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Discussion on the Current Situation of the Mutual Influence between Big Data Marketing and Female Consumers' Consumption Behaviors

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Abstract:
Marketing methods on big data platforms, including two forms of star live broadcasting and push notification mechanisms, are gradually influencing consumers' consumption behaviors. Female consumers are receiving increasing attention in the process of economic development, as their economic strength and consumption power continue to improve. By observing and analyzing the two methods of big data platform marketing, this paper explores how they affect the consumption behaviors of female consumers, and how female consumers can provide feedback and impetus to the marketing strategies of big data consumption platforms. Discussing the mutual influence and reasons between the marketing strategies of big data platforms and the consumption behaviors of female consumers is of great significance for enterprises to formulate marketing strategies and improve service quality.

Keywords:
big data; marketing; female consumers; star live broadcasting

1.Introduction

In recent years, China's big data industry has experienced rapid growth. The "14th Five-Year Plan for the Development of the Big Data Industry" points out that supporting consumer goods enterprises in integrating online and offline data, developing personalized recommendation algorithms, realizing customized production and refine operations, and promoting precise matching of supply and demand has become a major task in building a digital China[1]. The prospects for the development of the big data industry are promising. It is predicted that by 2024, China's big data market will exceed 150 billion yuan, with a compound annual growth rate of around 22% over the next three years. Enterprises and merchants will gradually adopt precision marketing models based on big data technology as their primary choice and technical means to capture major markets.

Meanwhile, the changes in the economic strength and social status of female consumers cannot be ignored. According to the "2022 Report on Business Women," on the one hand, the proportion of women with college or higher education has increased from 14.3% in 2010 to 18% in 2021, with an annual increase of over 25%[2]. This has also contributed to the increase in the income level of women in the workplace, narrowing

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the gap in monthly income between men and women. On the other hand, statistics show that the proportion of female executives in China is 32%. As an important driving force for business society and economic development, this proportion is expected to continue to rise in the future.

The female economy will become a major driver of global economic development[3]. Under the trend of big data algorithm marketing, to explore the future direction of economic development, it is necessary to comprehensively and deeply study the relationship between women and the marketing methods of big data platforms. Big data platform marketing mainly consists of two forms: "live streaming sales" and "platform push." This article will analyze the phenomena, reasons, and countermeasures of the mutual influence between platform marketing and female consumption behavior from the perspective of these two marketing methods.

2. Live Streaming Marketing on Big Data Platforms — Illustrated by Celebrity Live Streaming Sales

With the improvement of video technology on various platforms and the increasing demand for visual effects among the public, network live streaming has been on a rapid rise, especially during the pandemic era when the "stay-at-home economy" was prevalent[4]. Among the various branches of network live streaming, live streaming sales have been tapping into new consumer choices, with their potential being continuously unleashed. In the process of updating and iteration, celebrity live streaming sales have replaced internet celebrity live streaming sales, becoming a new profitable marketing method.

2.1 Reasons for Big Data Platforms to Choose Celebrity Live Streaming Sales for Marketing

2.1.1 Celebrity Effect

Celebrities have outstanding appearances, special achievements in certain fields, even have a degree of authority and influence in society[5]. Their words and actions easily attract public attention and followers. Therefore, when consumers click into a live streaming room, the celebrity status of the anchor gives the audience a sense of familiarity and warmth. Their often-seen images on the screen and personal branding also increase credibility, further prompting consumers to voluntarily purchase products from the live streaming room. The higher the celebrity's popularity, the higher the attractiveness, and the closer the connection between consumers and the products they purchase[6]. Combined with the timely feedback and two-way communication characteristics of live streaming, it can further increase consumers' willingness to buy.

