

Evaluating the Application Value of Radio Technology in Selected Provinces in China

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There is a prevailing belief that due to inadequacy of funds and education, radio should be the medium for people in the underdeveloped areas of China. However, the author has found out through field investigations that notwithstanding its important role in developed areas, radio technology is not widely used in those places. In transforming Chinese society, numerous reasons polarize the application value of radio technology which the author evaluates in present-day Chinese society, using a combination of quantitative and qualitative methods that yielded a large amount of first-hand survey and interview data.

The study analyzes the development situation in poor as well as rich areas of China and explores the prospects of radio in the country. It reinterprets the development of radio from a completely new perspective with the aid of some theories in mass communication.

Keywords: *radio technology, rural development, media habits*

The Existing Role of Radio

When discussing the power of radio in society, we may easily come to the conclusion that the coverage and popularity of radio in developed areas like cities and towns must be much better than in underdeveloped areas.

Most rural areas in China can only receive no more than five channels through the wireless transmission of television (TV). The signal is unstable due to transmission power, weather or geographic elements which lead to poor receiving quality (China Central Television Nationwide Viewer Survey, 2002).

In addition, the agricultural programs of these channels are mostly dispensable, and there are few programs which reflect life in the countryside or solve practical problems for peasants. Television has failed in helping peasants obtain and process useful messages to increase income and improve lives.

In comparison, radio coverage has great advantages in terms of both finance and administration. First, the principal problem that restricts the dissemination activities to the rural population in underdeveloped areas is

the lack of funds. However, the village radio network, a relatively advanced communication technology in these poor areas, requires much less investment than television, both in the first phase of technology setup and in follow-up maintenance and upgrade costs. Second, these poor areas are mostly located in remote mountainous regions that could not be reached even by motor vehicles, thereby making administration difficult.

Radio technology is relatively simple and local peasants can be trained to manage and maintain their own radio broadcasting. Moreover, China has a huge rural area, with different areas having different ecological and cultural environments. The dissemination of agricultural knowledge and income-generating information, for example, has to be adjusted according to the features of the different areas.

There is never a universal program which fits into every context. In this respect, radio is much more flexible than television in reorienting topics to meet the demands and habits of the local population. Therefore, there is a prevailing belief that, due to restrictions posed by lack of funds and education, radio should be the principal choice of communication medium in underdeveloped areas of China.

The Real Picture: Radio is a Weak Medium in the Underdeveloped Areas of China

As the chief communication strategy consultant of the EU-China Natural Forest Management Project (NFMP), the author conducted a field survey to monitor and evaluate the dissemination impact of the project. During the investigation in NFMP areas, he collected a large amount of first-hand data and used frequency analysis and cross-tab analysis using statistical software, the Statistical Package for the Social Sciences (SPSS). This helped the author draw an actual picture of the media habits of people living in the underdeveloped areas.

Methods of Data Collection and Analysis of the Research Environment

1. Methods of Data Collection

This investigation combines quantitative and qualitative methods, and involves the use of a survey, focus group discussions and case studies. The survey aims to find out how the villagers learned about the NFMP, the media habits of peasants and the profiles of people interviewed.

Researchers conducted an in-house survey, using multi-level sampling, from November 11 to December 5, 2005. Through this sampling, they randomly identified 20 villages from: a) Yanling and Yongshun Counties in Hunan

Table 1. Annual Income of Survey Respondents

		FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
Valid	Less than US\$120	246	33.6	34.8	34.8
	US\$120 – US\$220	65	8.9	9.2	44.1
	US\$220 – US\$360	91	12.4	12.9	56.9
	More than US\$360	304	41.5	43.1	100.0
		706	96.4	100.0	
Missing	System	26	3.6		
Total		732	100.0		

Note: At the time of the study (July 2009), the currency rate was 1 US\$ = 6.845 RMB.

Province; b) Baoxing, Songpan and Pingwu Counties in Sichuan Province; and c) Changjiang County in Hainan Province (all NFMP implementation areas). Then, they picked out 40 families through isometric sampling. During the in-house visit, the investigator chose family members to answer the questions. Of the 800 questionnaires distributed, 732 valid feedback or filled-up forms were received.

