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Analysis on the Status Quo of Competition in Mobile Audio Industry Under Dynamic Competition Environment

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Abstract—In recent years, mobile audio industry has undergone rapid development and the competition among platforms within the industry has become more and more fierce. Policy changes, technological developments, constant changes in users' demand and capital flows make entities in the mobile audio industry always in a dynamic and changing competitive environment. In a dynamic competitive environment, any competitive advantage is temporary. If a mobile audio platform wants to maintain a lasting competitive advantage in the game with its competitors, it is necessary to fully understand the interlaced and interactive relation existing among the platform itself, competitor and environment and further formulate applicable competitive strategies.

Keywords—mobile audio; dynamic competition; competitive advantage; competitive strategy

I. INTRODUCTION

Douban FM emerged in 2010 was considered as the first mobile audio platform in China. Since then, many platforms such as Himalayan FM, Dragonfly FM and Lizhi FM successively emerged. Followed by, mobile audio has rapidly grown into one of the most promising industries in mobile internet field. In China, mobile audio field has obtained the number of users which similar application in foreign countries may obtain for 6 years in accumulation. By the end of 2016, the overall user scale of China's mobile audio platform has reached 226 million users. While mobile audio industry undergoes rapid development, the competition among platforms within the industry also becomes fiercer and fiercer. Policy changes, technological developments, constant changes in users' demand and capital flows make entities in the mobile audio industry always in a dynamic and changing competitive environment. In the complicated and varying competitive environment, it is hard for mobile audio platform to maintain in advantage for long time. If a mobile audio platform wants to maintain a sustainable competitive advantage in the game with its competitors, it is necessary for the platform to fully understand the interlaced and interactive relation existing among the platform, the competitor and the environment and further formulate applicable strategies.

In traditional competitive strategy thinking, the understanding of sustainable competitive advantage is mainly based on a relatively stable market environment. Sustainable competitive advantage is regarded as a competitive advantage that always exists or is maintained for long term. ¹Traditional competitive strategy treats the market environment as a stable or gradually varied condition, regardless of its dynamic and complicated natures. In face of a rapidly changing new competitive environment, Richard A. D' Aveni (1994) and George S. Day & David J. Reibstein (1996) proposed the theory of dynamic competitive strategy. This theory believes that any competitive advantage is temporary, enterprise and its competitors are in a long-term "offensive-counterattack" interactive relation and only by constantly making correct competitive strategies in the unceasingly changing competitive environment can the enterprise build up its long-lasting competitive advantage.

Drawing on the competitive structure analysis method in the theory of dynamic competitive strategy, this paper analyzes the competition status of the entire mobile audio industry from five aspects such as the competitor's competitiveness, new entrants' threat, consumers' power, providers' power and threat of alternatives, tries to find the main factors determining the competitive structure and intensity of the field and proposes applicable competitive strategies.

II. COMPETITIVENESS OF COMPETITORS

After experiencing the market start-up period from 2012 to 2013 and the high-speed development period from 2014 to 2015, the entire mobile audio industry has formed a multi-level competition pattern. Among them, Himalayan FM and Dragonfly FM are the two platforms having the strongest comprehensive strength, followed by Koala FM and Lizhi FM. The remained platforms have already far lagged from the said four platforms. Relevant data shows that in 2015, the

¹ Lu Qian. Strategic Choice for Sustainable Competitive Advantage of Enterprises in Dynamic Environment [J]. Journal of Industrial Technological Economics, 2004, (05): 61-64. (in Chinese)

² Ge Qingjun, Xiao Hongjun. Review on the Study of Theory of Competitive Strategy Based on Environment [J]. Management Review, 2008, (07): 42-49+64. (in Chinese)

said four platforms took more than 80% shares of the entire mobile audio industry. In the fourth quarter of 2016, Himalayan FM having 29.4% active users took the lead in mobile audio market, followed by Dragonfly FM and Lizhi FM respectively having more than 20% active users. However in the current entire mobile audio industry, the competitive ranking is not stable and there are changes from time to time and the competition is relatively fierce. It can be said that mobile audio industry has formed an oligopolistic competitive pattern.