2.1.2 Fan Economy

The "fan effect" originates from the special emotions that fans have for idols in the cultural entertainment industry, resulting in systematic consumption behavior towards idol-related products[7]. With technological advancements, the definition of fans' adoration for idols has expanded beyond traditional areas such as sports stars and luxury brand spokesperson. It has broken through geographical and spatial limitations, extending to specific targets in the digital consumption sphere, such as platform anchors and live streaming influencers in

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digital media environments[8]. This has developed into more convenient and complex interactive methods. During live streams, viewers entering the live streaming room may also be attracted to become fans due to the high degree of consistency between the celebrity anchor or live streaming products and their personal needs, triggering consumer purchasing behavior and further expanding the scope and effect of the fan effect[9]. In this process, celebrities can also increase sales, enhance their popularity, and improve their reputation through interactions with fans and group behavior among fans.

It is worth noting that as fans' acceptance and recognition of celebrity live streaming anchors deepen, they are encouraged to participate in the live streams through likes, comments, and shares, which simultaneously enhances the vitality of the community and fan stickiness. At this point, fans are not just passive receivers of sports anchors' information but also become producers and disseminators of live streaming sales information, even exhibiting a certain degree of exclusiveness.

2.1.3 Emotional Value

Consumers' trust and affection towards celebrities are essentially a form of symbolic appreciation and emotional premium[11]. Emotional premium has gradually replaced the functional premium of products, becoming a significant source of excess profits for products in celebrity live streaming. Celebrities themselves, under the background of symbolization, have become "the most beautiful consumer goods," representing positive traits such as beauty, handsomeness, and interestingness. The uniqueness of their identity and the positive projection of consumers' emotions attract consumers to spend money on them.

Li Jiaqi, once known as the "Lipstick Brother No 1," is also a beneficiary of "emotional value." From "OMG" to "lowest price on the internet," from "piggy girl" to "Xiao Li's Classroom," Li Jiaqi has always portrayed an image of encouraging, protecting, and praising all consumers, leading them to appreciate him, trust him, and purchase the products (especially high-profit cosmetics) recommended in his live streaming sessions[11].

Most celebrities also follow this template when engaging in live streaming sales[12]. Whether it's introducing a product by saying, "Such-and-such celebrity really likes using this one," or engaging in "dramatic" live streaming with ultra-low prices and free lucky bags to attract attention, they create a symbolic link between the product and the celebrity, giving consumers the illusion of "buying this will make me look like such-and-such celebrity" or the impression of "the celebrity loves their fans" and "works for the benefit of consumers." The gap in identity and commercial value between the top and bottom can further stimulate consumers to impulse buy.

2.2 How Female Consumers Interact with Celebrity Live Streaming Marketing

In daily life, women play multiple roles as wives, mothers, daughters, etc. They not only need to purchase items for themselves and household items, but also need to buy things for their husbands, children, parents, etc[13]. According to the analysis and survey results of women's online shopping behavior by relevant organizations, there are far more female consumers than male consumers in online shopping, and the shopping frequency of female consumers is also relatively higher. Therefore, most online businesses consider the female consumer market as an important development direction.

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Female consumers also play a crucial role in celebrity marketing on big data platforms. Their emotional connections, social influence, fashion leadership, and brand trust have positively contributed to brand market performance, sales growth, and brand loyalty. Brands often leverage the influence and appeal of celebrities to attract female consumers and stimulate their interest and desire to purchase branded products[14].

2.2.1 Emotional Connection and Idol Worship

Female consumers often assign emotional attachments to certain goods during the shopping process, obtaining dual value from both the spiritual and psychological aspects of the product. The delicate styling, unique packaging, vibrant colors, and even clever designs of products can greatly touch the emotions of female consumers and stimulate their consumption psychology[15].

