

Future of Radio Broadcasting and Audience Behavior in Streaming and Apps

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Abstract

This descriptive research aims to understand listener behavior in consuming live streaming and radio broadcast applications in Indonesia to support the sustainability of radio broadcasting businesses. The study employs a quantitative method with data collection techniques through a survey distributed via Google Forms. The survey was conducted from August 1, 2024, to October 17, 2024. The population of this study consists of individuals who actively access radio through digital platforms, either through live streaming or mobile radio broadcast applications. The sampling technique used is convenience sampling, with inclusion criteria: aged at least 16 years, having internet access, and having listened to digital radio in the last six months. The number of respondents was 223 individuals, determined based on the Lemeshow formula with a confidence level of 95% and a margin of error of 0.066. Data were analyzed using descriptive statistics. The research results show that the majority of streaming radio listeners are Generation Z (54.5%) and millennials (25%), with a female majority (60.3%). 50.2% of listeners access digital radio through mobile applications while traveling. The reason the audience consumes streaming radio is due to better quality (43.8%), easier accessibility (60.6%), and wide reach as long as there is an internet connection (63.1%). These findings have implications for radio station managers to enhance their digital strategies to ensure their business remains sustainable amidst changing listener behavior and increasingly fierce media industry competition.

Keywords: application; business; live streaming; listeners; radio

Abstrak

Penelitian deskriptif ini bertujuan untuk memahami perilaku pendengar dalam mengonsumsi live streaming dan aplikasi siaran radio di Indonesia guna mendukung keberlanjutan bisnis siaran radio. Studi bermetode kuantitatif dengan teknik pengumpulan data melalui survei yang didistribusikan dengan Googleform. Survei dilakukan dalam rentang waktu 1 Agustus 2024 hingga 17 Oktober 2024. Populasi penelitian ini adalah individu yang aktif mengakses radio melalui platform digital, baik melalui live streaming maupun aplikasi mobile siaran radio. Teknik pengambilan sampel yang digunakan adalah convenience sampling, dengan kriteria inklusi: berusia minimal 16 tahun, memiliki akses internet, serta pernah mendengarkan radio digital dalam enam bulan terakhir. Jumlah responden adalah 223 individu, yang ditentukan berdasarkan rumus Lemeshow dengan tingkat kepercayaan 95% dan margin of error 0,066. Data dianalisis menggunakan statistik deskriptif. Hasil penelitian menunjukkan, mayoritas pendengar radio streaming adalah generasi Z (54,5%) dan milenial (25%), dengan dominasi perempuan (60,3%). 50,2% pendengar mengakses radio digital melalui aplikasi mobile saat bepergian. Alasan audience mengonsumsi radio streaming karena kualitas lebih baik (43,8%), aksesibilitas lebih mudah (60,6%) dan jangkauan yang luas selama ada koneksi internet (63,1%). Temuan ini memberikan implikasi bagi pengelola siaran radio untuk meningkatkan strategi digital agar bisnisnya tetap sustainable di tengah perubahan perilaku pendengar dan persaingan industri media yang makin ketat.

Kata Kunci: aplikasi; bisnis; live streaming; pendengar; radio

INTRODUCTION

This research aims to understand the audience behavior regarding, conventional radio, live streaming and mobile applications for the sustainability of radio broadcast business in Indonesia. Currently, there is a shift in audience consumption of radio broadcasts in Indonesia as a result of the widespread internet penetration in the country (Ardilla et al., 2022). As of January 2024, the number of internet users in Indonesia reached 185 million, which accounts for 66.5% of the total population of

Indonesia, reaching 278.7 million people (Annur, 2024). The increasingly widespread internet penetration is the reason why BBC and Trax FM have decided to cease broadcasting on traditional frequencies and transition fully to streaming (Affan, 2022; Kompas, 2022). Such action is taken as an adaptation to the advancements in communication technology, which significantly influence audience habits in listening to radio broadcasts (Muslikhin et al., 2023). The transformation of the audience will ultimately alter the foundation and business model of radio broadcasting (Singarimbun et al., 2019).

Throughout its journey, the radio broadcasting business in Indonesia has experienced fluctuations influenced by communication technology. In the late 1980s and 1990s, radio broadcasting in Indonesia was largely abandoned by its listeners as private television channels developed. Consequently, dozens of private radio stations in Jakarta went bankrupt and ceased broadcasting. However, overall, the radio broadcasting industry managed to survive after adapting to technological advancements (Akbar, 2023).

