

Digital TV Transmission in Saudi Arabia as a New Era of TV

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Abstract

Digital TV is particularly relevant in the advance of media. It is considered one of the greatest changes in TV technology since the invention of television in the 1930s. The use of TV, as well as the production of TV programs, has undergone massive changes. The development of Digital TV in Saudi Arabia was successful under hard conditions in Middle East countries in this period. This study concerns Saudi Arabia's transition from analog TV to DTV, and how other countries in the Middle East can learn from this transition.

Keywords: Digital TV, TV Transmission, Saudi Arabia, Media

Introduction

Television signals that are usually transmitted on digital platforms instead of analog ones are indicated as Digital TV (DTV). In DTV technology video and audio are transmitted through digital signals, and multiple into one carrier. This enables DTV to manage multiple programs on one frequency, which is coded and pressed to be one signal (Starks, 2013). This enables the content being received to be of quality. DTV has become increasingly popular in the world; therefore many countries have started withdrawing from the analog transmissions. DTV can be received from more than one source which includes: cable and terrestrial broadcasters, internet connections, recorded media and satellite systems (Gerburg, 2009).

DTV signals give out clear pictures and audio, making watching TV more attractive. In the twentieth century, there was an increase in the number of television stations. An appropriate digital platform was created so as to benefit both the broadcaster and the viewer. Analogue airwaves mean that the audiences were restricted to a specific number of channels. This changed in the twenty-first century when changing the signals from analog to digital became mandatory for broadcasters' carriers. The DTV gives the audience several options like choosing what to watch, accessing other international channels and even recording and distributing the television content. North American and European countries were among the first countries to take part of DTV transition.

Saudi Arabia was among the countries that completely adopted the idea of digital TV and was the first country to take part in the digital switchover in the Middle East. In April 2006, the country's television broadcast went to digital after signing a contract with Stesa in different cities like Jeddah and Riyadh. Transmission equipment was also supplied to other stations and supervision was placed to control what was being aired. This was to enhance the clarity of both TV and radio channels. Saudi did proceed onto securing a contract with Harris Corporation, which provided DVB-T transmitters and Atlas digital transmitters so that the digital coverage would be increased.

There were thirty free TV channels that have been aired, as to serve for the coverage of local content in the country. Saudi Arabia has a harsh desert climate so in 2011 it upgraded its broadband to DVB-T technology. Other adjustments made included the use of JUHD and UHF broadband antenna which would better the quality of digital video broadcasting in Saudi Arabia. In 2013, Saudi Arabia got a deal with Harris Broadcast, for the supply of DVB-T2 transmitters. These transmitters were to be used by Saudi Broadcasting Corporation during the period of the digital switchover (DVB, 2015). However, content aired on digital TV in Saudi Arabia is controlled by the government. Saudi Arabia is one of the states in the world that upholds its Muslim faith, and this is reflected on how they regulate what is aired on their media (Tassel, 2013). Saudi Arabia also has a Saudi-controlled Pan Arab media that mainly focuses on the positive aspects rather than the negative ones found in the Saudi regime.

The remarkable of how Saudi Arabia is continuing to expand its media business after Saudi Telecom Company has secured a deal with Alcatel-Lucent to expand its broadband access network (XDSL, 2010). This will allow the Saudi Telecom Company to offer quality bandwidth-demanding applications to consumers and cover a wide range of network coverage. Saudi Arabia has the best Mobile television broadcasting, IPTV, and Digital terrestrial broadcasting service as indicated by the Arab Advisors Group (ITU, 2015). This is due to the regular directing of resources to digital projects by the government.

Methodology

This research paper has been written in order to show the significance of Digital TV in the present age and the benefits experienced from it. This study will focus on Digital TV transition in Saudi Arabia, and how it has affected countries in different aspects such as economically, socially, and politically. Saudi Arabia will be the major country of interest in this research. The methodology of this paper depends on meta-analysis of the DTV in Saudi Arabia to explain whether DTV might cause a knowledge gap of society. Therefore, many of studies, programs, textbooks, articles, news, and magazines are subject for analysis.

In addition, knowledge gap theory allowed this research to have an in-depth understanding of the challenges faced by Saudi Arabia in compliance with digital migration. Knowledge gap helps in illustrating the impact of access to information and utilization in strategy and challenge minimization and lack of such information as evident by Romania. Saudi Arabia represents higher social status while Romania represents lower social status with information being the understanding legislative skill by Saudi Arabia for effective digital compliance.