Due to early entry into the market, those leading platforms have established their own brands and have demonstrated the advantages that other platforms have not yet formed in terms of financing. Many audio companies such as Himalayan FM, Dragonfly FM, Koala FM, AnyRadio, DuoTing FM and Lizhi FM have successively completed the US\$ ten millions scale of Series B and C financings; of which Himalayan had completed the US\$ 11.5 million Series A financing and the US\$ 50 million Series B financing in 2014 (financed 61.5 million USD in total), taking the lead position in the industry. At the beginning of 2015, Lizhi FM announced that it had completed the US\$ 20 million Series C financing, becoming a mobile radio application jointly invested by MatrixPartners China, Morningside Ventures, MIUI Technology and Shunwei Capital. In February 2016, Dragonfly FM had completed the Series D Financing by China Culture Industrial Investment Fund (the leading investor), with a valuation of ± 2.5 billion. In May 2016, Koala FM had obtained an investment of ¥170 million from Legend Capital and other investors (see "Table I").

 TABLE I.
 STATISTICS ON FINANCING OF MOBILE AUDIO PLATFORMS

Financing series	Himalayan	Dragonfly FM	Litzhi FM	DuoTing FM	Koala FM	AnyRadio
А	US\$ 11.5 million	US\$ 2million	US\$ 10million	Undisclosed	Undisclosed	¥20 million
В	US\$ 50million	US\$ 10million	US\$ 20million	US\$ 10million	¥170million	
С	Ongoing	20million USD	20million USD	Ongoing		
D		Undisclosed				

^{a.} Note: the above data was sorted out from disclosed information.

With the support of capital, the competition of mobile audio platforms begins appearing Matthew effect. The current and future competition will be mainly the competition between the said four platforms, while the focus of competition is on the adhesiveness between user and platform and the maturity of business model. In order to improve adhesiveness and activeness of users, each leading platform adopts a differentiated competitive strategy to improve user loyalty by providing different styles of content. For example, Himalayan FM had abandoned "traditional content" since its establishment and is committed to get "voice players" connected together. At present, it has collected a large number of high-quality PGC resources. Meanwhile, Lizhi FM broken through from the "literary feelings" of niche player, created exquisite and fresh overall style so that its users are extremely sticky.

Although each platform has formed its own competitive strategy in terms of content production, several leading platforms are still in the stage of active exploration in terms of mature profit model. The profit model becomes a key factor in future competition. At present, advertising and user fees are the main income source of mobile audio platforms, and a single profit model cannot meet the day-to-day operations and further development demand of mobile audio platforms any more. All platforms are trying to open up the upstream and downstream industrial chains in combination with their own advantages, and seeking for cooperation with automobiles and smart homes and other fields in order to form new business models and create new competitive advantages.

III. NEW ENTRANTS' THREAT

Markets easy to access may quickly become overcrowded if they have good profit prospects. ³ Mobile audio market is facing a market size of hundreds of millions of users and the market space of tens of billion Yuan, so that in a few short years, it has attracted a large number of new entrants. As of the second half of 2015, more than 150 Internet audio media had emerged. For early pioneering mobile audio platforms, the competition in the entire market will become more intense once new entrants have built up their own bridgeheads. Conversely, the threat posed by new entrants may be greatly reduced if early pioneering mobile audio platforms can maintain their sustainable competitive advantages and increase the access barriers in aspects of factor costs, economic scale, differentiation and switching costs.

Currently, mobile audio industry has formed an oligopolistic competitive pattern. For example, mobile audio platforms such as Dragonfly FM, Himalayan FM and Lizhi FM have accumulated a group of highly loyal users and taken half of the market size. It is difficult for new entrants to shake the "long-lasting status" of those leading platforms in a short term. But for those mobile audio platforms in the middle and lower end of the industry, especially at the end of the industry, they still face threats of competing with new entrants for obtaining resources such as users, traffic and advertising.

