

Operational Strategies for Music Technology Market: Case Study from Netease Cloud Music

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Abstract. NetEase Cloud Music is a Chinese music technology company dedicated to providing users with online music services. This research aims to analyze the operational strategies of NetEase Cloud Music and offer relevant recommendations. The study reveals that through strategies such as personalized user recommendations, music social interaction, and copyright protection, NetEase Cloud Music has successfully attracted a vast user base and established a significant music community. However, facing intensified competition and profitability challenges, NetEase Cloud Music needs to promote further user willingness to pay, advance copyright collaboration, and strengthen partnerships with artists and the music industry. NetEase Cloud Music is recommended to continue to bolster technological research and development, enhance user experience, introduce more innovative music products, and expand its user base. By implementing these strategies, NetEase Cloud Music will maintain its competitive edge and achieve sustainable growth in the Chinese music technology market.

Keywords: List the keywords covered in your paper.

1. Introduction

Founded in 2013, NetEase Cloud Music initially emerged as an online music streaming platform. Beyond simple playback, the platform empowered users with uploading and sharing functionalities. It provided personalized music recommendations, attracting many loyal users thereby gradually carving out its niche in the Chinese music streaming market [1]. Between 2015 and 2018, to elevate the user experience, NetEase Cloud Music introduced a paid membership system, offering members access to high-quality music, an ad-free environment, and supporting artists' copyright earnings. Concurrently, active collaborations were established with record labels, artists, and independent musicians to expand its music library. By signing contracts with major music companies, it accessed an even broader range of licensed music, providing more choices for its users. Having undergone multiple financing rounds, NetEase Cloud Music continues to increase its market share, launching more personalized recommendations and social interaction features to increase user stickiness. Committed to a global strategy, it is bolstering its overseas market investments, aiming to expand its influence globally.

The main research question of this paper focuses on the operational strategies chosen by NetEase Cloud Music in the current market, encompassing its business model, means of user acquisition, retention, and conversion, as well as its market promotion and brand-building strategies. The significance of this research lies in analyzing the company's current operational strategies and exploring its adopted business model and practices in user operations, thereby gaining a deeper understanding of its position and competitive advantage in the music streaming market [2]. Additionally, the research will unveil effective user growth and retention methods, providing insights and references for professionals and researchers in similar fields. This will help elucidate NetEase Cloud Music's role in progressively shaping the market landscape and its impact on the music streaming domain.

2. Operational Strategy Analysis

2.1. Core Competitiveness and Market Positioning

With user experience at its heart, NetEase Cloud Music caters to users' needs by offering premium music services such as personalized recommendations, curated playlists, and high-quality audio. They continually enhance the user experience by optimizing the user interface, refining recommendation algorithms, and providing diverse music content, attracting more users to the platform. Concurrently, NetEase Cloud Music has fostered a community with social features, allowing users to share their favorite tunes, engage in discussions, and participate in music events and challenges, thus promoting user interaction and communication. Regarding copyright collaboration, they actively cooperate with music copyright holders, purchasing exclusive rights and organizing events such as online concerts to allure renowned musicians and users to the platform. Leveraging digital marketing tools like social media promotions, online advertisements, and collaborative events, NetEase Cloud Music enhances its brand visibility, drawing more users' attention and engagement.

Moreover, they continuously venture into innovative businesses like live music streams, virtual concerts, and music-related social games to enrich the musical entertainment experience. Actively penetrating international markets, they offer multilingual music content and collaborate with global music companies to meet users' diverse cultural and preferential needs across regions [3]. In summary, the operational strategy of NetEase Cloud Music persistently develops in enhancing user experience, fostering user interaction, expanding music resources, and promoting brand recognition, aiming for business growth and market share expansion through innovation and globalization.

2.2. User Growth and Retention Strategy

NetEase Cloud Music predominantly serves users aged between 18 and 35, accounting for 80.5% of its user base, with a gender distribution of 54.3% male and 45.8% female. Primarily, the user base comprises:

School students: While this demographic possesses limited spending power, they are at an age with social needs. Features such as "listen together" and musical friendships significantly expand their social circles, connecting them with like-minded music enthusiasts.

