

# *Using the PESTEL Analysis to Determine the Effectiveness of New Digital Media Strategies*

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**Abstract:** In recent years, new digital media marketing strategies, for example, online streaming, NFTs, and Metaverse have been frequently seen and discussed. However, the effectiveness of these strategies has varied between countries. The PESTEL analysis is a tool that can help to explain the answer to this inconsistency. This paper aims to discuss and analyze emerging digital media strategies by using the PESTEL analysis. The analysis focuses on six aspects, which are political, economic, social, technological, environmental, and legal, to examine each digital media strategy. Through the PESTEL analysis and real-life examples, the results have shown that these strategies have the potential to attract new customers and raise public attention. Each digital media strategy can help to boost sales and increase brand recognition. The PESTEL analysis shown the advantages of implementing these strategies, but the analysis also addresses the shortage of these strategies.

**Keywords:** Marketing strategy, Digital media, Web 3.0, PESTEL analysis, NFTs

## 1. Introduction

As time goes by, Gen Z (people who were born in-between 1997-2012) will be the next leading consumer group. According to research studies, even though, it is difficult to define their characteristics since most of them are under-age, Gen Z has grown up in a social network era where technologies are more advanced, social norms are shared, and they show greater tolerance to aspects such as LGBT rights [1]. Thus, many brands and corporations are starting to switch to more dynamic and unconstrained marketing strategies to capture the attention of Gen Z.

The purpose of this paper mainly focuses on discussing the effectiveness of emerging digital media marketing strategies. Nowadays, companies invest largely in doing promotions on social media platforms. Hence, strategies like sales promotion using live streaming on social media platforms, launching NFTs, and introducing the Metaverse concept are becoming a trend. But blindly copying these strategies will not bring benefits to a company. Using the six factors in the PESTEL analysis, which are Political, Economic, Social, Technological, Environmental, and Legal can test the feasibility of each digital media strategy. This paper will discuss and dissect three types of commonly seen and debated strategies: live streaming, NFTs, and Metaverse as the research examples.

## 2. Why Gen Z is Special

When implementing a marketing strategy, a company needs to locate the right target market. So, a customer behavior study is necessary to make sure a company is prepared for the implementation. Subsequently, an important aspect of customer behavior study is self-efficacy, defined as people's beliefs in one capability to execute a specific behavior [1].

Compared to elderly consumers, youth are less likely to have strong brand loyalty. Their natural characteristics make them willing to experience and explore new things. Moreover, to have loyal customers, customer satisfaction is key to strengthening the bond between the sellers and buyers. Satisfied customers show more engagement with the company [1]. However, studies suggest that there are factors, such as personal characteristics, type of product, brand, or firm may moderate the relationship [1]. Thus, age can affect self-efficacy causing Gen Z customers to become uncertain and irresolute when making purchase decisions.

Gen Z has grown up in a digital media era where knowledge and communication are made expediently. They are more open to accepting and understanding diverse aspects compared to other generations and emphasize the freedom to express ideologies [2]. They were born in the right era where technology can enable social networking online, driven more by cause and common purpose than economic status [2].

Gen Z's uncharacteristic views have challenged the stereotypical views [2]; they became the catalyst that stimulated the traditional market to change strategies.

## 3. Digital Media Strategy

With the advancement of technology, people can search for information on the Internet in a split second with thousands of results. The popularity of computers and smartphones has made people enjoy the convenience that technology brought for a decade. The Internet is fascinating because it allows people to create content like videos or articles independently. Nowadays, some applications and websites have become famous for their video-sharing features, such as YouTube, Bilibili, and Douyin. The flexibility these platforms offered has attracted a lot of people to use them, and they stimulated creative people to open their video channels and produce captivating videos. With more views, the video creator can earn monetary profit from play views which influences a lot of youngsters to start their careers as content creators.

Live streaming is a real-time online transmission that provides information to its viewers like a broadcast. It offers social interaction between hosts and viewers. This broadcasting format has no limitation; the viewers can join a live stream when and wherever they want, and the host can schedule his or her own time to decide when it's the start of the show. Moreover, becoming a streamer is not complicated; anyone who has a smartphone can become a streamer. With the advancement of technology, many social media platforms are available for live streaming. Creators, also known as streamers, could generate monetary profits through donations and click rates while increasing their exposure at the same time. The feature of live streaming can be seen in many applications. Twitch.tv is a popular gameplay-based live-streaming platform with more than 2.2 million active streamers per month [3]. And other platforms like Facebook and YouTube are both offering live stream features.

Live streaming is viral in China. According to [3], the result of continuous live-streaming growth was tremendous; there were 200 million viewers watching streamers perform live shows each night on more than 200 live-streaming platforms, creating an estimated 5-billion-dollar industry in 2017.