Currently, the radio broadcasting business faces even greater challenges in the era of the internet, which has subsequently given rise to new media such as social media, websites, live streaming, and mobile applications (Ashari et al., 2021). The emergence of new media coupled with the widespread use of smartphones has transformed the way audiences consume media, including radio broadcasting. Consumption patterns of radio broadcasts are shifting from conventional methods, such as through radio frequencies or waves, to internet-based radio broadcasting (live streaming and mobile applications). The advent of the internet is considered a factor in categorizing the radio broadcasting business as a sunset industry due to declines in both audience numbers or media consumption and advertising revenue (Aspar & Anshar, 2024; Rini Octavia, 2018). In terms of media consumption, several surveys indicate a declining trend in audience consumption of radio broadcasts in Indonesia. According to the 2024 We Are Social Survey, the audience's duration of access (time of listening) to radio broadcast media is the shortest compared to other types of media, at 32 minutes per day, down 1.3 percent from the previous year. The duration of access to radio broadcast media is even significantly lower than conventional newspaper access, which stands at 1 hour and 28 minutes. The percentage decrease in audience access to radio broadcasts is the highest compared to other media such as TV (streaming and broadcasting), social media, newspapers, games, podcasts, and music streaming (Kemp, 2024).

In line with the declining trend on the audience side, the radio business also lags far behind in the competition for advertising revenue. Nielsen Indonesia records that radio broadcasting only accounted for 0.3 percent of the total advertising expenditure, reaching Rp. 135 trillion in the first semester of 2022. This figure decreased by 13% from the previous period. Meanwhile, Nielsen Media Research notes that the largest share of advertising is obtained by broadcast television media at 79.7 percent, and digital media has increased by 6 percent, capturing 15.2 percent of the advertising pie (Pahlevi, 2022a). The level of competition for advertising revenue among radio broadcasting media is even more intense, given the high population of radio broadcasting media in Indonesia, which amounts to 1982 stations (KPI, 2023b).

Despite facing various challenges and being considered as belonging to the sunset industry category, the radio broadcasting business has managed to endure thus far. There are several reasons why the radio broadcasting business continues to survive: the entry of conglomerates into the radio broadcasting business, bringing new capital and management; radio broadcasting management within media groups and networks; the ability to adapt to changes in communication technology and understand the audience's needs in consuming radio broadcasts (Ashari et al., 2021; Pahlevi, 2022b).

Several studies indicate that the radio industry in Indonesia has a long history and has been one of the popular mediums for entertainment and information for many years (KPI, 2023a; Parista et al., 2018). The peak of the radio industry in Indonesia occurred during the 1980s to the 1990s, during which various radio programs were broadcasted and became popular among the public (Kustiawan et al., 2022). Radio became the primary medium for listening to news and the number one platform for music enthusiasts to listen to various newly released songs (Hollander et al., 2009; Kustiawan et al.,

2022). However, this glory was short-lived due to the emergence of new communication technologies that altered the media landscape and radio industry in Indonesia. Research indicates that this resulted in a significant decline in the number of listeners (Berry, 2020; Kretschmer & Peukert, 2020). Nielsen's survey in 2014 indicated that the number of radio listeners experienced a decline of up to 3% annually (Tustasatya & Herieningsih, 2017). This decline is caused by several factors, one of which is the development of audiovisual technology such as television, which has shifted the role of the radio industry in Indonesia (Hollander et al., 2009). Furthermore, several studies reveal that the ease of accessing information and music through the internet, social media, and the latest digital communication devices allows listeners to easily obtain information and listen to their favorite songs (Hollander et al., 2009; Innayah & Susanti, 2016). They can access their favorite audio content anytime and anywhere through smartphones, tablets, or computers without needing to rely on radio stations.

Digital music streaming services and podcasts like Spotify, YouTube Music, and iTunes also offer on-demand content, allowing listeners to choose and listen to the audio content they desire without being tied to traditional radio broadcasting schedules (Laor, 2022a; Berry, 2020; Li et al., 2020). These platforms also offer a wide range of audio content covering various music genres, talk shows, and podcasts from around the world. Several studies mention that this allows listeners to find content that better suits their interests and preferences, which may not always be fulfilled by radio broadcast (Hodgson, 2021; Laor, 2022b; Trinoviana, 2017). Researchers also believe that the internet not only presents challenges but also provides solutions and opportunities for the radio industry in addressing business challenges. Social media has become a new tool for enhancing interaction between radio stations and listeners (Lathifah & Ismandianto, 2021; Trinoviana, 2017). This interaction enables the development of more varied and personalized programs according to the listeners' interests.

