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A QUICK GLANCE: THE UGLY TRUTH OF RADIO MIGRATION IN MALAYSIA

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Abstract:

With the advent of television, radio lost its dominant position in many countries due to globalisation and convergence, leading to the rise of digitalisation. However, digitalisation has overshadowed traditional analogue technology. Instead of coexisting, analogue and digital technologies are now in direct competition, with digital alternatives such as podcasts and online radio posing significant challenges to analogue technology. As a result, the radio industry is currently facing severe problems to stay relevant. We conducted a study examining political economy influencing radio migration in Malaysia along with its relationship to government actions and plans. Our research reveals that the political economy perspective strongly impacts radio migration in the country. To ensure a successful radio migration, we propose the implementation of a neo-liberal perspective within Malaysia's broadcasting sector.

Keywords:

Political Economy, Radio, Digitalisation, Neo-Liberal, Malaysia

Introduction

Radio has long been an unseen medium yet always around us. In the twenty-first century, radio has surpassed its geographical and historical definitional limitations (Hilmes & Lindgren, 2018). Radio now has many new applications and meanings (Ibrahim, 2020). However, the

history of radio has been largely forgotten as a result of the development of the fields of social media studies, film, and television, all of which are relatively recent. Before the invention of television, the radio, the first electronic broadcast medium, gained widespread recognition worldwide (Anderson, 2013; Ibrahim, 2020). In the 1950s, television overtook radio as the dominant medium just as radio had emerged as a dominating medium, riding the crest of two decades of invention and being recognised as the primary voice of nations and people throughout World War II and the era of reconstruction that followed (Hilmes & Lindgren, 2018).

According to Rooke (2013), radio is no longer a national concern but a transnational one. The advent of digitalisation not only revolutionised radio industries worldwide but also paved the way for the emergence of extensive businesses across various sectors (Anderson, 2013; Berger, 2010; Ibrahim & Wahab, 2021). However, as (O'Neill, 2007) and Rooke (2013) pointed out, this transformation also brought about a quandary involving manufacturers, distributors, the government, and broadcast stations. This quandary particularly impacted national and private broadcasting stations, especially in developing countries, when organisations like the International Telecommunication Union (ITU), Asia-Pacific Broadcasting Union (ABU), and the General Agreement on Tariffs and Trade (GATT) intervened in the process of digital radio broadcasting, necessitating the shutdown of analogue signals, and requiring strict adherence to a predetermined plan. Failure to comply with the plan resulted in the obligation to provide a clear and detailed explanation to the ITU.

Initially, the technology of digital radio, pioneered by developed countries, encountered setbacks in Finland and Spain, but they eventually found a solution in the form of bandwidth optimisation (Bonet et al., 2011). The United Kingdom also faced challenges before developing its multiplex, which did not align with Germany's multiplex (O'Neill, 2007). These instances raise crucial questions: What defines a radio as digital? Is it necessary to phase out the analogue system entirely when many developing countries are not fully prepared for the digital transition? Despite their claims of readiness, the migration from analogue to digital radio appears to have made limited progress today (Ibrahim, 2020).

The Malaysian broadcasting ecosystem has undergone transformative changes with the migration of radio frequencies and formats. Changes are taking place in both production and distribution. In Malaysia, research on digital radio from the social sciences perspective is new and limited. The earliest research on radio in Malaysia dates back to 1977 when Adhikarya conducted a study focusing on the early development of radio in Malaya (Ibrahim, 2020). This was followed by Asiah Sarji's research in 1996, which concentrated on the radio during the war period (Ibrahim, 2020). Another notable study by Darussalam Abu Bakar 2005 shed light on radio development during the privatisation era (Ibrahim, 2020). However, research on the radio seemed to come to a halt later on since academicians and scholars shifted their focus towards the television and social media industry. As a result, the significance of radio as a medium gradually diminished, and it became relegated to a "runner-up" status in Malaysia and numerous countries over time.

The interference from international bodies seemingly leaves Malaysia with no choice but to comply with the requests of capitalists, given their economic monopoly over the telecommunication, broadcasting, and computer market. However, undeniable facts indicate that liberalisation, privatisation, and national policies have significantly pushed the country

towards implementing digital broadcasting. The emergence of new communication technology led to a monopoly by private radio stations, contributing to an oligopoly in Malaysia's market. Nevertheless, these broadcast stations must still adhere to the guidelines, rules, and regulations set forth by the government and international bodies. Therefore, the paper aims to examining political economy influencing radio migration in Malaysia along with its relationship to government actions and plans.