Idol worship manifests more directly as the "fan economy." Female fans develop an interest in the daily necessities and consumer preferences of their idols. Unlike the slogan-style support of traditional fans, fans of popular celebrities are more inclined to invest money and time in commercially supporting their idols. This consumption model, with fans as the main purchasing force, can easily lead female consumers into value misperceptions, causing chaos in the "fan circle." Businesses will bind the scarcity of celebrity resources with fan demand, offering interactive opportunities in live streaming or bundled marketing with celebrity merchandise to those who spend a certain amount[16]. This can lead female consumers, attracted by the "halo effect" of their idols, to prioritize emotional connections in live streaming marketing over practicality, resulting in unrestrained ordering and even compare the amount of impulse spending to each other to satisfy their projections and aspirations onto their idols.

2.2.2 Social Influence and Promotional Power

Most female consumers belong to the urban white-collar class, possessing high cultural literacy and economic strength. They possess the ability to manage social groups and exert a strong influence on social platforms[17]. By watching live streams of celebrities, purchasing marketed products, sharing their experiences, recommending purchases, or disseminating product reviews, they contribute to increasing brand exposure and recognition, thereby enhancing the brand and product's fame and influencing other consumers' purchase decisions.

This influence depends heavily on the quality of the products marketed through celebrity live streams and the credibility of the celebrity endorsements[18]. The online environment differs significantly from traditional shopping environments, with a vast asymmetry in information between consumers and merchants. A celebrity's past reliable public image and product branding can attract female consumers to purchase products. However, if a celebrity becomes overly involved in live streaming marketing without delivering quality work, it may raise suspicions of money-making schemes, gradually eroding their credibility over time, with a corresponding impact on product sales. Issues such as product quality problems or fraud disputes surrounding celebrity-promoted products can lead to a decline in the celebrity's reputation and brand image, regardless of whether rumors are dispelled. Consumers may also face difficulties in safeguarding their rights. Scandals or bans resulting from personal or sensitive issues can also affect a brand's reputation and lead to a decline in product sales, exemplifying the interconnectedness of all aspects. For instance, Zheng Shuang, a once-prominent actress, faced a ban in the entertainment circle after being implicated in tax evasion. Her endorsement

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of the popular beauty brand "CHIOTURE" led to a 17% month-on-month decline in sales following the incident's revelation, followed by a 42% decline the next month, putting the brand in a crisis. Therefore, brands must exercise caution in selecting celebrities for live streaming marketing to ensure a mutual choice between the celebrity and female consumers.

2.2.3 Diverse Consumer Needs

Female consumers have a more sensitive aesthetic, paying attention to features such as color, style, and packaging when shopping online, and preferring to purchase items with exquisite and high-quality appearances. Besides the appearance and quality of products, female consumers also consider the cost-effectiveness of items during online shopping[19]. When watching celebrity live streams, they particularly pay attention to past customers' reviews of the main marketed products, store reputation, and after-sales service. Driven by a desire to save, female consumers also compare the prices and quality of celebrity-marketed products with those in physical stores, making purchase decisions only after careful consideration.

Therefore, during the marketing process on big data platforms, it is essential for celebrity anchors to understand and showcase relevant professional knowledge about the products sold in their live streams, including brand image and product function explanations. This can reduce the time consumers spend learning about the products and increase the value of the live streams.

Female consumers have a wide range of needs, covering areas such as fashion, beauty, health, and family. As brand ambassadors or spokespersons, celebrities need to effectively market and promote products in different fields during live streaming, making prepared recommendations to create an impression among female consumers that they understand women's preferences and needs, thereby influencing their shopping choices.

3. Big Data Platform Push Notifications - Illustrated by the Xiaohongshu Push Mechanism

The development of the internet economy has not only shifted the traditional economy, which relies on physical labor, towards an industry economy based on intellectual capital and big data, but it has also broadened the work and living spaces for women. This has created a new platform for the liberation and enhancement of women's consumption power, resulting in a diversified and complex landscape for the development trends of the female economy[20].