Radio, as an industry facing pressure from digital media, must adjust its business model to survive. Monetization models through digital advertising, platform partnerships, and premium subscriptions have become relevant strategies in facing digital disruption (West & Turner, 2018). In this context, radio stations that develop mobile applications and streaming services have a greater opportunity to retain their audience compared to those that continue to rely on conventional frequencies.

The fourth industrial revolution has a larger scale, scope, and discourse (Schwab, 2016). The advancements in new technologies integrating the physical, digital, and biological worlds have impacted all disciplines, economies, industries, and governments (Haryatmoko, 2020). This condition has led to many changes in society, with people shifting their media consumption habits away from mainstream mass media to digital media, dominated by internet-based media and social platforms such as Instagram, Facebook, YouTube, and TikTok. BBC London ceased terrestrial/frequency broadcasts since December 30, 2022, focusing on streaming. In Indonesia, Trax FM in Jakarta had already discontinued its frequency broadcasts and fully transitioned to streaming starting from January 1, 2022.

Digital disruption is one of the optimistic aspects of the Fourth Industrial Revolution, characterized by an orientation towards platforms that result in numerous changes and fundamental shifts (Haryatmoko, 2020; Schwab, 2016). For radio broadcasting, digital disruption must be anticipated through adaptation to remain resilient amidst the changes brought about by the development of communication technology. There are seven sources of digital disruption that radio broadcasting should consider as references to ensure survival: grid computing, the widespread use of three-dimensional printing, artificial intelligence, real-time intelligence, the Internet of Things (IoT), significant changes in demand, and finally, digitization and smartphones that can be carried anywhere (Haryatmoko, 2020). Significant changes in demand refer to shifts in audience consumption patterns of radio broadcasts. The widespread penetration of the internet and advancements in communication technology have impacted radio audiences, who now have various mediums to consume radio broadcasts that are not limited by space and time. Meanwhile, digitization enables companies that have gained trust from their audiences to easily enter and cross various other business forms, including those unrelated to information and media. To adapt to these sources of digital disruption, it requires business

management that understands digital disruption. Mogel (Mogel, 2004) explains that in implementing radio broadcasting business management, five aspects need to be considered: investment or capital; human resources; communication technology; media as an economic entity within the business domain; media regulations on a policy scale.

Based on the explanation above, this research is conducted with the aim of understanding the needs, motivations, and methods of the audience in consuming radio broadcasts through live streaming and mobile applications. This research is of importance because its findings could serve as a reference for managing radio broadcasting businesses in the digital era. Radio managers can utilize the findings of this research to create more varied, interactive broadcast programs or content that align with the behavior of live streaming and app listeners. In addition, these findings can serve as a reference for making changes to marketing and monetization strategies to obtain new sources of income.

RESEARCH METHODOLOGY

This research adopts a quantitative approach with a survey method, measuring the quantity of respondents' answers regarding the shift in radio broadcast consumption patterns in Indonesia. The research population consists of individuals who actively access radio through digital platforms, either via live streaming or mobile applications. The sampling technique used is convenience sampling, where respondents are selected based on availability and ease of access. This technique is used because radio listeners are not organized in a clear sampling list, making it difficult to apply probability sampling techniques. Convenience sampling allows researchers to quickly and efficiently reach individuals who actively access the radio. Considering that the research population consists of radio listeners spread across various platforms. The inclusion criteria for respondents are being at least 16 years old, having internet access, using digital devices such as smartphones or laptops, and having listened to digital radio in the past six months. Data collection was conducted by distributing questionnaires through a Google Form link shared with various social media community groups. Data were collected by distributing a questionnaire from August 1, 2024, to October 17, 2024, via Google Forms. The number of respondents in this study was 223 individuals. The determination of the number of respondents followed Lemeshow's formula regarding the minimum sample size for research with an unknown population. The confidence level in this study is set at 95%, with a margin of error of 0.066. This sample size is considered sufficiently representative to illustrate the trends in digital radio listener behavior in Indonesia. The use of Lemeshow's to determine the sample size because the population number, namely radio listeners, is not known for sure (Slamet & Aglis, 2020). Data analysis using descriptive statistics provided by Google Forms based on the responses of the respondents who filled out the questionnaire.