### 3.1. The Frequency of Watching Live Streaming in China

Douyin, which is also known as TikTok, is a video-sharing application that has been viral in recent years. It also has a live streaming feature where streamers can host live shows like any other platform,

but Douyin is different because it is user-friendly and has diverse options of content compared to a platform that is based on one genre like video gaming or sports.

Studies had shown that live streaming in North America and Europe was exclusively for a specific event or was shared with a small number of friends and families [3]. However, Streamers on Douyin had put live streaming at a higher level. Their live streams differ in content, style, and form and were utilized for various purposes such as Pan-entertainment (also called “showroom performances” of singing, dancing, musical instruments, and talk shows hosted by streamers), e-commerce, and personal knowledge and experiences sharing [3].

To better understand the social practice behind watching live streams on media platforms, [3] surveyed 14 Chinese interviewees with age 21-39. The result shows that 36% of these interviewees showed they spent 3 times per week watching live streaming, 21% of them watch it 7 times per week, 21% of them watch it 4 times per week, 14% of them watch it twice per week, and 7% of them watch it 5 times per week. Moreover, [3] held a larger survey online, and the result showed that the average time spent on a single live stream was 62 minutes. Respondents also spent on average 7.2 hours per week watching live streams [3].

### 3.2. Using the PESTEL Analysis to Examine Live Streaming

Through the data above, live streaming showed a great “invasion” into people’s lives. Companies saw this opportunity and chose to collaborate with famous streamers to do sales promotion in live streams. Here is a re-creation of [4]’s data, the graph represents the proportion of live-streaming e-commerce in online shopping in China from 2018 to 2020 with estimates until 2023. The estimates showed that live-streaming e-commerce has huge potential, and the percentage is taking over a huge share of total online shopping in China.

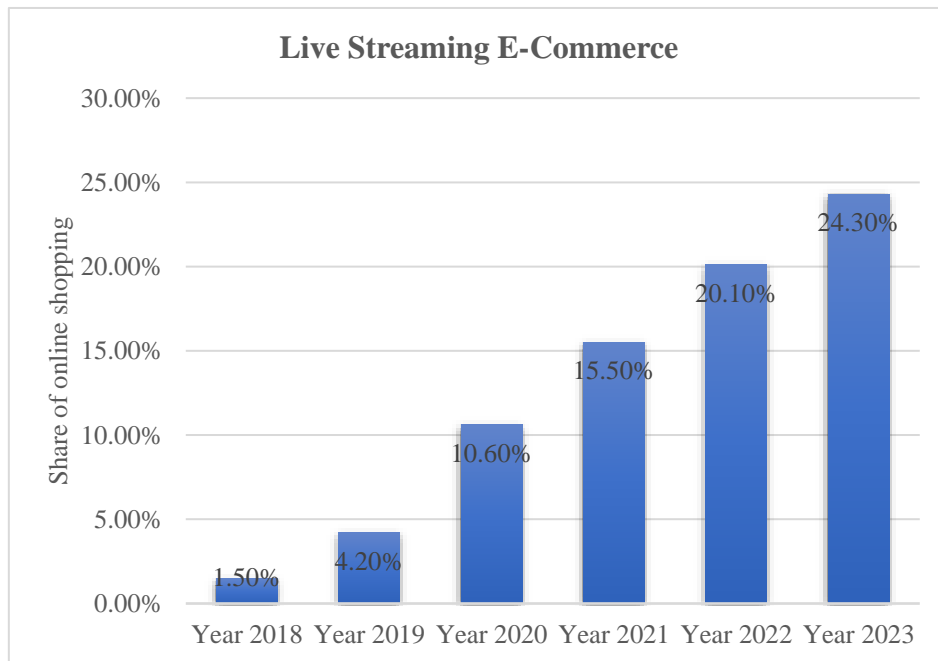


Figure 1: Proportion of live streaming e-commerce’s GMV in online shopping in China from 2018 to 2020 with estimates until 2023.

Using the PESTEL analysis, live streaming will be examined by the six factors in the analysis to see the pros and cons of the strategy.

### **3.2.1. Political**

In 2017, China issued the ‘PRC E-Commerce Law’ to gain control over the online consumer markets [5]. The Law states that live-streaming platforms must register with the state to prevent smuggling and protect intellectual property [5]. China has a different structure in terms of e-commerce and live streams, so replicating such success outside of China is difficult. Most e-commerce retailers such as Amazon in the United States operate independently. Besides, there was no live-streaming platform exists for marketing uses [5].

### **3.2.2. Economic**

E-commerce live streaming has had a huge impact on shopping malls and stores. People are more willing to shop online instead of browsing shelves. Especially during the pandemic, online shopping became even more common in every household.