Recently employed young adults are self-reliant without parental support, often experiencing significant physical and emotional stress [4]. While using NetEase Cloud Music, which primarily targets the youth, they find solace and relaxation in the music, granting them a temporary escape from reality.

Music providers: This category encompasses music uploaders, lyricists, and independent musicians, forming one of the primary content providers for NetEase Cloud Music.

Given these considerations, NetEase Cloud Music has employed multiple strategies to enhance user growth and sustain user activity levels. Initially, the platform, utilizing advanced algorithmic techniques, analyses user listening behaviors and historical data to tailor personalized music recommendations, enticing users to discover music that resonates with their preferences and thereby bolstering retention rates [5]. Additionally, NetEase Cloud Music periodically rolls out featured playlists, theme-based music events, and social interactions like holiday-themed playlists, celebrity playlists, and user comments/shares. These initiatives spark user interest and engagement, sustaining their platform activity levels. Furthermore, by establishing a music community, users are encouraged to communicate and share comments and updates on the platform, fostering a sense of belonging and emotional attachment and promoting retention. Loyalty and satisfaction are further cultivated through user rewards, premium music content, exclusive copyrights, and innovative features, enticing users to stay committed to the platform. In summary, through strategies like personalized recommendations, social interactions, event challenges, community building, and user rewards, NetEase Cloud Music aims to attract users to the platform and boost retention rates, achieving user growth and enhancing user value.

2.3. Competitive Strategy

In the Chinese music market, NetEase Cloud Music faces challenges from several competitors. As a leading music platform, Tencent Music (QQ Music) capitalizes on its vast user base and extensive music resources, presenting fierce competition with NetEase Cloud Music [6]. Secondly, KuGou Music attracts a large audience with its unique recommendation algorithm and superior music experience, competing with NetEase regarding user stickiness. In addition, MiGu Music, launched by mobile carriers, exerts influence among mobile users, adding competitive pressure on NetEase Cloud Music. Even though Spotify, a global music giant, is not a local Chinese enterprise, its intentions to gradually penetrate the Chinese market should not be overlooked. These competitors engage in battles over music resources, user experience, and social interaction, pushing NetEase Cloud Music to continuously innovate and optimize to maintain its competitive position in the Chinese music market.

KuGou Music emerged in 2004, and by April 2013, China's internet music industry had reached a relatively mature and stable state. QQ Music, NetEase Cloud Music, KuGou Music, and KuWo Music have garnered substantial market shares. NetEase Cloud Music tapped into this domain with "music socializing." Through rich musical and social activities and personalized music recommendation services, online music players were redefined, carving out a niche for NetEase in the market [7]. The online music market's growth rate has slowed, but the prospects and future of music social entertainment are promising. According to the "2022 China Digital Music Industry Insight Report," China's music industry is gradually reaching a plateau. In 2022, the digital music market was valued at 494.7 billion yuan, a decline of 3.4% year-on-year. The monthly active users of digital music platforms in 2022 stood at 564 million, showing a decrease of 6.4%, a continued downward trend. However, in terms of music social services, there's still a significant growth opportunity for NetEase Cloud Music. NetEase's financial reports revealed that the monthly paid users for social entertainment services and other businesses were 1.33 million, whereas online music services had 38.3 million monthly paid users. Assuming the payment rate for its social entertainment services is the same as online music, at 20.2%, its monthly user count would only be 6.59 million, far fewer than its monthly user numbers. As a result, NetEase Cloud Music adopts different strategies for music listeners and social entertainment users. Given the vast potential to tap into the music social entertainment user base, the company will continue to prioritize promoting music social entertainment services.

3. Content Ecosystem Development

NetEase Cloud Music is a renowned music streaming platform in China, offering users functionalities like music playback, sharing, commenting, and recommendations. With the evolution of internet music to date, most product forms have relatively matured. Hence, product innovation is increasingly reflected in the capability to enhance user experience details.