Literature Review: Global Perspectives

The political economy of media, including television, radio, music, magazines, and the internet, is influenced by geographical factors. However, much remains to be explored, particularly in light of technological transformations in cultural industries (Christophers, 2015). (Sopoeva and friends (2020) claim that digitalisation in the radio electronics industry enhances efficiency, coherence, and competitiveness by simplifying and accelerating work processes, requiring skilled electronic equipment, and strengthening economic relations between actors.

Hendy (2000) analysed radio's digitalisation from a political-economic perspective, however, suggesting that in a loosely regulated market economy, digitalisation will not necessarily significantly increase choice or participation. On the contrary, it is likely to encourage further concentration of ownership in the radio industry, thus restricting diversity (Hendy, 2000). Anderson (2013) claims that the current state of affairs is due to a variety of factors, including a lack of regulatory engagement with the radio transition, political and economic shifts in the balance of power between the various broadcaster constituencies involved, and the recalcitrance of receiver manufacturers and listeners to adopt any digital radio broadcast technology.

We noticed that the political-economic perspective and the listeners influence countries' migration from analogue to digital radio broadcasting. (Moyo, 2013) concluded that digital media technologies on radio are subject to organisational, institutional, and social shaping and that questions about these technologies' emancipatory power, especially to audiences and citizens, are often exaggerated because the question of power relations between actors or interests is often overlooked. What Moyo said best can relate to South Korea's situation.

According to (Ahn, 2006), South Korea's radio industry development reveals that political and ideological changes have significantly impacted the country's media system. Initially, it was influenced by an authoritarian ideology. However, after President Park was assassinated, the regime of General Chun Doo-Hwan adopted a seemingly libertarian approach to controlling South Korea's broadcasting industry. Despite this appearance, Joon Ahn (2006) criticised the regime when he discovered that the General's rule did not align with libertarian principles and instead maintained a monopoly over the South Korean broadcasting industry.

It shows that the digitalisation of conventional broadcasting in South Korea is influenced by political and economic factors (Ahn, 2006; Kwak, 2012; Lee & Joe, 2000; Curran & Park, 2005). Ahn's research (2006) indicates that introducing digital radio in South Korea involved the intervention of profit-based firms, such as Samsung and LG, which controlled the radio industry market by regulating broadcasting migration through technology creation. These interventions had significant implications, leading to a transformation of the government-market relationship from authoritarian to neo-liberal.

The state is crucial in promoting digital technology development, essential to South Korea's economic growth and high-tech industrial production (Petrovich et al., 2020). According to (Cho, 2022) the South Korean government's digital communication transformation has varied based on the strategies and approaches of different administrations, with political parties adopting either progressive or conservative attitudes towards digital communication issues.

Meanwhile, the Norwegian government ensures that the country's radio broadcasting migration project is industry-driven (Norwegian Ministry of Culture, 2010), which is compatible with the ideology of the country's media system, based on neo-liberalism, and as an OECD country with high income (The World Bank Data, 2015). Local broadcasting in Norway faces challenges in the digital age, with traditional TV and radio stations facing challenges in creating local identity and democracy (Biernacka-Ligieza, 2010). The report presented by Ala-Fossi (2013) shows ten obstacles that Norway had to face in implementing digital radio broadcasting.

Ala-Fossi (2013) argues that the Norwegian government ignored the implementation of digital radio broadcasting and only focused on the issue of digital television broadcasting and Internet-based broadcasting. Ala-Fossi's opinion (2013) is based on observations of the migration progress of the radio industry. However, Ala-Fossi's opinion is contrary to the report of the Norwegian Parliamentary Conference (Norwegian Ministry of Culture, 2010) and the progress report on digital radio broadcasting (Ministry of Culture, 2015).

The results of the 2011 Norwegian Parliamentary Conference show that politicians are interested in digital radio broadcasting. In the conference, the government agreed with the proposal submitted to cease conventional radio (FM) entirely in 2017 (Norwegian Ministry of Culture, 2010; Ministry of Culture, 2015; WorldDAB, 2016). It also emphasised that producers, distributors, and broadcasting stations must meet every criterion set at the conference, which includes digital radio service coverage must be compatible with the FM channel. Multiplexes for commercial broadcasts must cover 90% of the population, and digital radio must represent listener-added value.

However, we noticed that, the lack of economic incentives undoubtedly has slowed down the migration effort. The Norwegian Government also added additional criteria to be followed by broadcasting stations in 2015. It includes: 1) solutions to car transmission issues must be affordable and have reasonable technical solutions; 2) at least half of the population listened to digital radio daily in 2015. If the parties involved fail to meet the criteria, the entire digitalisation project needs to be postponed to 2019 (Norwegian Ministry of Culture, 2010; Ministry of Culture, 2015; WorldDAB, 2016).

Based on the past research, we can conclude that the migration of conventional radio to digital radio in Norway is a process that requires a significant amount of time, as it involves the readiness of the community as radio users. Additionally, the development of the digital radio industry in Norway is shaped by economic factors that support the country's economic growth.

