at home, and the development of the traditional real sector has been greatly affected. The internet economy, catalyzed by both the rapid development of internet technology and the epidemic outbreak, developed rapidly and became an important support force for the country's economic development,

effectively mitigating the impact on the overall economy during the epidemic. This has facilitated the digitisation and knowledge-based transformation of the real economy, with thousands of businesses coming together to accelerate the integration of big data with the real economy. These real economies will further contribute to the development of the Internet economy and the growth of the national economy[10].

Based on an online network platform and driven by diverse development needs, the internet economy has developed rapidly in the context of universal home isolation, promoting national economic development. Although the internet economy has a certain scale of development, its rapid growth in a short period of time is mainly due to the epidemic. The outbreak of the epidemic caused the entire population to take care of the epidemic at home, and under these conditions the internet economy developed passively and grew rapidly in a short period of time. While covid-19 has had a huge impact on our economy and way of life, it has also given a strong impetus to the innovation and development of the internet economy and provided a historical opportunity for the development of new internet industries. The development of the internet economy is now showing signs of slowing down as the epidemic slows down, and many problems have been revealed during the epidemic. To ensure the healthy and stable development of the internet economy in the post-epidemic era, it is urgent to analyse the situation of the internet economy during the epidemic.

4.3 A Wide Range of Services to Meet the Diverse Needs of the Population

In recent years, per capital consumption levels have risen, and internet technology and supporting services have been optimised and upgraded. Before the epidemic, the internet economy's consumer base was mainly young people, and its services were mainly in the animation, gaming and online video industries. Due to the impact of the New Crown epidemic, the audience of the internet economy has become diversified, with people of different ages, occupations and geographical areas being actively or passively influenced by the internet economy, making its service targets expand rapidly. The audience of the internet economy grew substantially during the epidemic through celebrity bandwagoning and other means. The internet economy is not only reflected in games, anime and everyday shopping, but the internet celebrity effect is growing in various areas, such as pet health and online learning. In this context, webcasting fully releases and highlights its multiple functional attributes such as presence, real-time and interactivity, tapping into services such as live+education and live+entertainment functions.

Webcasting brings new opportunities for innovation in traditional education models and entertainment. It is this diversification of the internet economy that reduces the impact of the epidemic on people's productive lives. It also opens up a broader space for the development of the internet economy while accelerating the penetration of the online economy into people's lives. Secondly, there is a wide geographical range. Tier 1 cities usually have good network facilities, professional technical personnel and a larger market, which makes the internet economy more prosperous in Tier 1 cities. During the epidemic, as the entire population was quarantined at home, the scope of internet services also rapidly expanded from cities to towns and villages. As a result internet economy education and training, health care and content consumption resources also penetrated more into lower tier cities. The epidemic has stimulated demand for online economy among urban as well as rural users, which is expected to further increase the scale of internet users in rural areas, bridging the digital divide between urban and rural China and expanding the scope for the development of internet economy.

4.4 Technological Advances and Developments in the New Media Industry

The popularity of 5G and the innovative development of new technologies such as VR and AR will enrich the user experience and enable better development of live webcasting. 5G technology and the Internet of Things will be the key drivers of the next economic paradigm shift [6]. For example, live streaming has advantages over traditional e-commerce shopping in terms of user interaction, as it can visually display product information and recreate the offline face-to-face shopping scenario. Users can interact with the anchor in real time and have a more detailed and comprehensive understanding of the product. At the same time, the application of cloud computing

and artificial intelligence technology helps live streaming platforms to more accurately profile users, explore vertical market segments and innovate recommendation mechanisms and supervision methods, thus continuously improving the efficiency of live streaming platform operations and realization.

The development of the new media industry promotes the production of better quality content. Webcasting shows a trend towards vertical segmentation in terms of content categories. Tapping into vertical areas, the scene is more diversified in terms of content categories. As the hottest new form of audiovisual communication, the integration of live broadcast and short video is showing an accelerating trend [9]. The integration of live streaming and short-form video is a win-win situation through the complementary advantages of both media, platforms and users. By extending the original content format to short videos, webcasting can effectively enhance its social and user stickiness with the help of short videos. And the introduction of the live streaming function of short videos can enhance its real-time and interactive nature with the help of live streaming. The live broadcast scene shows significant daily and quality characteristics. The rise of the internet economy is thus closely linked to the growing popularity of mobile internet, the formation of digital consumption habits and the increasing sophistication of the logistics system. The development of new media has also accumulated a large number of talented people who have experience in live streaming and are willing to work in this industry.

4.5 Promoting Social-economic Recovery and Development

With the continued spread of the covid-19 epidemic, China's and even the world's economic development has been impacted. From the perspective of epidemic prevention and safety, contactless shopping is therefore sought after, which explains the popularity of the internet economy. In this context, the webcasting platform gave full play to its media advantages, building a new industrial chain for them and helping their digital transformation, thus effectively contributing to social-economic development during the epidemic.

The internet negotiates a super-social or 'communicative intimacy' between internet and followers through audience feedback [11]. This relationship allows consumers to rely on internet to make shopping judgement. This trend contributed to the rapid growth of the internet economy during the epidemic. The new pneumonia epidemic has brought new challenges to the fight against poverty. Faced with the dual pressure of poverty eradication and the new pneumonia epidemic, many government officials in impoverished areas have responded to the call to broaden sales channels by live-streaming their products. The ability of digital media has created a new culture of consumerism, enabling the rise of private label and influential culture [12]. Live streaming platforms provide the technology and traffic to support the internet economy. The development of this internet economy promotes the effective grafting of digital technology and rural life, helping to build a digital countryside. Data shows that from the start of the epidemic to the end of February, Kwai has helped at least 500,000 offline businesses to resume business, with its single-day live broadcast viewing over 100 million +; from February to the end of May, Taobao Live broadcast 450,000 live broadcasts, helping 1,200 brand shops to sell live. In summary, during the epidemic, the internet economy, with its own advantages, played an important role in helping to spread information about the epidemic, meeting people's diversified development needs, and even promoting social and economic development, fully demonstrating its social value.

5. Conclusion

This paper combined consumption data and policy measures during the epidemic to conclude that residents' consumption habits began to switch from offline to online. The development of the internet economy is also examined by examining the data of major online platforms (e.g. Tiktok, Taobao Live, etc.) and the market size of the internet economy in the past five years. The internet economy became an important force for economic development supported by online platforms and consumers.

New technologies and media are important drivers of change in lifestyles and modes of

production. internet economy has played an important role in helping economic development, promoting cultural dissemination and empowering social innovation, thanks to multiple factors such as policy and technology. Especially during the epidemic, live streaming has become an important means of corporate self-help, online learning and cultural entertainment. However, the internet economy is not without some fake content, such as fake products that sometimes appear in e-commerce live broadcasts. Therefore, the future of the internet economy needs to be more well regulated. Internet economy will not only have a great impact on the Chinese economy and industry, but will also change people's consumption behaviour patterns in the short and long term. People's consumption patterns, consumption targets and consumption capacity have changed in a series of ways as a result of the epidemic. By analysing the reasons for the growth of the internet economy during the epidemic, this paper can therefore make an important contribution to the study of future trends in the changing consumer behaviour of the population, to the promotion of the optimisation and upgrading of traditional industries and to the study of the responses of enterprises to changes in consumer behaviour patterns. Future research could focus more on the changes in consumer behaviour and the diverse consumption patterns of the internet economy in relation to different groups of people.

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