2. The Research Environment

This survey covered three provinces and six counties as mentioned above. The counties shared the following characteristics:

- a. Table 1 shows that 706 persons (96.4%) of the 732 participants in this survey have a relatively low average annual per capita income.
- b. Most of the residents are not well-educated.
- c. Most of them are peasants.
- d. There is a large number of tribal or cultural groups in these areas, including Li, Yao, She, Tujia, Miao, Qiang, Zang and Baima-Zang (see Table 2).

Media Habits in Underdeveloped Areas

1. Media Use: Television

Majority of the respondents (67%) chose television as their chief medium to get information (see Figure 1). They cited the following as the main reasons for choosing television:

- a. Since 1999, the National Broadcasting Bureau has carried out a broadcasting project called “Reaching Every Village,” which expanded the coverage of TV in underdeveloped areas. This benefited the local

Table 2. Types of Cultural Communities

PROVINCE	HAINAN		HUNAN		SICHUAN	
COUNTY	CHANGJIANG	YANLING	YONGSHUN	BAOXING	SONGPAN	PINGWU
Population	Middle	Middle	Low-middle	Low	Low	Low-middle
Village Size	Minitype to Midsize 100-600 families	Midsize 150-500 families	Minitype-Midsize 50-400 families	Minitype 75-175 families	Tiny 20-85 families	Minitype-Midsize 100-300 families
Type of Minorities & proportion	Li (100%)	Yao, She (<5%)	Tujia, Miao (60-70%)	Zang (<5%)	Qiang (>90%)	Zang-Baima (50-99%)
Income in USD	88.4-181.9	188.3-277.6	77.4-181.2	150.2-245.4	174.0-399.1	174.0-438.3

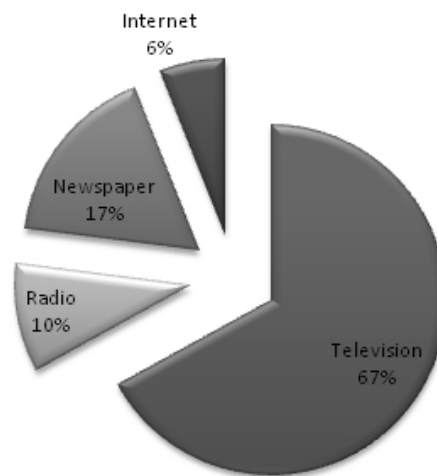
peasants and served as the material foundation for television to become the leading medium in these areas. For every four families, three own a television set or have access to it through neighbors.

- b. As an audio-visual medium, television is more vivid, direct, live and instantaneous compared to other media.
- c. The manifested content and format of TV programs attract and satisfy audiences with different educational backgrounds, hobbies and needs.

American communication scholar Melvin Defleur (Duan, 2006) divides the contents of mass communication into three types: a) Babbitry; b) undisputable; and c) exquisite. He describes Babbitry content and undisputable content as “those that enrage critics constantly” and “those that critics seldom have comments on,” respectively. Both types are widely spread and have large-scale audiences (Duan, 2006: 231).

The survey disclosed that the interviewees’

Figure 1. Media Use of Respondents



favorite programs were series, such as *Da Chang Jin* and *Super Girls*, and TV news reports. These programs were also mentioned as favorites during the focus group discussions. Entertainment TV programs, which Defleur tagged as having “Babbitry” and “undisputable” contents, make television the unrivaled medium of choice in both developed and underdeveloped areas.

According to the Uses and Gratifications Theory of Katz, audiences actually control the whole communication process by using media actively, in this case, television. They are not passive. They use the media and obtain gratification according to the demands on knowledge, emotion, self-integrity or social integrity. In the process of mass communication, audiences connect need-gratification and media selection. Media, however, must compete with other factors that can gratify the needs of audiences (Taylor, 2005: 144).

According to the survey, the TV programs that the respondents watched were quite diversified in terms of channel, format and language. At the same time, these TV programs satisfied audiences with various education levels, hobbies, genders, ages, demands and ethnic backgrounds. Therefore, it is not surprising that television is the leading media choice in underdeveloped regions.

- d. As an audio-visual medium, television breaks down the access barrier for the illiterate population in poor areas.

2. Media Use: Newspaper

In the survey, the percentage of people who chose newspapers as their principal medium or source of information is only 17% which is much lower than those who chose television. There are two main reasons for this. First is that the newspaper is a visual medium whose major communication tool is the printed word which, in turn, requires its audience to have reached a certain educational level.