(Hirschmeier et al., 2019) used exploratory analysis to study challenges and solutions for new digital radio services and found that the orientation for practitioners contributes to a new area of research for information systems. However, a study conducted by (TNS Gallup, 2019) after a year of Norway implementing digital radio broadcasting shows that the penetration rate and use of DAB digital radio are unfavourable (67% of listeners listen to DAB digital radio every

week). This finding is noteworthy, mainly because radio stations are still broadcasting using the FM standard in Oslo. The community's cost remains a significant concern after implementing the analogue shut-off (ASO) (TNS Gallup, 2019). Therefore, Malaysia must plan thoroughly how to implement DAB before the analogue shut-off.

(Llorens et al., 2013) suggested that the digital broadcasting policy formed in 2005 should be flexible, considering that radio can be accessed through various mediums. They also recommended reducing government intervention in the migration process, which is often bureaucratic and can slow decision-making involving multiple parties. Such bureaucratic government intervention may put manufacturers and distributors at a disadvantage (Llorens et al., 2013). This is likely why Norway and South Korea do not support extensive government intervention in the digital radio project; instead, they grant permission to the radio industry to spearhead the migration process.

A study conducted by Negrodo and friends (2018) reveals that 87% of the Spanish population uses the Internet to access online portals for newspapers, radio, and television. Despite this trend, six out of ten individuals still listen to the radio, with access options including online streaming, FM, or DAB. This study highlights the need for comprehensive statistics on radio listeners in Spain.

Bonet and colleagues (2011) discovered that the Swedish government made an official announcement on December 14, 2005, declaring its lack of economic and political support for implementing DAB. However, a year later, the Swedish government surprisingly renewed the digital radio broadcasting license (Bonet et al., 2011). The study did not clearly state the specific reasons for Sweden's renewal of the DAB license.

A different scenario is shown in the United Kingdom. The United Kingdom is a high-income OECD country (The World Bank Data, 2015). More surprising when the issue of Brexit in 2015 was hotly discussed in June 2016 regarding the United Kingdom's efforts to leave the EU (Riley, 2016). This issue may not affect the migration of radio broadcasting in that country. However, it could affect the migration of radio broadcasting in Scotland (since Scotland has voiced its desire to leave the United Kingdom if it leaves the EU). Political polemics can affect radio's digital migration efforts, which are actively being worked on.

Among the efforts taken by Britain to make DAB digital radio broadcast a success is to establish the Digital Radio Development Bureau (DRDB) as a body that plays the role of promoting (brand awareness) digital broadcasting in the community throughout the United Kingdom (Fleming, 2010). Finally, the country succeeded in creating its own DAB market and does not deny still experiencing receiver problems, and they are trying to address the issue (Fleming, 2010).

Before the advent of digital radio broadcasting, United Kingdom radio stations used analogue waves, including the medium frequency band (medium frequency) and the low-frequency band (low frequency), where MF and LF are known as AM (Fleming, 2010). The second analogue technology is the Very High Frequency II (VHF II) band, or FM (Fleming, 2010). The technology that replaces analogue radio is DAB (Fleming, 2010; Department for Digital, 2014; WorldDAB, 2016). Researchers found that in 2016, the United Kingdom was still waiting for

readiness (not taking any action, instead waiting and seeing the situation in the country) and a positive reception from society.

Despite this, a study of listeners in the United Kingdom carried out by (RAJAR, 2018) showed a significant change in the use of digital radio, whereby digital radio listeners exceeded 50% of the digital benchmark set by the government. However, the report does not specify the type of technology that the country will use. The situation in the United Kingdom is different from Norway's.

Thus, Kwak (2012) and (Hjorth & Khoo, 2015), on the other hand, offer different perspectives. They argue that the creation of new communication technologies has significantly contributed to the formation of digital broadcasting in South Korea, thereby transforming how society uses radio. According to a report released by Statista (2019), there has been a decrease in the ownership of radio decoder sets among listeners in South Korea from 2013 to 2018. In comparison, internet-based access via mobile or PC accounted for less than 15 per cent of use cases in 2022 (Statista, 2023). This decline in radio ownership and usage suggests a significant shift in South Korea's radio consumption over the past decade, with less time spent listening to the radio than other entertainment media.

The scenario in Vietnam gives a positive impression of the digitisation of the industry in the country. As is well known, from a political polemic point of view, Vietnam is one of the countries that went through the most prolonged phase of the war, which lasted for 30 years. It involved the upheaval of the struggle between France and the United States. According to the World Bank (2015), Vietnam is a developing country with a lower middle income than Malaysia. Interestingly, Vietnam's GDP growth over the four years from 2010 to 2014 has been consistent (The World Bank, 2015).

