Exploring the Business Models of Media Platforms in the Context of Mobile Big Data

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Abstract. This paper comprehensively discusses the communication mechanism, user behavior, and business model innovation of media platforms under the background of mobile big data. In the context of mobile big data, the media platform has successfully attracted and built a large user group through accurate user portraits, personalized content recommendations, and diversified services. Its business model has shifted from single to multi-faceted, covering direct means of profitability such as advertising revenue, membership subscription, virtual goods sales, etc., and focusing on multi-channel revenue growth through a full range of services and ecosystems.The key to the success of these platforms lies in the deep insight and precise grasp of user needs and the use of big data and artificial intelligence technology to provide personalized content and services to meet the diverse needs of users. The conclusions of this paper further update and enhance the operational methods and strategies of media platforms, providing valuable references for research and practice in related fields.

Keywords: Big data, Media platform, Business model, User behavior .

1 Introduction

With the rapid development of modern technology, social media, and network platforms have not only realized rapid technological iteration and functional innovation but also experienced the evolution of their business models from single to

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multiple and from simple to complex. These platforms have successfully attracted hundreds of millions of users and built strong user stickiness and activity through accurate user profiling, personalized content recommendations, and diverse service offerings.As the core of media platform operations, business models can mainly categorized into revenue models and integrated models. The revenue model relies mainly on direct profitability means such as advertising revenue, membership subscriptions, and virtual goods sales, while the integrated model focuses more on multi-channel revenue growth through the provision of a full range of services and ecosystems.These two models complement each other in the actual operation of media platforms and jointly constitute a diversified pattern of platform profitability.

With the rapid popularization of network technology, the number of users of media platforms has exceeded the 5 billion mark, and this gigantic user group provides the platforms with enormous commercial value and development potential.The key to the success of media platforms rests on their deep insight into and precise grasp of users' needs. Through big data analysis and artificial intelligence technology, media platforms can accurately identify users' interests, preferences, and behavioral practices to provide users with more personalized content and services and meet their diversified needs. Through an in-depth study of the business model, user behavior, and operational details of the media platform, this paper aims to provide a valuable reference for academic research and practice in related fields.

2 Literature Review

2.1 Social Media

From the perspective of the development of social media, the new term " social media " was first proposed by Anthony Mayfield in his book " What is social media. "With the development of information technology, some scholars have reclassified the basic forms of social media. In 2009, Tula et al.divided social media into five categories, namely blogs and podcasts, social networks, communities, content integration platforms, and virtual worlds [1].From research in the business world, Paris and Caraher feel that social media is a particularly cost-effective form of marketing for the business community. Businesses can use a small amount of money to promote their products and services through social media, and this will attract more customers [2].In 2003, Bowman and Willis first proposed the concept of we-media.In 2004, Gillmor further introduced and discussed the we-media and media industry. In current China, the discussion about we-media is mostly about what it means[3]. And the extensive influence of the media on society[4]. Among them,we-media's impact and intervention in social views[5] and the ways of censorship and monitoring of we-media[6] have been analyzed from an economic perspective, but relatively little.

2.2 User Behavior of Media Platform

Regarding the study of user behavior, the users usually choose many ways to express themselves to authors, to publish their ideas, or to spread some good works.As a result of the study, a large number of users maintain their network image by reposting videos, and users will repost or interact with strangers in the comments section of knowledge-based videos.They use this form to ' perform ' and ' mediatize ' survival[7].Many Media celebrities, to solidify the number and quality of their followers, adopt interesting innovations to increase user stickiness and motivate more people to retweet or favorite their work. It has also given rise to many media platforms to use the words "after watching remember to forward, collect, and like." which will greatly motivate fans and new users to retweet and spread their messages and works[8].The modern network media platforms are also improving the user's viewing effect to communicate and positively influence users [9]. Media platforms will allow fans and users to enhance viewing and incentivize further user-media interaction through four methods: emotion, immersion, innovation, and mutual communication [10].Among them, immersive interactive experience functions, such as ' barrage ' ' interaction ' ' feedback " forwarding sharing 'etc., stimulate users ' interactive ideas. [11].In general, there is still a lack of more effective ways to study this program in today's society.