Second, newspaper circulation is very low in underdeveloped areas, especially in the rural areas. Due to their remote location, people from many underdeveloped areas can only have access to newspapers that were published three days or even one week before. When news becomes old, few people would choose the newspaper to obtain information. Moreover, due to time constraints, most people in poor areas prefer to read news digests.

3. Media Use: Radio

Based on the survey, only 10% of the respondents chose radio as their principal medium for information which puts it third on the list. As an audio

medium, radio has an advantage in timely reporting and has no restrictions as far as people's literacy is concerned. Although it is far less vivid than television, radio nonetheless is much better than print, particularly in the live transmission of an ongoing event. Still, radio was not the most popular medium, according to the survey. Similarly, in the focus group discussions, the discussants revealed that even in most underdeveloped areas, radio was considered as an outdated medium when compared to television.

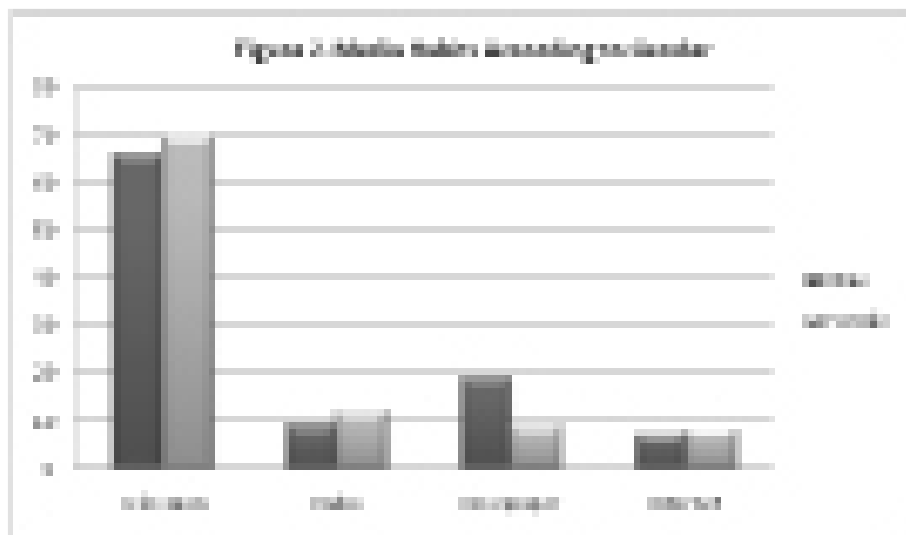
4. Media Use: Computer/Internet

The use of the computer and the Internet is not popular in the underdeveloped parts of China. The survey found out that computer use in the richest region of the target areas was only 2 to 3%, while in most villages the figure was zero or nil. This is because this new medium requires a certain financial capability and educational background before users can avail themselves of it.

Therefore, although it is sweeping the world with its amazing power, the computer was identified as the primary medium by merely 6% of the respondents. According to the survey, the users were mostly local young farmers who went to the Internet café, and members of the office staff in forestry enterprises which have computers.

Media Habits According to Gender

Figure 2 clearly shows the differences, which are generally not so distinct, in media selection between male and female respondents in underdeveloped



areas. A relatively notable observation, however, is the choice of the newspaper by more men than women.

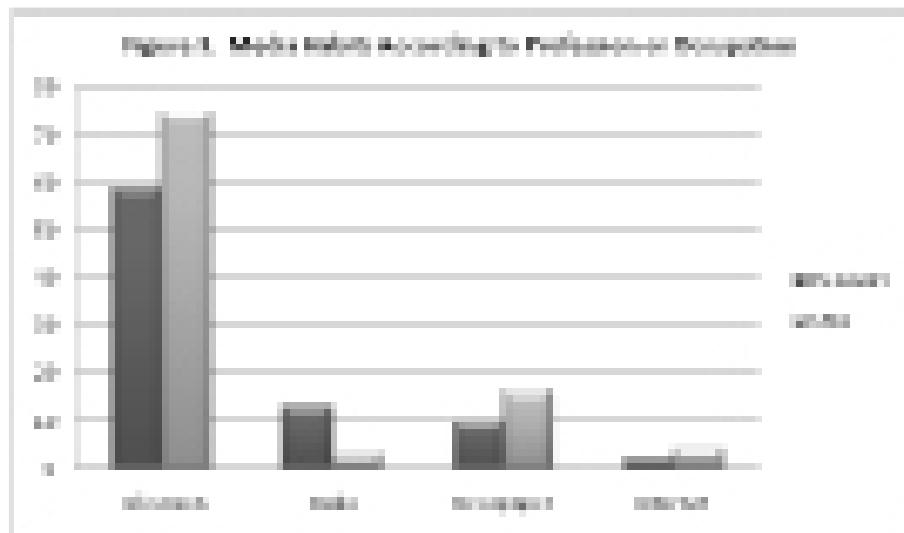
A plausible explanation for this is that in the underdeveloped areas of China, more boys than girls have access to education. Whenever possible, boys are more likely to be sent to school than girls. Women, on the other hand, generally prefer radio as an alternative to television.