In 1945, the President of Vietnam, Ho Chi Minh, established the Vietnamese radio industry following the revolution and the declaration of Vietnam's independence (Vu, 1999). The analysis conducted by Kiem & Huy, 2005) and (Dang, 2008) stated that Vietnam has hundreds of radio stations compared to Malaysia. It happened due to the spread of information due to the outbreak of war (Dang, 2008). (Tran, 2011) argues that mountainous and deltaic geographical factors make radio usage necessary.

Vietnamese radio stations range from the national level to the rural areas of Vietnam. Voice of Vietnam (VoV) is a government-owned radio and TV station with 11 radio stations (Kiem & Huy, 2005). The regional level has 68 stations, while the district has 606 radio stations (Kiem & Huy, 2005). After Vietnam's independence era, VoV experienced changes in programme publication and transmission technology (Vu, 1999). Vu stated that this change increased the quality of content and professional training for VoV staff. Digital technology has increased the production of TV and radio channels, whether using satellite, cable, or terrestrial (Vu, 1999).

The WorldDAB data (2016) shows that 98% of Vietnam's geographical area is covered with analogue signals. TV and radio signal coverage greatly help Vietnam's social and economic development, especially for the people living in rural areas and islands. The Vietnamese government is behind in implementing TV and radio digitisation projects to bridge the digital gap between its people and create modernisation in Vietnam (Tran, 2011).

VoV states the need for technological transition due to geographical factors and energy savings (WorldDAB, 2016). VoV is the largest broadcaster in Vietnam and needs to ensure that every province, district, and area gets broadcast coverage. In addition to that, the Vietnamese government aims to sell digital equipment at affordable prices (Tran, 2011). In other words, digitisation projects should not burden people. So, researchers need to examine the establishment and development of the country's radio industry in the digital era.

(WorldDAB, 2019) explains that Vietnam is undergoing a second pilot test of DAB+ technology in Hanoi and Ho Chi Min. The first trial test was conducted in the same area in 2013. However, the trial report was not made public. ASO's expectation for analogue terrestrial radio lines in Vietnam is 2025 (WorldDAB, 2019). It shows that the Vietnamese government is serious about digitising conventional radio broadcasts.

We noticed that research on the digitisation of the radio industry in Malaysia is limited. Ibrahim (2020, 2021) actively researched radio and digital radio in Malaysia. Until now, Malaysia has had zero terrestrial digital radio, and the only digital radio broadcasting was operated by Astro Radio via satellite.

Thus, from our readings, we found that the development of the radio industry and digitisation in each country differs in terms of (1) the reasons why the country migrates, (2) the progress of migration, which varies among countries, and (3) the implications of digitisation, which are more or less similar in each country.

Methodology

The qualitative approach was defined by (Wimmer & Dominick, 2011) as a method of inquiry that uses flexible questioning to understand the situation being examined rather than relying on statistics. On the other hand, (Denzin & Lincoln, 2017) defined the qualitative approach as an instance where the researcher collects data through observational approaches. An alternative way to characterise a qualitative method is as open-ended data collection (Campbell, 2014).

Researchers studying radio often employ the qualitative method in communication studies. Using this method, (Coleman, 2020) and Hirschmeier et al. (2019) investigated how the producer's decisions about aesthetics in the UK can be influenced by digital radio production. In order to comprehend the digital broadcast environment and the behaviour or response of radio station managers and radio presenters who must work in a constantly changing environment—that is, transitioning from a conventional radio setting to a digital radio setting—they combined observations and interviews.

O'Neill (2007) and (RheinlandPfalz, 2017) used in-depth interviews and document analysis of news stories and policies to look at the birth and expansion of the radio industries in Canada and the UK. This approach was employed in earlier studies by Anderson (2013), Halbert (2015), and (Jauert et al., 2017) who employed document analysis and in-depth interviews as their main research methods while using radio as the medium.

For this study, we used relevant document analysis and in-depth interview. The procedure entails assessing both physical and electronic documents in order to decipher their significance, build upon the information they offer, and interpret them. Two primary document kinds are utilised by researchers in this research:



Figure 2: Reaction on Political Economic

If Ahn (2006) claims that Samsung and LG are the key players that have transformed the media system and political orientation in South Korea from an authoritarian to a neo-liberal oriented, Malaysia is, on the other hand. This research suggests that the new communication technology is a tool rather than a variable that can transform the political system in Malaysia from a quasi-democracy to a democracy or from an authoritarian to a democracy or vice versa.

The document analysis (related policies, government minutes of meetings, government reports and prime minister speech) that has been conducted confirms that the only variable that can be transmuted to the political system in this country is the political decisions made by the government of the day. This is because each political decision the ruling party makes will influence the development of the broadcasting policy in Malaysia, particularly the radio broadcasting industry.