RESULTS AND DISCUSSION

Audience Demographics

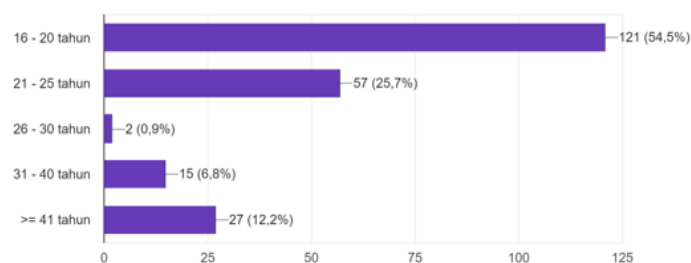


Figure 1: Age of Live Streaming Radio Listeners.

Source: Processed by the researcher from respondents' answers, 2024.

The majority of respondents in this study, as seen in figure 1, are women (60,3%) and 39.7% are men, with the highest age group being in the range of 16 – 20 years old (54, 5%), followed by those aged 21 - 25 (25,7%), ages 31-40 (6.8%), and above 41 years old (12.2%)..

The respondents' residences are distributed as follows: 72,9% in the Greater Jakarta Area (Jabodetabek), 16,3% outside the Greater Jakarta Area, and 10.9% outside the Greater Jakarta Area and beyond. The main reason respondents listen to the radio is because it presents creative programs (52,1%). Additionally, 60% of respondents believe that radio provides a quick response to listeners' needs conveyed through telephone or social media. Another reason respondents listen to the radio is due to their interest in the broadcasters, amounting to 44,5%.

Access to streaming radio and the devices used

The way audiences consume radio streaming is predominantly (32%) through mobile radio applications available on Playstore/Appstore, followed by radio websites, either those belonging to stations with live streaming channels or online radio websites.

Meanwhile, the devices used to consume radio broadcasts are predominantly mobile phones (43.7%), followed by laptops (7%), as illustrated in figure 2.

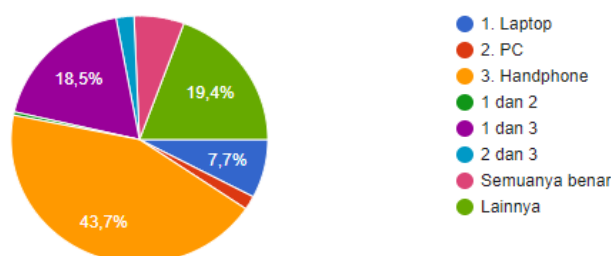


Figure 2: Devices for Accessing Radio Streaming.

Souce: Processed by the researcher from respondents' answers.

This study also found that the most commonly used device to access streaming radio is a smartphone (43.7%), followed by a laptop (7%).

Reasons for Consuming Radio Broadcasts

There are several reasons why respondents choose to consume radio broadcasts through live streaming or mobile applications rather than through frequency or conventional means. First, 43,8% of respondents stated that radio broadcasts via live streaming or mobile applications are clearer, with only 6.6% expressing otherwise. Second, 60,6%% stated that radio broadcasts via live streaming or mobile applications are more easily accessible. Additionally, 63,1% of respondents stated that live streaming radio broadcasts and mobile applications can be accessed throughout Indonesia, provided there is internet access. Third, the majority (66.8%) of respondents do not have devices to consume conventional radio broadcasts (frequency), so they switch to live streaming or mobile applications using smartphones or laptops.

This study found that the main reasons audiences consume streaming radio compared to conventional radio are better sound quality (43.8%), easier accessibility (60.6%), and wider reach as long as there is an internet connection (63.1%).

Motives and Objectives of Listening to Radio Broadcasts

Research found, 50,2% of respondents access radio streaming or applications when traveling to school or work, with the aim of seeking entertainment during the journey. Meanwhile, about 31,7% consume radio streaming broadcasts while at home. The timing of radio listening indicates that radio

is consumed as a form of entertainment during relaxation, leisure time, or in calm situations, thereby aiding in relaxation during activities. At the leisure level, radio serves as a medium that strengthens societal collectivity, including within the family sphere. This is evident from the responses of 53,7% of respondents who state that listening to radio streaming can fill leisure time together with family.

Additionally, radio serves as a medium for entertainment information, especially regarding world celebrities, as indicated by 55.4% of respondents strongly agreeing that they are entertained by receiving direct information about local and international celebrities through radio streaming. Not only entertainment about celebrities, but also 79,3% of listeners agree that the music played through radio streaming is entertaining. In addition to receiving entertainment and information, 63% of respondents agree that listening to radio streaming will enrich their knowledge and information on various topics. The majority of respondents, 83%, stated that the knowledge and information obtained from listening to radio broadcasts become material or preparation to be shared with others.