³ George S. Day. Dynamic Competitive Strategy [M]. Shanghai Jiaotong University Press, 2003, p21. (in Chinese)



For new entrants who want to enter the mobile audio industry, the barriers to this industry are getting higher and higher. The first barrier is the high amount of copyright fees. With the gradual maturity of mobile audio industry, the competition for copyright among various platforms has become more intense and the cost of some high-quality copyrights has also raised. For consumers, what they consider when choosing a mobile audio platform is the content, audio quality, fluency and related services. So in addition to high copyright fees, new entrants must also spend a lot of money to meet user's requirements in technology and hardware. However, this practice needs to be supported by huge funds. Secondly, the current profit mode of mobile audio industry is still unclear so that there are certain risks for new entrants. The main profit source of mobile audio industrial market is still advertising, user payment model hasn't been established and it is still exploring for cross-field cooperation although this market has undergone rapid development and has repeatedly received the olive branch provided by the capital market. In face of the high costs in copyright fees and so on, the current income of this industry is still non-profitable. Therefore, at present stage, new entrants must prepare a large amount of funds for covering the deficit in a period of time.

On the whole, although mobile audio field is full of development potential, the oligopolistic competitive pattern has been formed, the cost of acquiring users is getting higher and higher and the requirements for capital and technology are higher in addition to the vicious competition between peers so that the barriers to entry throughout the market are gradually increased. If new entrants want to gain a certain market share, they must be supported by sufficient funds and differentiated products. For mobile audio platforms that have entered the field, the dominant platforms are currently facing less threat, but the platforms having less market share and homogenized product still need to deal with the strong challenges from new entrants.

IV. CONSUMERS' POWER

Consumers of mobile audio platform can be divided into two categories: ordinary users listening to mobile audio content and advertisers paying advertising fee to the mobile audio platform in exchange for popularization.

According to iiMedia Research data, it is found that the main users of mobile audio platform are mainly 25-40 years old, accounting for more than 81%; of which, their occupations are mainly white collar, accounting for 35.9%, followed by business management, freelance, private enterprises and other high-income population. Although mobile audio platform has accumulated hundreds of millions of users in just a few years, most users are still listening to free content and have not formed a habit of payment for the listening. For mobile audio platforms wanting to make money, it is clearly not a long-term solution to continuously provide free content. However, as there is neither restriction nor highly increased cost for user transferring from one platform to another platform, user may turn to use other similar platform providing free content when an audio platform begins to charge for the listening. At this time, the

bargaining power of user as a consumer is improved and the loss of user may affect the influence and attraction of the platform and further affect the decision of advertisers. In order to avoid this problem, it is necessary for mobile audio platform to implement a differentiated strategy and provide unique products to stabilize customer's attention and gradually establish the payment model.

Driven by the booming mobile Internet industry, mobile audio platform is increasingly attractive and influential and has become a new channel for advertisers to advertise. At present, advertising is the main mode of profitability of mobile audio platforms. Within the period when the user payment model is not developed and the cross-field cooperation model is still being explored, advertising is still be the main mode of profitability of mobile audio platform and the key for such platform to establishing and maintaining competitive advantages is whether it can attract more advertisers and pay more advertising fees. Therefore, advertisers are consumers on which mobile audio platforms highly depend and also the resources under fierce competition among mobile audio platforms.

The theory of dynamic competitive strategy believes that the size of consumer power depends on the reliability of its bargaining power and its sensitivity to price⁴, and the two factors are closely linked. Mobile audio platform provides audio products for general users and provides a propagating platform for advertisers. Mobile audio platforms, users and advertisers constitute a three-phase structure of "crossnetwork externalities" and an increase in the absolute value of any party will have a positive boost to the other two parties (see "Fig. 1"). From the above analysis, it can be seen that the loyalty of consumers is low when users or advertisers can transfer from one platform to another without any restriction and cost increase; and consumers will be willing to pay and their loyalty will be greatly increased, when a mobile audio platform is different from other platforms in content and service so that consumers cannot buy the same product and service on other platforms.

⁴ George S. Day. Dynamic Competitive Strategy [M]. Shanghai Jiaotong University Press, 2003, p23. (in Chinese)



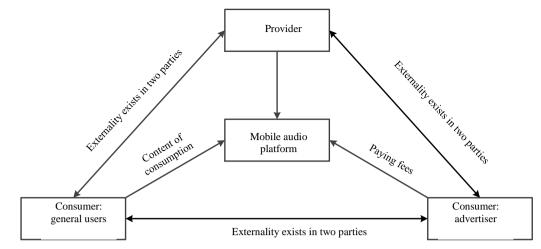


Fig. 1. Cross-network externality structure.

V. PROVIDERS' POWER

Mobile audio platform mainly provides content products and content is the core resources in the competition in mobile audio industry. Currently, the providers of mobile audio content mainly come from three channels: UGC, PGC and PUGC.