Apart from those above, it is noted that the global is also a key influencer that influences the political decision in Malaysia that affects the development of the radio broadcasting industry in Malaysia. As a result, it contributes to technology migration from analogue radio to digital radio. The development of digital radio is affected by the political decision made by the government.

Concerning the above, the followings are considered proof to show that the political decision is the determinant that enforces the migration of technology to take place in the radio broadcasting system in Malaysia;

Political decision made by the former prime minister of Malaysia, Tun Dr Mahathir Mohamed, in 1994 regarding the formation of digital broadcasting in Malaysia led to the launch of All-Asian Satellite Television and Radio Operator (Astro) in 1996 and behind the formation of Astro, the United Malays National Organisation (UMNO) members eagerly refused the involvement of Tan Sri Ananda Krishnan, the owner of Astro as a pioneer in the digital broadcasting business. However, Mahathir was determined to disregard the voice of the UMNO. His political decision has contributed significantly to Malaysia's Gross Domestic Product (GDP) growth.

During the financial crisis in 1998, Mahathir was suggested by Anwar Ibrahim, his deputy prime minister, to get a loan from the IMF, to which Mahathir firmly rejected the idea. One vexing question is how Mahathir can solve the crisis without succours from the IMF.

Mahathir and his legitimacy prepared long-term strategies and policies to overcome the financial crisis. Multimedia Super Corridor (MSC) is one of the government initiatives solely created to boost telecommunication, broadcasting and multimedia industries during the crisis through the MSC Malaysia Bill of Guarantees (BoGs). BoGs incentivise the organisation with MSC status to recover during the crisis.

Astro holds MSC status, classified under Creative Multimedia Cluster (CMC). It is stated that Astro was entitled to income tax exemption for five years, and no duties were imposed on the imported multimedia apparatus. National economic conditions at that time did not affect Astro due to the initiatives and incentives provided by the government.

In 2002, Mahathir expressed his intention to step down from his Prime Minister position. However, due to the severe impact of inflation on the country, the party convinced him to remain and address the economic situation. Officially, his term as Prime Minister ended in 2003. Undeniably, Mahathir's governance successfully propelled Malaysia to a higher level of modernisation, making significant contributions to its economic development during that period.

Several scholars and journalists, including Milne & Mauzy (1999) and Boo Teik (2003), have portrayed Mahathir as a fearless Prime Minister, unafraid of making decisive decisions and taking bold actions. Consequently, his firm decisions and actions gave rise to a new term, "Mahathirism," which described his exceptional and dominant influence over Malaysia. The power of Mahathirism significantly transformed the media landscape in Malaysia.

Tun Dato' Sri Haji Abdullah Ahmad Badawi was elected to succeed Mahathir in 2003 until 2009. One unpretentious question is how is the development of digital radio broadcasting during Abdullah's rule?

The media environment during Abdullah differed from that of Mahathir, who was portrayed as a leader controlling the media. Mahathir is reportedly fighting for the freedom of the press to be upheld. On the other hand, Abdullah was portrayed as a "clean man" and more like a democratic leader than Mahathir. In other words, the degrees of democracy practised by both former Prime Ministers were marginally different.

The truth is that the Abdullah administration's media was more independent than Mahathir when he allowed an open debate among politicians on television. In the context of digitalisation, Abdullah was not directly interfered in the digitalisation process; on the other hand, he focused on how societies benefit from digitalisation.

Document analysis evidence confirms that during Abdullah's governance, he showed his positive thought on the new communication technology to block the digital gap between those in rural and urban. He also asked MSC and MDEC to collaborate to strengthen Malaysia's telecommunication infrastructure and communication hub. During Abdullah's administration, the number of radio stations had increased significantly, creating a new radio industry trend

contributing to the oligopoly. However, Abdullah's term in office ended after serving as prime minister for barely five years, and after the general election in 2008, he stepped down voluntarily.

Eventually, Datuk Sri Najib Tun Razak took the political decision. Najib assumed office as the Prime Minister in 2010. Initially, during the early stages of his administration, Najib was perceived to be extending the plans that had been set during Pak Lah's administration. However, (Abdul Hamid & Ismail, 2012) as well as Ismail and Hamid (2013) argued that after 13th General Election or Pilihan Raya Umum -13 (PRU 13), there were significant changes in Najib's approach. He was reported to be Mahathir-like in both policy and decision-making, leading these scholars to coin the term "re-mahathirisation."

One interesting aspect to consider is the progress of radio industries in Malaysia, with Mahathir being portrayed as the father of digitalisation in the country, while Abdullah focused on sustainability by increasing the number of radio stations.