Substitutes for Conventional Radio

The majority of respondents, namely 75,7%, agree that both radio streaming and mobile applications serve the same function, which is to provide entertainment and information. Only 5,5% of respondents disagree that radio streaming or mobile applications have different functions compared to conventional radio. The widespread internet penetration and the development of communication technology have transformed the devices used by the audience to consume radio broadcasts (Bathgate, 2020; Gulnaz, 2023). Audiences today have the capability to consume radio broadcasts through live streaming, mobile applications, and conventional broadcasts. Moreover, with the advancement of audio on demand (AoD), audiences can tailor their radio consumption according to their needs (Laor, 2022b).

Discussion

The age distribution of radio listeners, as shown in Table 1, is not significantly different from that observed in the United States. A survey conducted by Edison Research in the second quarter of 2024 revealed that the age group with the highest radio listenership is those aged 18 and above, as well as those aged 35 and above (Nielsen, 2024). The age range of live streaming radio listeners in both Indonesia and the United States falls within the Gen Z and Millennial categories. This also confirms Jenkins' (2006) research that digital media allows for better personalization compared to conventional media (Jenkins, 2006). Therefore, radio stations need to adjust their content and marketing strategies to better attract this segment. Based on the Uses and Gratifications theory, this age group prefers media that is flexible and aligns with their digital lifestyle (Moon & An, 2022). This also confirms Jenkins' (2006) research that digital media allows for better personalization compared to conventional media. Therefore, radio stations need to adjust their content and marketing strategies to better attract this segment (Sheva et al., 2023).

The respondents' opinions are in line with one of the radio's characteristics, which is intimacy with its audience. One way to build intimacy is through the broadcasters addressing listeners by name and fulfilling listener requests (Laor, 2022b; Singarimbun et al., 2019)

This indicates that radio names are not strongly remembered by the audience (Geller, 2011). They even seem to generalize radio through a single application. The devices and platforms used by the audience to access radio streaming or mobile applications align with the widespread ownership of smartphones in Indonesia compared to PCs or laptops. In 2023, the number of smartphones in Indonesia reached 354 million, exceeding the population count of 278.69 million (Saskia & Pertiwi, 2023).

Meanwhile, according to a survey by Statista in 2024, smartphone penetration in Indonesia reached 90.89%, with only 9.11% of the Indonesian population not owning smartphones. By 2029, smartphone penetration in Indonesia is predicted to reach 97% of the total population (Siahaan, 2024)

The audience behavior, as revealed in the survey, has prompted radio station managers, including those in Indonesia, to broadcast in various formats or adopt convergence (Danito et al., 2020; Laor, 2022b).

Based on the Uses and Gratifications Theory developed by Blumler & Katz (Glo, 2023) audiences choose media that can fulfill their needs. The finding that audiences prefer streaming radio due to sound quality and ease of access indicates that the need for comfort and audio satisfaction plays a significant role in listeners' choices. Additionally, through streaming radio, listeners gain benefits in the form of entertainment, information, and social interaction through digital features such as live chat and social media (Damayanti et al., 2024).

Meanwhile, the findings of the study related to audience motivation and access in consuming radio broadcasts through live streaming or applications support the study by McQuail & Deuze (2020) that the accessibility of digital media highly depends on the availability of supporting devices (McQuail & Deuze, 2020). With the increasing penetration of smartphones in Indonesia (Statista, 2024), the trend of consuming digital radio through mobile applications is expected to continue to grow. A survey conducted by Goodstats in 2024 found that 48% of young people listen to radio broadcasts through digital devices (Lubis, 2024).

According to this research, listening to live streaming radio can help listeners satisfy their demand for social integration by strengthening their bonds with their families (West & Turner, 2018). Besides functioning as social integration, the findings of this research also show that consuming live streaming radio meets other needs for the audience, namely cognitive needs, affection, personal integrity, and tension release (West & Turner, 2018).