Media Habits According to Profession or Occupation

Like in all underdeveloped areas, the means of livelihood of the investigated areas are quite simple: they are mostly peasants and local staff forestry employees (SFEs). Between these two, more SFEs choose television as the principal medium (see Figure 3). The basic reason is income. The number of SFEs is higher than that of peasants who choose TV, newspaper and Internet while only a few of them choose radio as the primary medium of information.

As mentioned earlier, the average income of the regions covered by this survey is rather low. People with annual incomes below US\$116 and up to US\$365 constitute the majority of the population. There is a big income gap between the rich and the poor. Those with annual incomes that are more than US\$365 work for the government, specifically the Forestry Bureau.

In other words, most peasants' annual incomes are lower than US\$116. Usually, it costs more than US\$146 for people to buy a television set and antenna—a big investment for most peasants. On the other hand, with their



higher economic status, the richer SFEs have more opportunity to access TV programs. Their preference for TV is therefore not surprising.

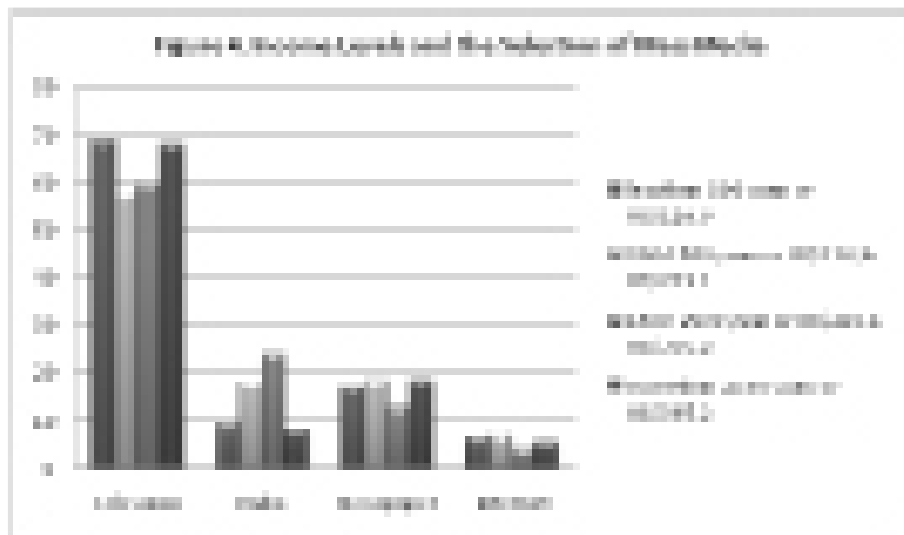
The data also show that more SFEs prefer newspapers than peasants. The reason for this also points to education. As government employees, SFEs have a higher educational background, having completed at least middle school. With their capacity to read, more SFEs are therefore inclined to turn to newspapers.

Meanwhile, there is a modest difference in the preference for the computer/Internet. In underdeveloped areas, the reach of the computer/Internet is very limited. Neither SFEs nor peasants can afford to buy this medium.

More peasants than SFEs prefer the radio as the primary medium of information. Almost every family has a radio set. With their poor economic status and low educational background, peasants have no other choice than to have the radio as the alternative to TV; it is cheaper and, unlike newspapers, does not require reading skills. For the SFEs, television has a much better communication impact than the radio because of its visual messages. This also supports a previous statement that the radio is deemed an outdated medium in developed areas.