The findings revealed that from 2010 to 2016, the radio industries in Malaysia experienced a relative decline in total. Researchers can illustrate this through the shutdown of radio stations, both in national and private broadcasting. For example, RTM's radio stations decreased from 35 to 32 due to financial constraints, leading to the liquidation of a few institutional radio stations. Additionally, Copyright Laureate Sdn Bhd's two stations were acquired by Media Prima Group and rebranded as Kool FM, while Astro Radio Group rebranded XFM as a new radio station called Melody FM in response to audience demands. Furthermore, Astro Radio Group has plans to acquire Red FM and Capital FM from The Star Group. Undoubtedly, the decrease in radio stations is also influenced by national economic conditions, as political decisions and economic factors are interconnected and complex.

The technological transition triggers changes in Malaysia's economic conditions, which means that the country's economy is susceptible to global shocks. For instance, fluctuations in the global price of gas or iron directly impact prices in Malaysia. Similarly, financial collapses in developing countries have a significant impact on Malaysia's financial status, and the instability in the Asian market also influences the Malaysian market. As a result, Malaysia's national economic conditions from 1996 to 2016 exhibit fluctuations, with fluctuations in the country's GDP going up and down during this period.

To illustrate, Figures 3, 4, and 5 present the pattern of how sub-sector services contribute to Malaysia's GDP in three different eras of governance (Mahathir from 1981-2003, Abdullah from 2003-2009, and Najib from 2009-2018).