3.1. Functional Upgrades

NetEase Cloud Music, leveraging user behavior data and algorithmic techniques, furnishes personalized music recommendations for its users. They curate potential music interests for users based on listening history, preferences, and evaluations, aiming to enhance the user experience [8]. In 2022, they further refined the song recognition function. This feature now supports recognition through listening, humming, reciting lyrics, and across apps, improving the accuracy of song detection. Users can more conveniently identify songs in various ways, further elevating the user experience. Subsequently, they introduced a cloud shuffle function, allowing users to customize the shuffle mode. Within any playlist, users can set shuffle preferences based on song familiarity, preferences, and similarity in music style, meeting the individualized shuffle requirements of users.

Moreover, introducing the offline search function permits users to search for local resources and play them in areas with weak internet connections. This includes recently played tracks, liked songs, shared or downloaded music, and user-created or saved playlists. This caters to users' demands to

search and play music in offline or weak internet scenarios, such as elevators and underground garages, significantly improving the search experience. The launch of these features marked an industry first, garnering widespread acclaim from users. This showcases NetEase Cloud Music's relentless endeavor in product innovation, dedicated to augmenting users' musical enjoyment and convenience.

3.2. Social Applications

NetEase Cloud Music boasts its unique social platform, "Yun Village", akin to a music social network. Users can post updates, share music, follow other users and musicians, and participate in various music discussions in Yun Village. In 2022, NetEase Cloud Music rolled out innovative social activities like "Music Close Friends" and "Social Playlists", striving to offer a more engaging music interaction experience for Yun Village users and deepen connections among users, friends, and families. In 2022, NetEase Cloud Music introduced the well-received "Memory Coordinates" feature, creating nostalgic moments for users, encapsulating the sentiment, "All those memories are recorded for you by Cloud Music". This feature screens songs related to users' special memories (those frequently played or listened to for extended periods). It showcases users' five most cherished dimensions: "First Time Listened", "Total Play Duration", "Most Listened Day", "Heart Timestamp", and "Underrated Song Stamp". Simultaneously, Memory Coordinates also proved its promotional value in music copyright return events, integrating dynamic content to make the feature more compelling. Continuous updates to Yun Village's social products effectively elevated users' music listening efficiency and experience, fostering tighter connections among its residents.

3.3. Supporting Original Music

NetEase Cloud Music significantly emphasizes supporting independent musicians and emerging artists, offering them a platform to showcase and promote their works. This policy of nurturing independent music has garnered attention and backing from many indie creators and users, thereby bolstering the competitiveness of NetEase Cloud Music and enriching its musical variety. For instance, at the end of 2022, NetEase Cloud Music launched the "Musician's Story", similar in format to the annual report provided to listeners, tracing the growth trajectory of musicians. Following the feature's introduction, numerous renowned original music artists eagerly shared it [9]. Artists such as Wanida, TizzyT, The Landlord's Cat, and Yang & Su disseminated their annual reports within the community, preserving their 2022 musical memories alongside the user base. These reports allow artists to see specialized social content like their "Closest Fans", "Number One Fan", and "Long-time Fans", bridging the gap between them and their followers. Moreover, the 2022 report introduced a segment for musicians to send thank-you messages, enabling them to express gratitude to three fans (namely the Top Fan, the Closest Fan, and the Long-time Fan) through private messages and interacting within the community, further diminishing the distance between fans and musicians.

3.4. Music Copyright and Content Collaboration

NetEase Cloud Music employs various strategies in music copyright and content collaboration, ensuring users access to a broad range of legitimate musical content. Firstly, NetEase actively collaborates with domestic and international record companies and music distributors, curating a legitimate music library with popular tracks and albums. Secondly, the platform also works with independent musicians, offering them opportunities to upload original compositions. Through mutual agreements, creators can secure reasonable copyright revenue shares, thereby encouraging the origination and dissemination of indie music. Moreover, the platform encourages user-generated content, allowing users to share their musical creations and craft personalized playlists, enhancing content diversity. To safeguard music copyrights, digital music copyright management techniques are employed, ensuring the music experienced by users is authorized and legitimately purchased. Through these comprehensive efforts, NetEase Cloud Music has established a diverse music

ecosystem, balancing the interests of both music consumers and creators and fostering the sustainable development of the music industry.