UGC (User Generated Content) is one of the important providers of mobile audio. Taking Himalayan FM as an example, this platform has used UGC as its starting content since its establishment and has rapidly accumulated a large number of active users by virtue of the UGC production model. At present on the Himalayan FM platform, there have been more than 4 million anchors and 400,000 voices are uploaded every day. Mobile audio platform continues providing contents endlessly by virtue of the large number of individual users. Those contents are rich and diverse in terms of the theme and cover all aspects of social life. They are flexible in form and different in time length, thus are deeply loved by users. For mobile audio platforms, UGC's production model has extremely low cost but high rate of return. So, many mobile audio platforms encourage the development of this model, and some of them even formulate incentive policies to increase users' enthusiasm for generating content. However, since producers of UGC are ordinary network users mainly including grass-roots users and radio enthusiasts, the contents provided are varied in quality and sometimes may also have copyright issues, bringing trouble to the management of mobile audio platform.

The content of PGC (Professional Generated Content) mainly comes from radio and television stations and the like institutions and professionals. At the beginning of emergence of mobile audio, PGC was the main provider of its content. The mobile audio platform created by traditional radio stations may often put such programs broadcasted on the radio station as intact or slightly packaged on the mobile platform for the user to click and listen to. In early days, commercial mobile audio platform may also buy copyrights from radio or TV stations to enrich their content. Along with the rise of WeMedia and the rapid becoming popular of a group of WeMedia workers, in the sources of PGC contents, mobile audio platform has not been content with such providers as radio or TV stations but turn its attention to the competitive contents created by more appealing leading professional WeMedia teams. As a result, "Logical Thinking", "Xiaosong Pedia", "Wu Xiaobo Channel" and Jiang Xun, Yuan Tengfei, Yi Zhongtian and the like have become scarce resources that various platforms are competing for. As the source is professional production organizations, high-quality PGC content meets user's increasing demand for sound quality, contributed to the establishment and maintenance of mobile audio brands. But this part of content needs to be granted copyright by purchasing, while the high copyright fee increases the cost of mobile audio platform. Although the scarcity of resources and high copyright costs both get the cost of mobile audio platform increased, mobile audio platform will still give the priority to select PGC content providers in the trend of accurate, refined and qualified development of mobile audio.

PUGC (Professional User Generated Content) is a mode of "let professional user to produce content". It is a content production mode gradually formed in the development process of mobile audio industry and getting UGC+PGC combined together. Himalayan FM is the first mobile audio platform proposed PUGC ecological strategy. Its content production consists of UGC+PGC+ exclusive copyright. It also gets the upstream and downstream of the industry connected together, forming an entire audio ecological chain. PUGC's content production model is based on excellent users accumulated on the platform, encourages and guides their content generation. For example, the Himalayan selected 80,000 certified anchors from the 4 million grassroots anchors and established Himalayan University to train the anchors professionally. Dragonfly FM also signed contract with more than 12,000 anchors. This content ecological model bundles the content providers with the mobile audio platform, which not only ensures the richness and diversity of the source of the supplied content, but also guarantees the quality of the content under supervision of the platform. Currently, PUGC's content ecosystem model is being adopted by more mobile audio platforms.

The vast majority of grass-roots users and professional radio anchors and WeMedia workers constitute the foremost providers of mobile audio platforms. Grass-roots users are huge in quantity and are highly active to provide content. Relatively, this way produces low cost. Therefore, mobile audio platforms are also selecting excellent providers for further cooperation while actively encouraging them to produce contents. Professional radio anchors and currentlypopular WeMedia workers have strong fans appealing power, but the cost of copyright is high; and it is not wise to solely rely on paying copyright fees to maintain the relationships with such providers. It is available to bundle the development of those providers with the platform and increase the closeness with such providers so as to improve the passive situation of mobile audio platforms and increase the bargaining power of the platform in front of such content providers.

VI. THREAT OF ALTERNATIVES

Mobile audio platforms mainly provide audio products, so their alternatives are generally other channels providing the same products. From the point of listening terminal, there are three main types of alternatives: peninsula radio, PC-side Internet radio and on-board audio device.