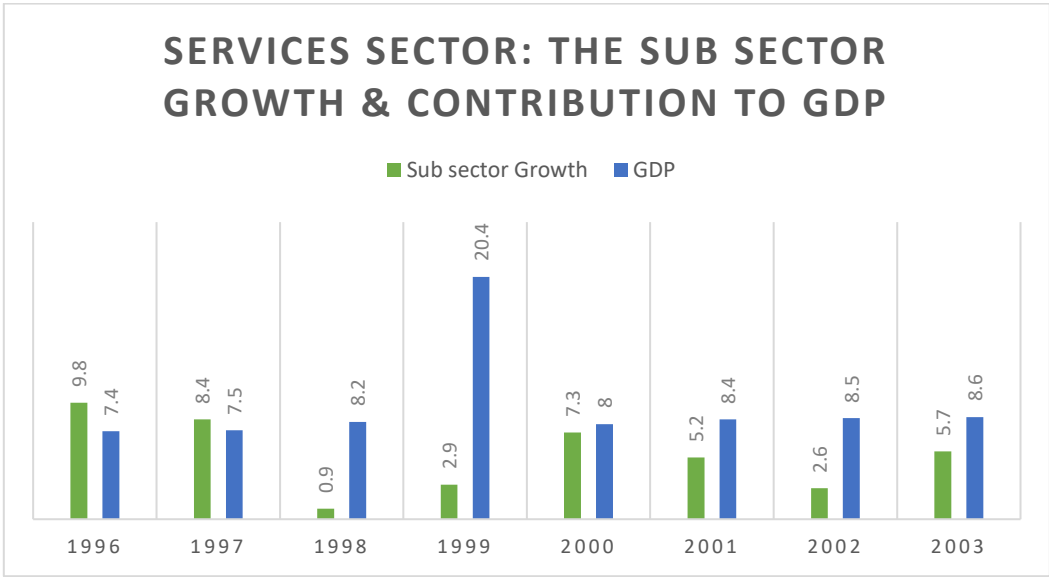


Figure 3: Services Sector: The Sub Sector Growth & Contribution to GDP

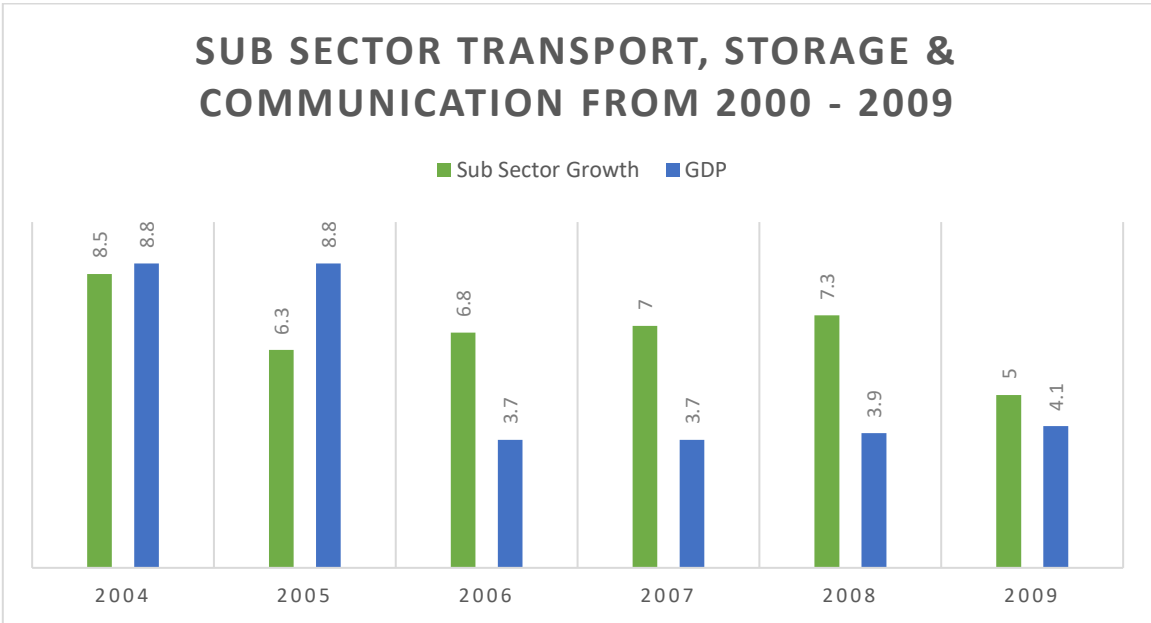


Figure 4: Sector Services: Sub Sector Transport, Storage & Communication From 2004 to 2009

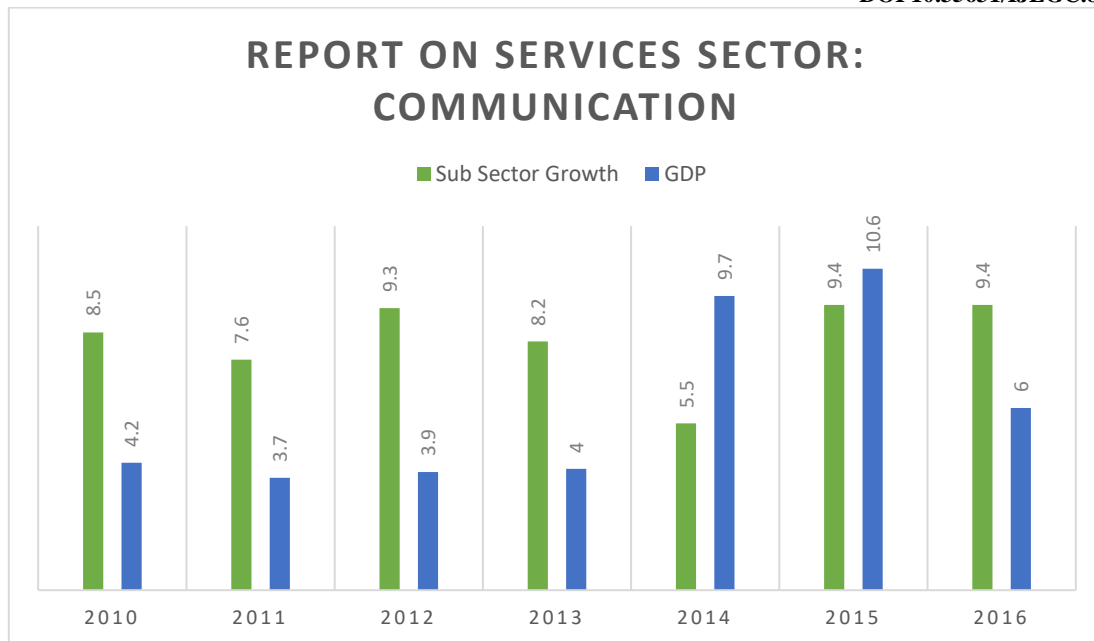


Figure 5: Report on Service Sector: Sub Sector Communication From 2010 to 2016

There are eight sub-sectors in the services sector as follows; (1) delivery services; (2) transportation, storage and communication; (3) finance, insurance, property, and business services; (4) the final services; (5) electric, gas and water; (6) wholesale and retail trade, hotel and restaurant; (7) government services; and (8) other services. For this research, researchers focus on the transportation, storage, and communication sub-sectors to emphasise digital radio broadcasting.

A report from the Bank Negara Malaysia (BNM) shows that national economic conditions via GDP in 1996 increased compared to 1995. In 1997 (after the digitalisation), Malaysia's GDP grew by 0.1 %, and the sub-sector of services, which is transportation, storage and communication contribution, decreased by 1.4 % due to the impact of the financial crisis. However, the financial crisis in the year of 1997 was unable to thump the GDP. Unfortunately, the contribution of sub-sector transportation, storage and communication is degraded. Thanks to the government for developing new strategies to protect the telecommunication, communication and multimedia industries through BoGs. So, there was a significant relationship between digital radio broadcasting and economic conditions.