### **3.2.3. Social**

Watching live streaming has become a lifestyle of Chinese citizens, most people spent an hour watching live streaming on social media. Live streaming also enables people to develop new careers and stimulates creativity. According to [5], watching live streaming helps Chinese people get rid of loneliness, it’s a way to be socially connected. The internet offers many ways of communicating with consumers and for consumers to interact with each other [6].

### **3.2.4. Technology**

China is leading in e-commerce. In every social media, there is an e-commerce section built into the applications. For example, Chinese people use WeChat for daily communication with friends and family or business purposes just like WhatsApp. Not only is being a communication tool, but WeChat also carries an e-commerce section where people can make purchases of a specific product. A lot of applications had also made a transformation from social media platforms to platforms with e-commerce. For example, Nice was a popular social media platform like Instagram where people can share their pictures in China. However, it transformed to fit into the online shopping trend and became an e-commerce platform. Instagram is also an example that a social media platform that is now available for e-commerce uses.

### **3.2.5. Legal**

‘PRC E-Commerce Law’ is regulating the online market. However, illegal activities were still blooming. In recent years, streamers were fined millions of dollars because of tax evasion. Viya, a Chinese famous influencer, and streamer were given a record \$210 million penalty for tax evasion [7]. Ping Rong, another Chinese influencer, has been fined \$9.8 million for tax evasion. Thus, China will raise its attention on legal issues with live streaming more in the future which makes a good example for the rest of the world to see the legal problem that live streaming can cause.

### **3.2.6. Environment**

Last but not least, live-streaming e-commerce can be popular because people can feel involved. Researchers found that viewers desire deeper and richer interactions with other viewers and streamers [3]. Thus, watching or performing live streaming is constituted as a social practice. Moreover, streamers have a huge fan base which means the message entailed in live streams can have a direct impact on the external environment.

## 4. Brief Background Information of the Current Internet World

With the advancement of technology, computer science has moved into a new era. As it grows stronger and stronger, people's lives are relatively improved and become convenient. However, it can also be overwhelming since new concepts and ideas are abstruse and distant from people's daily lives.

Web 2.0 is a term that describes the current status of the Internet, it was introduced by Darcy DiNucci in 1999 and popularized by Tim O'Reilly and Dale Dougherty in 2004 [8]. Nowadays, social media, video allocating sites (YouTube), Podcasting, and Microblogging are the representations of Web 2.0 [8]. The advantages of Web 2.0, for example, are such as it is available anywhere, any time, and any place, user-friendly, and real-time discussion. However, there are disadvantages such as scams and frauds or the risk of getting the wrong information [8].

Web 3.0, also known as the Semantic Web, was introduced by John Markoff as an expansion of Web 2.0 [8]. Based on blockchain technology, cryptocurrency, and non-fungible tokens, Web 3.0 offers a more secure internet environment, but is free from censorship and surveillance at the same time. According to [9], decentralization is the foundation of Web 3.0. Since Web 2.0, computers use HTTP in the form of unique web addresses for information which means information is stored in a fixed domain [9]. Decentralization is getting rid of such centralization to prevent false information.

### 4.1. NFTs and Metaverse

NFTs and Metaverse are the technologies that will be seen in Web 3.0. NFT stands for "Non-fungible token" which is a non-interchangeable unit of data stored on a blockchain, and functions as a digital ledger that can be sold and traded. While Metaverse is through technologies that enable one's multisensory to interact with a virtual world, digital objects, and people [10]. These terms quickly invade the public's sight, shocking everyone with the incredible monetary profits they made. The world's highest NFT art was sold for \$91.8 million in December 2021 [11]. Famous American rapper Travis Scott used the Metaverse concept and held a series of five virtual concerts on a video game called Fortnite. During the first live show, there were 12.3 million players participated in the event concurrently, marking a record for the game [12].