2.3 Business Model Innovation

Business model innovation is diverse and can be classified in several ways. In the case of social media, they achieve profitability through subscription services and advertising.As described by Alexander Ostwald, a business model is a simplified logical diagram that describes how a business makes money. It clearly shows how a business makes a profit, what information it provides, to whom it provides that knowledge, and how it achieves those goals.Peter Weil and Michael Vitale further proposed eight main business models in the field of e-commerce, including B2C (business-to-consumer), B2B (business-to-business), C2C (consumer-to-consumer), O2O (online-to-offline), C2B (consumer-to-business), B2G (business-to-government) , P2P (peer-to-peer), and F2C (factory-to-consumer).These models can operate independently or in combination with each other to suit different market needs. Jensen takes another perspective by categorizing business models into revenue and integrated models. The revenue model focuses on the way companies make profits, while the integrated model emphasizes the importance of business configuration, strategy, and design.[12][13][14][15] However, as society continues to evolve, methods and practices that seek more efficient economic benefits continue to emerge, requiring companies to innovate to adapt to market changes[16].

In studies about business model innovation, people found that business model innovation is a result of the co-development of companies. Especially in China, the online video industry has been developing rapidly for nearly two decades and is gradually moving into the mobile Internet era.Countless companies have reshaped the market landscape by spreading their products through short video platforms.Zott and Amit categorized business model innovations into two broad categories, efficiency and novelty, and proposed corresponding measurements [17].Although the categorization and measurement of business model innovation in the theoretical world is still in the developmental stage, Zott and Amit's study has achieved significant results in the application of business models in newspaper media companies, proving the applicability and value of their research.Michael Lappa believes that the business model is the key for firms to find profitability in the value chain. He further divides firms into different categories, emphasizing the central role of the business model in the profitability process [18].

3 Media Platforms in the Mobile Big Data Environment

3.1 Propagation Mechanism of Media Platform

With the evolution of the times, media platforms have begun to widely use mobile big data technology to optimize the process of information dissemination, covering all-around technical means of data collection, processing, analysis, and presentation. Among the many modes of communication, scene-based communication has attracted much attention because of its unique communication effect.In the mobile era, users are amid text messaging and information consumption scenarios almost all the time.The media platform makes full use of the user's fragmented time, based on the user's browsing records and search preferences, and pushes personalized content to the user through the recommendation engine.Taking social media city promotion as an example, cities such as Chengdu have successfully attracted a large number of tourists by posting unique cityscapes and cuisines.

In addition, as a new way of communication, H5 immersive experience communication brings users a richer immersive experience by integrating video, voice, jump links, and other marketing methods.For example, Adidas's City Light H5 uses 360 panoramic displays, urban sports, and popular music. Users can feel the active atmosphere in the interactive process, thus deepening the brand impression.At the same time, short videos and live broadcasts have also become popular means of communication.Users can shoot, edit, and share their video works, sharing life, experience, and views in real-time.This mode of communication provides new marketing and promotion channels for enterprises and individuals. Beauty brands have effectively attracted potential consumers by demonstrating the effects of their products through live streaming.

As a targeted communication method, personalized recommendation communication improves the user's viewing experience by analyzing the user's interests and preferences and recommending relevant content. For example, Jinri Toutiao uses personalized recommendation algorithms to accurately push news and information based on the user's search history, interest preferences, and browsing records, which both improves user satisfaction and enhances user stickiness.Social media communication realizes rapid dissemination and wide coverage of information through users' retweeting, liking, and sharing. This mode of communication has a very high speed of dissemination and a wide range of dissemination.The media platform also improves the relevance and effectiveness of information through precision pushing, which pushes customized content to users based on information such as their interests, geographic location, and online behavior.Nike 's ' Unlimited ' series of advertisements are widely disseminated through social media and have successfully attracted a large number of users.

Finally, as an important means of interaction between media platforms and users, interactive marketing attracts users to participate by voting, answering, and answering questions. Coca-Cola's "We Care" ad further enhances the brand's reputation through creative props and immersive experiences that allow users to feel the brand's warmth and creativity in interaction.

3.2 User Behavior Research

In today's society, it is a common and natural phenomenon for users to distribute their works on media platforms. Behind this phenomenon lies a diversity of user motivations, ways and reasons for communication. An in-depth understanding of these psychological and social mechanisms helps media platforms better understand user needs, optimize communication strategies, and provide users with more precise and personalized services.

From the perspective of users' communication motivation, users' behavior of spreading work is influenced by many motivations. First of all, emotional resonance is an important motivation for dissemination. When users come across works that are similar to their own experiences and ideas, they are more likely to resonate with them and then share them with others.This sharing behavior is not only the recognition of the content of the work but also the expression and sharing of their emotions. Secondly, obtaining the appreciation and praise of others is also one of the significant motivations for users to disseminate their works.By sharing their work, users hope to be recognized and affirmed by others, thus enhancing their sense of self-worth and accomplishment.In addition, helping others is also a motivation for users to spread their work. Users may share effective tools, insightful articles, or various offers to help others solve problems or gain benefits.Finally, social demand is also one of the significant motives for users to spread their works. A portion of users hope to make new friends and expand their social circle by sharing their work to satisfy their social needs.