Implications for the Business Model of Radio in Indonesia

The findings of this research have implications for the management of radio businesses amidst intense competition to maintain their sustainability. These implications are related to content diversification, enhanced interaction with listeners, and adjustments in marketing strategies and monetization across various channels. Content diversification has become a necessity for radio managers in light of audience consumption patterns that utilize multiple channels and devices. Several radio stations in Indonesia have started diversifying their programs or content to align with their listeners' consumption patterns. In addition, several radio operators in Indonesia have already implemented the multichannel principle in their broadcasts, namely through frequency, the internet, applications, and social media (Gymnastiar et al., 2024; Santoso & Astuti, 2024). The development of communication technology marked by digitalization in various fields, including broadcasting platforms, requires radio managers to apply the principle of ubiquity, meaning radio must be present everywhere in their business management (Kurnia et al., 2023; Rahmadini et al., 2024).

Radio stations must be present on various platforms, including terrestrial broadcasts, live streaming, websites, social media, and mobile applications. Additionally, radio stations need to offer a diverse range of programs in both live streaming and audio on demand (AoD). They should also provide interactive content, such as podcasts, talk shows, and events that encourage listener participation. This is essential for reaching a broader audience and meeting the needs of diverse listener segments (Damayanti et al., 2024; Gymnastiar et al., 2024; Santoso & Astuti, 2024).

Meanwhile, live streaming facilitates more direct interaction between broadcasters and listeners. Radio stations can leverage social media platforms and streaming applications to communicate with their audience in real-time. This interaction not only enhances listener engagement but also aids radio station managers in better understanding their audience's preferences. The shift in radio consumption patterns toward live streaming and mobile applications necessitates that radio stations adapt their marketing strategies to be more digitally oriented. They can also utilize analytics data to comprehend listener behavior and tailor their marketing campaigns to align with existing trends. Changes in

consumption patterns also open up opportunities for more diverse monetization. Radio stations can generate revenue through terrestrial broadcasting, live streaming, social media, and their websites.

In addition to content strategy, changes in audience behavior in consuming radio broadcasts also have implications for its monetization strategy. Radio managers do not only rely on conventional advertising as their sole source of income, but must also utilize other sources such as digital programmatic advertising, premium and subscription content, sponsorship or partnerships with brands, and data-based monetization.

Challenges

There are several challenges faced by radio managers in adopting a digital business model, particularly in content creation and monetization. Some of these challenges include: First, competition with global streaming services like Spotify and Apple Music that offer a more personal and ad-free listening experience. Second, the changing habits of the audience who increasingly prefer on-demand content over live broadcasts. Third, dependence on technology and digital infrastructure, where radio must continue to invest in the development of applications and online platforms to remain relevant. Fourth, the continuously evolving digital regulations, which can affect how radio monetizes its content, especially in terms of user data protection and digital advertising policies.

CONCLUSION

The research concludes that the audience for live streaming radio consists primarily of Generation Z (54.5%) and Millennials (25%), with a majority being female (60.3%). Live streaming radio consumption predominantly occurs through mobile applications downloaded from the Play Store or App Store, using smartphones. The primary reason (43%) for the audience's preference for live streaming radio is the superior sound quality, which is perceived as clearer and more distinct compared to radio broadcasts transmitted via frequency. The audience's needs for knowledge, affection, personal integration, social integration, and tension release are all met through listening to live streaming radio. Notably, 50.2% of the audience consumes live streaming or mobile radio broadcast applications using smartphones, primarily while commuting to drop off their children at school or traveling to work. The majority, or 50.2%, of the audience consumes live streaming or mobile radio broadcast applications using smartphones, primarily while commuting to drop off their children at school or going to work. The findings of this research have implications for the management of radio businesses amidst intense competition to maintain their sustainability. Radio station managers need to take several steps to ensure their business survives. The steps that need to be taken include creating varied and more interactive content or programs that are tailored to the audience's behavior. To create interactive content, radio managers need to provide various features that allow listeners to actively engage with the content or program. Examples of features that can be provided in each program include live chat or direct comments, feedback, notifications, and online quizzes.

Radio managers must also provide content that the audience needs, which they can listen to at any time in the form of audio on demand (AoD). Radio content or programs must be consumable by the audience through various platforms, both conventional and digital (live streaming, applications, social media). These implications are related to content diversification, enhanced interaction with listeners, and adjustments in marketing strategies and monetization across various channels.

This study has limitations related to the sampling technique, as it employs convenience sampling rather than random sampling. The findings of this research would be more representative if a random sampling method were utilized.

To radio broadcast managers, it is suggested to intensify the promotion of radio website or mobile applications containing live streaming channels, thereby encouraging the audience to consume radio broadcasts via radio-owned websites or mobile applications, rather than general websites or mobile applications.

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