Media Habits according to Income Level

Through the cross-tabulation analysis of the questionnaire results, this study found out that the income levels of the respondents have some influence, albeit not a very strong one, on the selection of mass media in underdeveloped areas in China.



Across all income groups, television enjoys the highest percentage of preference. Figure 4 shows, about 68.4% of people with annual incomes below US\$116 and 68.1% of those with incomes above US\$365 choose television as the primary medium. People with annual incomes between US\$219 and US\$365 follow next. The last are those with annual incomes between US\$116 and US\$219.

Radio was chosen by more people with annual incomes between US\$219 and US\$365, followed by those with annual incomes of US\$116 up to US\$219; then by those with annual incomes of less than US\$116, and by those with annual incomes of over US\$365.

People with annual incomes of between US\$116 to US\$219 and those who earn more than US\$365 both preferred the newspaper as medium. They were followed by those whose income were less than US\$116 and those between US\$219 to US\$365 follow.

On the choice of the Internet, people with annual incomes of US\$116 to US\$219 had a slight edge with those who are earning less than US\$116. They were followed by those who earn more than US\$365 then by those who earn between US\$219 to US\$365.

The above statistics reveal that radio is not the prevailing medium in underdeveloped areas, despite being more affordable and easier to use.

Based on the analysis above, the author observes that with the expansion of television in underdeveloped areas, the influence of radio is declining. Despite its capability to deliver timely reports, it cannot compete with television in depicting the atmosphere on the ground, transmitting visual images and reviewing the news process. It is therefore less attractive in disseminating popular “Babbitry and undisputable contents.”

The Development of Radio in Rich and Moderately Wealthy Regions

To some extent, the utilization and development of radio are both an indicator and a reflection of the economic development of a nation or region. Categorizing and further subdividing the different radio formats and genre will provide more value and meaning to different audiences. In the US, for example, its rock-and-roll music radios were subdivided into contemporary pop rock, the campus non-commercial artists’ “new rock,” motional rock, classical rock and others. The growing diversification of city lifestyle and ideology in the modern metropolis intensified the media competition, making the content of radio further specialized and individualized, and focusing on leisure and entertainment.

The advantages of radio as a quick, handy and portable transmitter of information have been recognized and explored. The audiences of radio have changed, however, from what was believed to be the elderly group of society to new and untraditional groups like the mobile group receivers in moving vehicles. The low cost in receiving audio programs and the medium's flexibility in changing locations are extremely convenient for the mobile group. The specialization and subdivision have also become the new trend in radio communication in Chinese cities (Zheng, 2003).

The character of radio as a movable receiver which satisfies audiences' demand for sound accompaniment has become extremely important with the increase in the urban population and strengthening of transportation integration. In a highly competitive environment, mass media are now developing from "broadcast" to "narrowcast," wherein each radio station now specializes in different fields: news, economy, traffic, music and so on. Among these genre, music and traffic radios have made the more significant progress and development. This means that radio has found its niche in the needs of its audiences by developing a mode that adapts itself to the new media competitive environment.

Music Radio

Music radio is the most successful format developed from the specialization of channels. Many music radios conform and respond to the entertainment needs of audiences, like Easy FM91.5 of China Radio International (CRI), FM97.4 of Radio Beijing, Music Radio, Shanghai Orient Radio, Wuhan Chutian Music Radio and so on. The existence of music radio in China is almost identical with the development route taken by radio in developed countries.

Music radio is a brand-new channel which evolved from the third Art Channel of China People's Radio in 2003. The new music radio is a specialized music channel, broadcasting local and international music programs 18 hours a day, from 6 a.m. to 12 midnight. It is labeled as a "pure music channel" from which the best radio music in China can be heard.

Traffic Radio

The birth of traffic radios was impelled by traffic jams in the cities. Since the creation of the Traffic Information Radio of Shanghai People's Radio on September 30, 1991, over 50 traffic radios have been put up all over the country. Traffic radio is a typical local medium which cooperates with local traffic administration departments to disseminate official road traffic information to mobile groups. Among these radio channels, Beijing Traffic Radio has been attracting an amazing size of the market. Supported by a huge receiver group

composed of 70,000 taxis, millions of passengers and 1.7 million private vehicles, it has successfully tied up the receivers every day in rush hours with programs like road information. This channel earns an astonishing annual income of 300 million yuan or US\$43.84 million, thus ranking first among all radio channels in China. Its profit is even higher than that of many television stations in the same city.