As a big data platform positioned as a lifestyle sharing community, Xiaohongshu mostly features content in the form of text, images, and short videos, covering various fields such as beauty, food, mother and baby, home furnishing, fashion, pets, weight loss, and fitness. According to the "2022 Qiangua Active User Portrait Trend Report (Xiaohongshu Platform)", Xiaohongshu has over 200 million monthly active users, with a female user proportion reaching a high of 70%.

3.1 New Image of Women and Push Notifications of Stereotypes

The "2022 'She Economy' Insight Report" released by Quest Mobile, a domestic mobile internet business intelligence service provider, indicates that with the improvement of women's educational and employment

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status, the distribution of medium and high consumption willingness among female users in online consumption has reached a high of 71.9%[21]. Xiaohongshu uses big data algorithms to targetedly push products that match users' preferences and consumption power to them, positioning itself as an advantageous platform that calls for the awakening of women's independent consciousness and embracing their value, thereby creating a new ladder for female consumption upgrades.

Xiaohongshu's push notifications are characterized by tagging and customization. It often increases users' trust in products by combining real and interesting stories with interactive comment recommendations, making female users believe that the push mechanism is tailored for them. However, in reality, a large number of media and businesses still emphasize female characteristics under male gaze, such as personal recommendations from beauty bloggers in various fields, video bloggers who claim to "reconcile with their make-up free faces" but are fully made-up, and so-called successful people who promote the idea that "independent women should achieve both beauty and success". Under such pushes, female consumers mistakenly believe they are following fashion trends and realizing their own "beauty," but the paths they take are still catering to the ideal image of women in men's minds.

As Michel Foucault said, "If I do not coerce you at all and you are in a state of complete freedom, but you still choose the path I preset for you, that is when I begin to exercise power." Therefore, even if some female consumers question popular tags on Xiaohongshu such as "pure desire," "sweet and cool," and "marriageable," there will still be those who argue, "Don't overthink it. Women wear makeup to be beautiful. Women are born to love beauty," ignoring why many female consumers overlook the practicality of products, personal needs, and enjoyment, and instead choose "impractical but beautiful" outfits, clothing, and beauty products that cater to the desires of male-dominated society under the push mechanism. This also increases female consumers' dissatisfaction with their appearance and body image, leading to psychological pressure and physical discomfort.

3.2 Privacy and Data Security Issues

In November 2021, Xiaohongshu was ordered to rectify due to violations such as "excessive and frequent requests for permissions, collecting user personal information that is not necessary for service scenarios, and misleading users to download" mentioned in the "Look Back" notification issued by the Ministry of Industry and Information Technology regarding issues such as App exceeding its scope of permissions and over-collecting user personal information[22]. In the sharing and interaction of social media and e-commerce combined with a networked community with massive storage space, if personal privacy is constantly faced with the risk of illegal theft and dissemination, and well-known bloggers on big data platforms are constantly faced with the risk of being "doxxed," female consumers may abandon such platforms to avoid safety risks involving real life. Therefore, whether big data platforms can effectively protect consumers' privacy and data security will also become a major factor in determining female consumers' choice of platforms.

4.Summary

The marketing model of the big data platform, supported by big data science and technology, offers both opportunities and convenience, as well as challenges and risks, to businesses and consumers due to its char-

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acteristics of consumer segmentation and precise matching. Through live streaming or push notifications, the big data platform can deeply insight into the consumption behaviors and needs of female consumers, thereby taking a series of measures to attract them and establish long-term purchasing relationships. Additionally, it can leverage female consumers' social media activities and browsing histories to provide personalized recommendations and targeted marketing, enhancing the platform's competitiveness and generating more economic benefits.

However, the big data platform also possesses the capability to disseminate stereotypes, guide various consumption and value concepts through data calculation, and exercise its influence in related fields. Issues such as information leakage and privacy and data security concerns may arise during the platform's marketing process. This serves as a reminder to female consumers, businesses, and the government that they should not overly rely on the "self-consciousness" of big data platform marketing. Instead, they need to seek more effective means to regulate and standardize the current development of the big data industry.

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