Users distribute their work on media platforms in a variety of ways. Among them, social media communication is one of the most common ways. Users share the works they think are nice with friends or others with videos, links, photos, etc. by using social media platforms such as Weibo, TikTok, Xiaohongshu, YouTube, Facebook, etc.This mode of transmission has the characteristics of fast transmission speed and wide range, and can quickly spread works to a large number of users.In addition, email marketing is a common method of communication. Merchants send special offers, promotions, or subscription articles to users via email, and users can opt-in to receive the information directly or forward it to others.Spreading the word verbally among users is also an effective way of communication. When users find a good product or content, they usually recommend it to their friends and family, which leads to more attention and discussion.

The reasons for exploring users' dissemination of works are also different. First of all, the user's recognition and love of the work is one of the important reasons for the spread. When users agree with the views or content of the work, they tend to spread and forward to express their attitudes and positions. At the same time, recognition and love are also the premises for users to become disseminators of works. Secondly, posting questions or works may trigger enthusiastic replies and discussions among netizens, and such interactions and exchanges can also stimulate users' willingness to disseminate. By participating in the discussion and answering questions, users can obtain more effective information and further enrich their knowledge and experience.In addition, some users will spread their works out of personal interests or hobbies, such as sharing their favorite music, movies, or books. This way of communication not only meets the individual needs of users but also provides a variety of content choices for others.

3.3 Business Model Innovation of Media Platform

With the rapid development of mobile big data technology and the widespread popularity of social media platforms, business model innovation has become particularly important in the media industry. This innovation is primarily reflected in the in-depth analysis of user behavior characteristics and preference demands on media platforms, to provide customized services and enhance user experience. Diversified innovations in business models, such as advertising revenue models and e-commerce models, have not only greatly enriched the user experience but also significantly improved the precision and effectiveness of advertising placements.

In the context of mobile big data, media platforms have developed a business model of "separation of content production and broadcasting + advertising revenue sharing" (as shown in Figure 3.1). Independent media, as content producers, directly connect advertisers with consumers, generating revenue through advertisements to financially support both the independent media and the platform, without requiring payment from consumers. This model strengthens the cooperation between self-media and content distribution platforms, ensuring a fair distribution of advertising revenue.

It meets consumers' content needs while also promoting the joint development of self-media and platforms.

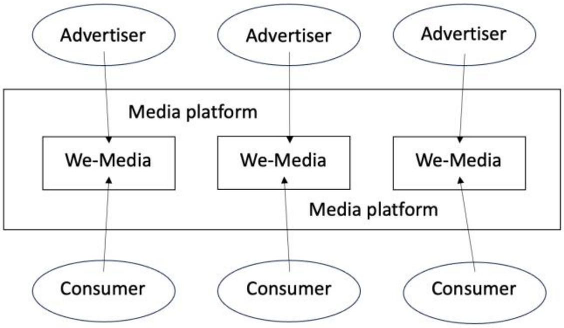

Fig. 1. Media platform business model

Media platforms are increasingly diversifying their paths to profitability through innovative business models. Advertising placement is a crucial component, capturing the attention of advertisers by displaying innovative and engaging ads on new media platforms, thereby generating advertising revenue. Furthermore, media platforms also utilize big data technology to collect and analyze user data, providing advertisers with precise and innovative ad placement strategies to optimize advertising effectiveness. The content subscription model is another new avenue for media platforms to generate revenue. By offering high-quality, exclusive content, they attract users to subscribe or make purchases, thereby earning income. Additionally, media platforms can offer data analysis services to help businesses or individuals better understand user needs and market trends, thereby supporting their decision-making process.

Cross-industry collaboration and brand partnerships between media platforms and other industries also demonstrate vast innovative potential. Content creators can effectively integrate resources and fan bases through cross-industry cooperation with different business sectors, achieving a win-win commercial model for both parties. This collaborative approach not only helps enhance the brand influence and user engagement of media platforms but also brings new business opportunities and growth points for both collaborators. Media platforms can leverage their vast user data advantage to deeply cooperate with other industries, achieving resource sharing and mutual benefit.

Media platforms need to continuously develop new innovative strategies to meet the increasingly diverse needs of users. By deeply analyzing user behavior data, media platforms can more accurately grasp user needs and preferences, thereby providing more personalized services and content. Such user-oriented innovative strategies not only help to enhance user experience and satisfaction but also help to strengthen the competitiveness and market position of the media platforms.