The Chinese Automobile Engineering Research Center estimates that the national annual light vehicles' consumption will increase to 10.4 million until 2009. More and more people will own automobiles. Radio, as a medium that liberates the eyes and is easily receivable in motion, is re-entering the lives of those who consider themselves fashionable. As the number of vehicles continues to increase, the radio audience will further expand. It is now a medium for the merging of the so-called "New Distinguished Media."

Private vehicle owners and regular taxi passengers are the most active consumption groups for traffic radios. These have become venues for advertisements. More and more luxury brands are advertising on traffic radios. This observation is supported by data from the 2005 CTR Market Research Media Information Department, which revealed that newspaper, magazine and television advertisement growths were at 22.9%, -8.6% and -7.9%, respectively. Meanwhile, radio advertising has continued to grow at an annual rate of 8.7% (CTR Market Research Media Department, 2005).

Evaluating the Application Value of Radio Development in China

During the 1960s and the 1970s, radio was not only an important electric appliance in every family in China, but it was also a popular tool for mass entertainment. The emergence of new radio channels induced a revolutionary change in media. Radio continuously and gradually evolved as a relevant technology. In fact, there are technical factors that restrict the development of radio but the technology has been aided by the Internet. This negates the impression that the use of radio is outdated; rather, it has found a new niche and opportunity for development.

Radio as a rapid, broad, cheap and portable mass media has played a remarkable role in transforming Chinese society. But the reality is a bit different from the perspective of rural areas. Radio is not widely accepted by the rural population in the quest to obtain and process useful information for their growth and development, such as income generation. In other words, radio development in underdeveloped areas is weak.

Although most families have broadcast receivers and understanding its coverage does not require a high education level, radio's development was

hampered by the expansion of television. In areas with better TV coverage, radio listenership is declining and the growth potential of developing channels is insufficient. The resources in these underdeveloped regions need to be consolidated for the development and growth of radio.

In the transformation of contemporary Chinese society, institutional adjustments have brought about changing interest structure, which creates contradictions and conflicts. Due to its simple operation, radio may be utilized to tackle the problems related to economic development, coordinate local relationships and alleviate social conflicts. From this context, radio may become the auxiliary booster for achieving harmony in society.

China has been speeding up its urbanization process after its reformation period and opening up to the world. Radio has adopted new patterns in urban regions as a result of the mobile age. The function of radio as a sound accompaniment is becoming prominent, and this has further brought opportunities for its development in wealthier regions. Traffic radios, music radios and news radios are becoming prosperous, proving that the medium has found the appropriate niche in the new media competitive environment.

The combination of radio and the new media (Internet) has allowed many stations to instantly conduct online auditions, along with the BBS forum and to supplement SMS exchange platform. This convergence with the new media has greatly enhanced the breadth and depth of radio's coverage. More importantly, Digital Audio Broadcasting (DAB), as a digital multi-media broadcasting technology, now provides an unparalleled experience among listeners.

As a third-generation discovery after AM and FM radios, DAB has been utilized in many countries. As a new generation of radio format standards, this is simply considered as the integration of Audio Broadcasting (AD) and Data Broadcasting (DB) where audiences not only enjoy the CD-level, high-quality audio, but also receive text, pictures, images and other visual data, while the receiving terminal is upgraded from a traditional radio to the modern cell phones. In the near future, it can even achieve the integration of radio and Internet. There is no doubt that this will be a revolutionary breakthrough.

This pattern has been accepted as an improvement of radios all over the country. There is a positive competitive ecological environment inside the radio industry to counter external threats and challenges from other media. The fast and stable development of urban radio in recent times also reflects the rapid development of Chinese cities.

Conclusion

The application value of radio in China indicates to some extent that China is a pluralistic developing society – a process which may last for a long period. It can be concluded that one can be optimistic about the future of radio in the country, even with the shrinking usage rate in underdeveloped regions. Comparing it with other resources are far from being sufficiently explored and developed in poor, medium or relatively wealthier regions. Radio can still prosper greatly in China, and its competitive power and influence will continue to grow stronger.

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