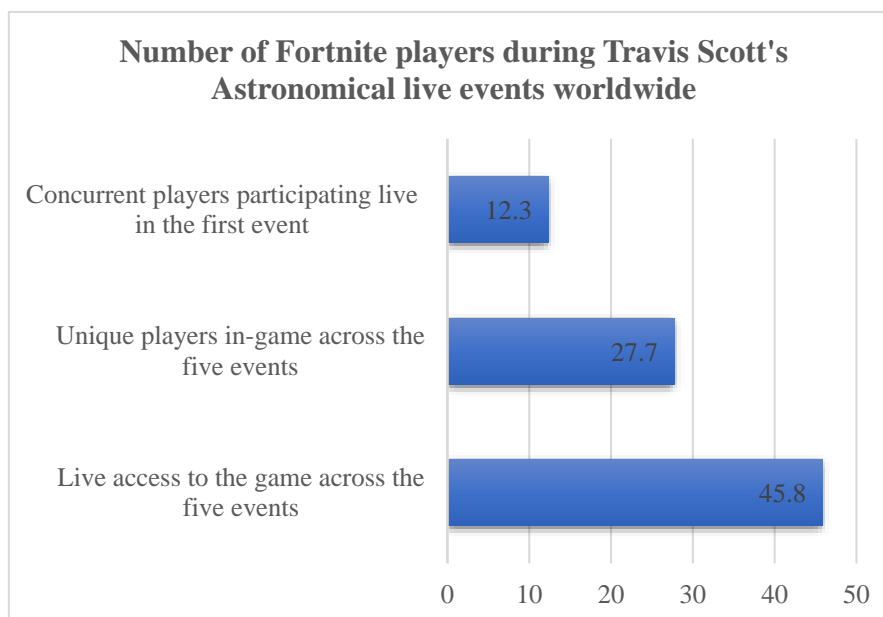


Figure 2: Number of Fortnite players during Travis Scott's Astronomical live events worldwide in April 2020 in millions.

In the fashion industry, Balenciaga launched their 2021 Fall-Winter collection runway show in a virtual form. They made a video game just for people to register an account and log in to browse their new items of clothing. The video game was presented through a VR headset. This decision was strange but exceptional, it successfully attracted the public's attention and increased their sales. And a few months ago, on July 19, 2022, Balenciaga's artistic director announced that they will release the "Cristóbal Balenciaga: To the Moon" NFT collection.

## **4.2. Using the PESTEL Analysis to Examine Live Streaming**

The concepts of Web 3.0 are becoming feasible in the reality. Companies are showing a positive attitude toward technologies like NFTs and Metaverse. Here, using the PESTEL analysis will examine the pros and cons of NFTs and Metaverse.

### **4.2.1. Political**

NFTs should be categorized as blockchain, which is a technology that has yet to be fully developed, they have a distant relationship with crypto assets [13]. Countries like China have not yet acknowledged cryptocurrencies as property. Only the United States taxed cryptocurrencies as property [14]. While Metaverse is a concept, not a technology, it's less likely to be regulated.

### **4.2.2. Economic**

Through real-life examples, NFTs and Metaverse had proved to be worthy. These strategies had made huge monetary profits, but the result is not determined. Now, NFTs are hard to be taxed which might lead to possible illegal economic activities such as money laundering causing harm to the global economy.

### **4.2.3. Social**

NFTs and Metaverse have a relatively small contribution to people's social activities and lives. Since buying and trading NFTs is an individual action, there will less likely to have a significant impact on people's daily lives. But, Metaverse might have a greater influence than NFTs, it's a concept that everyone can be involved in. For example, the Balenciaga video game is open to the public not through invitations. Even if a person is not a customer, he or she can participate in the event to get a brief understanding of the Metaverse concept.

### **4.2.4. Technology**

NFTs transactions are made with Ethereum, which is another cryptocurrency with a higher algorithm than Bitcoin. Currently, Ethereum is not fully developed. Ethereum platforms cannot provide strict anonymity or privacy [15]. In other words, all the users' activities, including transactions, are observable, which will lead to potential problems with information disclosure. On the other hand, Metaverse is easier to implement compared to NFTs. Because all the technologies it requires are fully developed such as VR, video game consoles, and computers. With current technologies, entering or building a virtual world is not unrealistic.

### **4.2.5. Environment**

NFTs and Metaverse have great significance to the world. They represent not only technological breakthroughs but also the vision of the next decade, motivating creativity and keeping a sense of solicitude for the future.



#### 4.2.6. Legal

Obviously, NFTs have potential legal issues due to decentralization. No law can regulate NFTs' crime. This means NFTs also don't fall under the protection of the law. If a collector reports his or her NFTs are stolen, there is no law to retrieve stolen objects. According to [13], one possible solution is lemmatization which can enhance the quality of NFT data used to prevent stolen in the first place.

### 5. Conclusion

New Digital Media Strategies have shown great significance and success. However, the PESTEL analysis shows that success is not determined. There are grey areas in each of the strategies discussed in this paper that might hinder a company from achieving its goals. For live streaming, the effectiveness can be varied. It seems to be a good strategy in China but only because China is already superior in E-commerce which makes it easier to implement. Besides, watching live streaming has become a daily ritual of Chinese citizens. Thus, it's reasonable to use live streaming as the marketing strategy. Moreover, NFTs and Metaverse are significant concepts that will be a technical breakthrough if the technologies become mature. NFTs and Metaverse are still facing technical difficulties and legal issues. Most countries except for the United States still hold doubts about virtual assets, so they don't recognize virtual assets as property. Thus, there is less likely for companies to launch NFTs as marketing strategies. However, NFTs and Metaverse are good strategies for promotion and mass communication, which makes them worthy of trying.

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