The age of digital radio in Malaysia started in 1996. At that time, Astro, through its groups Airtime Management and Planning Programming Sdn Bhd (AMP) (now known as Astro Radio), used the research-based format to elicit target audiences' attention. The rationale of Astro applying those strategies was to ensure that their programmes and the quality of the programmes were acceptable to their listeners.

During the financial crisis, the subscription of Astro increased from 50,000 to 80,000 subscribers. It shows that the crisis has not impacted the users of new communication technology. In the same year, Astro Radio Group launched Hitz FM, Mix FM, Light and Easy to cater for its subscribers. Best 104 expanded its transmission to the West Coast of Peninsular Malaysia due to the demands from listeners.

1998 was challenging since Malaysia needed to recover from the financial crisis. Amazingly, the sub-sector shows a positive development that has contributed to the GDP by 0.7%. Apart from that, Era FM was aired by the Astro Radio Group in the same year. In the following year, Astro concentrated on collaborating with Nokia to develop new technology that contributed to the diversity in listening to the radio. As a result, Malaysian could receive radio transmission from the handphone.

From the year 2000 to 2003, the national economic conditions are more salient, although facing inflation. One of the main contributors that led to inflation at that time was the collapse of the dot com bubble. Ironically, it has resulted in the collapse of the growth in the services sector by 2.1%. The dot com bubble only affected the industries of Information and Communication Technology (ICT) due to the saturation of investment in the technology, which cannot convert into cash.

In radio broadcasting, numerous radio stations apply digital apparatus under private organisations such as IKIM.FM, Astro Radio Group, Radio Rediffusion, and Star Group. Apart from that, national broadcasting (Radio Television Malaysia/ RTM) began a digital television project in 2000 and digital radio in 2007. Researchers described radio industries in Malaysia from the year 2000 to the year 2009 as booming, according to the document analysis (which is figure 4).

However, the study found that the changes in the pattern of sub-sector services to the Gross Domestic Product (GDP) from the year 2010 to 2016 did occur. Previously, from the year 1996 to 2009, the services sector combined transport, storage and communication under one sub-sector. However, the alteration occurred when communication alone was a sub-sector for services without combining with the other sub-sectors (transport and storage). It showed that communication started influencing the GDP and becoming a big business through convergence and transnational.

From the year 2010 to 2016, the study showed that digital radio broadcasting had "persistence" over television and emphasised the diversity of media. The secondary analysis and document analysis confirmed that the way radio stations generated income also changed and diverted into the digital platform. Undeniable that the number of FM (Frequency Modulation) radio stations declined, and it shifted to digital radio broadcasting through Internet radio stations.

Conclusion

To sum up, the domain of political economy plays a crucial role in shaping the transformation of the radio industry. Political economy delves into the interplay between politics and economics, examining how power dynamics, policies, and regulatory frameworks influence economic systems. When applied to the radio industry, political economy offers valuable insights into the underlying forces that drive the sector's development and transformation.

Firstly, political economy sheds light on the regulatory environment governing radio broadcasting. Government policies, such as the National Telecommunication Policy, licensing requirements and ownership regulations, play a crucial role in shaping the structure and competitiveness of the industry. Understanding these political dynamics is essential for analysing the transformative potential of radio. Thus, we conclude that it leads to the gradual movement in radio migration specifically in Malaysia.

Secondly, political economy examines the relationship between media ownership and political power. The concentration of media ownership can lead to a limited range of voices and perspectives, impacting the diversity of content available on the radio. By studying the influence of political interests and lobbying on ownership patterns, political economy provides insights into the potential biases and agendas that can shape radio programming.

Furthermore, political economy helps researchers understand the economic forces at play in the radio industry. It examines the impact of advertising revenues, market competition, and technological advancements on the sector's transformation. For example, changes in advertising strategies driven by political considerations can reshape the revenue streams of radio stations and influence programming choices.

Moreover, political economy analysis can reveal how political ideologies and government interventions impact the availability and accessibility of radio services. State subsidies, funding allocations, and public service obligations are all factors that can shape the provision of radio services and ensure equitable access to information and entertainment.

By considering the interplay between politics and economics, political economy offers valuable insights into the forces driving the transformation of the radio industry. It provides a framework for understanding the regulatory, ownership, economic, and ideological factors that shape the development of radio services and their impact on society. Recognising the importance of political economy in analysing radio transformation is essential for stakeholders, policymakers, and researchers seeking to navigate and shape this vital communication medium's future.

We proposed a neo-liberalism approach to tackle and handle radio migration in Malaysia. Neo-liberalism is a political-economic approach that allows private firms or organisations the freedom to operate within a country's economy while still adhering to the policies and laws set by the government (Harvey, 2005; Dawes, 2014). The neo-liberal approach minimises the government's intervention in the country's economic movements.

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