4. Innovative Business Model

4.1. User-Centric Business Model Creating Music Social Interaction

Before the inception of NetEase Cloud Music, the market's music products were primarily local and online music players. Users could only download and play music, treating it as a musical tool on electronic devices. Given this backdrop, user activity and loyalty were relatively low, and no new business models emerged. Zhu Yiwen, the founder and CEO of NetEase Cloud Music, saw music as an emotional bridge for users and chose to pivot towards music socialization. Recognizing the importance of emotional conveyance in the music-listening experience, Zhu rethought and researched the online music software available in the market. Leading his team with the central concept of "musical socialization", he transformed the role of online music players by integrating diverse music social activities and personalized music recommendation services.

4.2. Diversified Revenue Streams

According to NetEase Cloud Music's 2022 financial report, its annual revenue grew by 28.5% from 70 billion yuan in 2021, reaching 90 billion yuan. This growth predominantly stems from the robust surge in membership subscription revenue and a steady increase in social entertainment income. The monthly active users for its online music services also increased, reaching 189 million. Notably, the daily to monthly active user's ratio remained above 30% in 2022, indicating high user retention on the platform. Meanwhile, the monthly paying users for the online music service reached 38.27 million, a year-on-year growth of 32.2%. Regarding the payment rate, the rate for the online music service increased from 15.8% in 2021 to 20.2%, continuously maintaining a leading position in the industry.

Traditional streaming music platforms mainly profit through advertising and paid memberships. However, domestic advertising models are relatively monolithic and constrained. The conversion rate of user payments could be much higher, making it challenging to sustain the long-term development of the NetEase Cloud Music platform. As such, domestic streaming music platforms are actively exploring new business models to diversify revenue channels. Leveraging its inherent resources, NetEase Cloud Music has embarked on differentiated strategies in crossover marketing and pan-entertainment sectors, deeply engaging the entire industrial chain to cater to users' personalized needs. NetEase Cloud Music users exhibit high engagement, with comments on popular songs often reaching millions. As such, the platform capitalizes on this high user activity to cultivate a community-centric culture. To meet user demands, the platform launched a video community in 2017, comprising nine short video sections, continuing the momentum of likes and comments. Users can post their social status through videos and music, further expanding the realm of music socialization and thereby enhancing user stickiness.

Additionally, NetEase introduced a diversified payment model, breaking away from traditional audio advertising constraints. By diverting users from "listening to songs" to "reading comments", it has innovatively integrated advertising into the comment section, thus creating a unique comment-based advertising model. Brand advertisers can appear in the comments section of songs that align with their brand's tone as ordinary users. They can also participate in other community activities under regular user pseudonyms, engaging in captivating interactions with other users, consequently garnering more attention and goodwill [10].

5. Conclusion

This study aims to analyze the operational strategies of NetEase Cloud Music and provide relevant recommendations. NetEase Cloud Music's competitive strategy has judiciously adapted to industry

trends and user demands. Through differentiated strategies and the development of social entertainment products, NetEase Cloud Music is poised to retain its competitive edge in a fiercely contested market. The study finds that through strategies such as personalized user recommendation, music social interaction and copyright protection, NetEase Cloud Music has attracted many users and established an important music community. However, while facing fierce competition and profitability challenges, NetEaseYunMusic needs to increase users' willingness to pay, strengthen copyright cooperation, and enhance partnerships with artists and the music industry. It is recommended that NetEase Cloud Music continue to strengthen its technological research and development, enhance its user experience, launch more innovative music products and continue to expand its user base. By implementing these strategies, NetEase Cloud Music will maintain its competitive edge and achieve sustainable growth in China's music technology market.

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