4 Conclusions

In today's society, the development of self-media platforms is increasingly showcasing the advantages of diversification, interactivity, and technological integration. These platforms are no longer confined to traditional forms of news reporting; instead, they incorporate various elements such as social media, self-media, and short videos, providing users with a rich variety of information content, social features, and interactive experiences. This transformation not only significantly enhances user engagement and dependency on media but also drives profound changes in the business models of media platforms.

With the rapid growth of self-media platforms, their business models have shown a trend toward diversification. Especially with innovations in payment models, media platforms have introduced various payment methods, including subscriptions, pay-per-view articles, and single-piece purchases, to meet users' demands for high-quality content. This diversified payment model not only provides users with more options but also prompts media platforms to significantly improve the quality of their content.In today's era of extremely rapid information dissemination, content quality has become the core competitive element for media platforms, prompting major platforms to place greater emphasis on the quality and content of their offerings. Additionally, self-media platforms are deeply integrating with industries like finance, education, and e-commerce through cross-sector collaboration, providing users with a holistic service experience. This integration not only enhances the appeal of the platform but also expands its business scope and revenue potential. However, in the face of diverse and personalized user demands, media platforms still need to further explore and innovate payment models to meet the varying needs and budgets of different users.

During the development process of self-media platforms, content quality and the protection of original works have become pressing issues that need to be addressed. Media platforms should enhance the review and regulation of content, establish strict reporting systems and review mechanisms, and promptly identify and prevent the spread of low-quality content. At the same time, platforms should also strengthen support for original content, encouraging its creation and dissemination through policy support, incentive mechanisms, and other means. Furthermore, the application of artificial intelligence and big data technology will provide strong support for content review and quality control on media platforms.

References

1. I. Levin, D. Mamlok, Culture and society in the digital age, Information 12 (2) (2021) 68.
2. A. Arvidsson, et al., The future of community research: a conversation with Alison Hulme, Alan Bradshaw and Adam Arvidsson, Journal of Marketing Management 34 (7-8) (2018) 694-704.
3. U.S. Akpan, Exploring and Navigating the Chasm: The Incompatibility of Western Gatekeeping Theory with Akwa-Cross Akata Indigenous Media, Howard Journal of Communications 35 (3) (2024) 311-325.
4. E. Dubois, et al., Who to trust on social media: How opinion leaders and seekers avoid disinformation and echo chambers, Social Media + Society 6 (2) (2020) 2056305120913993. DOI: https://doi.org/10.1177/2056305120913993
5. Z.Z. Zhu, T.J. Lyu, Research on media market competition with negative bilateral network externalities, Journal of Management Sciences 6 (2007) 13-23.
6. G.S. Cheng, H.M. Chen, TV media platform competition model with two-sided market characteristics, Journal of Systems Management 18 (1) (2009) 1-6.
7. C. Schwarzenegger, Understanding the users of alternative news media — Media epistemologies, news consumption, and media practices, Digital Journalism 11 (5) (2023) 853-871.
8. S.J. Wang, Research on the 'use and satisfaction' of knowledge-paid users, MA Thesis, Anhui University, 2022.
9. C.Z. Yang, Research on the influence of user experience utility on knowledge continuous sharing intention in social networks, Modern Intelligence 40 (3) (2020) 88-102 + 110.
10. J. Du, Rediscover users in traditional mainstream media content production, News Lovers 10 (2021) 48-49.
11. Q. Li, Immersive media: Redefining the connotation and extension of the concept of media, International Press 39 (8) (2017) 115-139.
12. W. Buller, Learning from e-business, in: The e-Revolution and Post-Compulsory Education, Routledge, 2023, pp. 33-48.

13. W. Jansen, W. Steenbakkers, H. Jagers, New business models for the knowledge economy, Routledge, 2017.
14. A. Polydoropoulou, et al., Prototype business models for Mobility-as-a-Service, Transportation Research Part A: Policy and Practice 131 (2020) 149-162.
15. D. Szopinski, et al., Modeling business models: a cross-disciplinary analysis of business model modeling languages and directions for future research, Communications of the Association for Information Systems 51 (1) (2022) 774-841.
16. B.A. Soomro, S. Mangi, N. Shah, Strategic factors and significance of organizational innovation and organizational learning in organizational performance, European Journal of Innovation Management 24 (2) (2021) 481-506.
17. L.J. Zheng, et al., Product innovation in entrepreneurial firms: How business model design influences disruptive and adoptive innovation, Technological Forecasting and Social Change 170 (2021) 120894. DOI: https://doi.org/10.1016/j.techfore.2021.120894
18. P. Zeng, T.B. Song, Research on the driving force of business model innovation based on the integration of internal and external factors, Journal of Management 11 (7) (2014) 989-996.