Judging from the current change in users' habit in using media, users listening to audio programs in traditional way are decreasing year by year. In 2015, the overall listening rate of 35 cities throughout China was decreased by 3.33% compared with that in 2014. Compared with the average daily audience scale and average weekly audience scale in 2014, those in 2015 were respectively reduced by 0.51% and 0.10%. ⁵ In addition, radio can only receive the audio programs on traditional radio stations via electric wave signals and the content has been not available to meet the needs of users to a large extent. Therefore basically, it can be said that mobile audio exists instead of the function of the semiconductor radio, but the semiconductor radio is impossible to replace the function of mobile audio.

In early stage, with the support of policy and technology, Internet radio stations were so popular that listening to the audio programs uploaded on line by broadcasting radio stations and listening to music via PC became the main content of consumptions of netizens. However compared with mobile audio platform, PC gradually reveals the disadvantages such as inconvenience to carry, not strong nature of accompanying and weak sociability. At present, quantity of users on PC side appears a downward trend. In 2016, those using mobile phone to surf the internet accounted for 80.7% (by quantity of people) of newly-added netizens in China, creased by 9.2% from that in 2015; the proportion of netizens using desktop computers was decreased by 16.5% from that in 2015. ⁶ Therefore, in the long run, PC-side Internet radio stations are also difficult to replace mobile audio platforms.

The popularity of automobiles has brought new development space for the survival of broadcasting. Listening to the radio through on-board audio device becomes the choice of many people when driving. On-board audio device can be used to listen to the programs of traditional radio stations and meet users' demand for acquiring information about news and entertainment and especially about real-time traffic conditions. At the same time, car broadcasts also have the advantages of accompanying and interaction. It can be said that the above three types of alternatives are most threatening to mobile audio platforms. Of course, some mobile audio platforms have seen the potential market space of on-board broadcasts and implemented a strategy of turning competitors into partners. For example, the network audio aggregation platform DuoTing FM has developed a smart on-board plugand-play cloud radio CheTingBao, providing technical support for mobile audio platform on smart on-board platform. Mobile audio platform also tried to cooperate with car manufacturers in the front segment of the industry chain, tried to build their own audio platform into car's operation system so that drivers can listen to audio programs in non-WIFI condition. For instance, Dragonfly FM has beginning the cooperation with more than 50 entire-car manufacturers such as Ford, Volvo, BMW and AUDI. From the perspective of existing market development, mobile audio platforms successively select to cooperate with on-board broadcast in order to maintain the existing competitive advantage and expand the market development space, with the expectation to obtain more market share by virtue of the huge users' power of the on-board broadcast.

VII. CONCLUSION

The analysis of the competitive structure from the perspective of dynamic competitive environment effectively outlines the overall competition status of mobile audio industry. Seen from the five factors affecting the competitive structure, for mobile audio industry, competition between competitors has become increasingly fierce, especially between the leading platforms with a large market shares. The competition in copyright, users, flow and advertisement and other aspects becomes white-hot. The competitive pattern of the entire industry is becoming stable day by day, which produces greater difficulties and higher and higher industrial barriers for new entrants. The "cross-network externality" structure among mobile audio platform, content providers and consumers is closely linked. In the future, mobile audio platforms need to use differentiated content and accurate services to enhance user stickiness and enhance brand influence so as to further attract high-quality resources. From the perspective of alternatives, traditional listening tools are becoming less and less, and new technologies such as built-in listening terminals, smart homes and VRs may become alternatives. So, mobile audio platforms should be transformed from competitive relation into cooperative relation with such technologies to broaden the industrial chain and realize cross-field development. Certainly, in addition to the above five factors, policy changes, technology updates and diversification of consumer demand also affect the competitive environment of mobile audio industry. For

⁵ Cao Yi. Overview of Broadcast Listening Market in 2015[J]. China Broadcasts, 2016, (02): 51-55. (in Chinese)

⁶ CNNIC. (39th) China Statistical Report on Internet Development. http://www.cnnic.net.cn/hlwfzyj/hlwxzbg/hlwtjbg/201701/t20170122_6643 7.htm (in Chinese)



each mobile audio platform, only by paying real-time attention to the changing competitive environment and understanding its competitive advantages and competitors can it be available to formulate a practical and feasible competitive strategy and further create and maintain a sustainable competitive advantage.

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