The knowledge gap theory has been used in this project, in order to bring out how digital media coverage has taken place. The concept behind knowledge gap has been used to illustrate how an information event becomes evident within due time (Lin & Atkin 2014). Philip J Tichenor introduced the theory in 1970 stating that “when information about a certain subject is put out, the gap in knowledge amongst those of a high and low socioeconomic status increases” (Communication Theory 2010). The theory is used to understand if DTV could affect people knowledge what makes them looking for other media platforms. As well as this theory helps the researcher to have idea if DTV will contribute to narrowing the knowledge gap and what is the quality of DTV information. Knowledge Gap theory assists to know if the government has a power on DTV in Saudi Arabia, so as controlling on the knowledge and resulting to being a gap.

The study seeks to achieve its aims by following three steps; first step involved the review of several articles touching on the digital television (DTV) with emphasis on the challenges and

difficulties in the process of complying with DTV compliance. The articles provided an understanding of the impacts of DTV compliance on governments, the public, regulators, and DTV signal providers. The second step involved a comparison of Saudi Arabia who has successfully made the transition and Romania, who has had problems with making the transition using two articles. After understanding the main differences between Saudi Arabia and Romania, knowledge gap theory was applied to answer the hypothesis. Third, recommendations for future research and limitations for the research were then provided with research articles and views on DTC acting as guidance.

Literature Review

After its launch and positive audience acceptance in 1998, television manufacturers started producing digital TV sets which aimed to get the consumer to buy them to get clear high definition TV signals. The television technology was improved, and TV sets in LCD format started being produced. Broadcasting channels increased their high definition content over time with the increase of viewership from the audience (Cianci 2012).

On 11 June 2006, Saudi Arabia started moving to the era of digital terrestrial television, with Riyadh, Jeddah, and Dammam being among the first to take part in the first phase of the transition. The digital TV signals were able to broadcast quality images on the English and Arabic channels. The DTV signals in Saudi Arabia enabled thirty free to air channels, which would offer a wide variety of channels compared to analog.

Romanian DTV study as a model similar to Saudi Arabia

Romania began its digital migration in 2005. Nationala de Radiocommunication S.A., the major network operator in Romania, secured an order to get DVB-T transmitters. This DVB-T system would help in the digital migration in Romania. The Authority for Management and Regulation in Communication in Romania launched a tender that would serve for DTT multiplex licenses. This would help in increasing the number of transmitters to increase the digital content being aired in the country (DVB 2015).

Romania media has developed in unique ways. This is observed on the content and the number of channels being aired by the broadcasting corporation in the country. The country has about three channels that only cover the news. The stations that cover general programs are six while the state owns two main channels. There are also two channels that air Romanian content for people living abroad. Romania, therefore, has both state and private-owned television channels showing that there is freedom of media in Romania (Radu & Surugiu 2006).

Romania is among the European countries trying to ensure that everything is in place before the global switch off. The government has offered its citizens with the freedom to access information without putting up any restrictive measures. The popularity of television station is rated according to viewership in Romania. For instance, Pro TV is the biggest channel in Romania because it has a large following 339000 viewers (International Business Publications 2012).

Governments and companies support of digital TV

The government is one of the key players in the digital migration in every country. In Saudi Arabia, the move to digital migration was initiated by the Ministry of Engineering Affairs and the Ministry of Culture and information all of which are government bodies. The government offers revenue and uses its power to attract investors who will help in the setup of the technology

used for digital TV migration. Cable companies also play a significant role in the support of digital TV. Companies like Harris Broadcast have participated up with the Saudi Broadcasting Corporation to offer DVB-T2 transmission services. First Gulf Company is a broadcasting company that has a contract with Saudi Arabia to cater for the telecasting range.

Ownership of Media in Saudi Arabia

When it comes to the issue of who owns media in Saudi Arabia, we need to focus on both the government and the private sectors. Saudi Arabia's government has full ownership of broadcasting outlets. But what we need also to understand is that there must be other private bodies involved in piracy. Initially, we get to hear that Saudi Arabia experiences about 10% loss of satellite pay revenues due to the issue of piracy (Alharbi & Sign, 2013). But in most cases, piracy is always led by private sectors that may be some of the powerful people in the government or the most respected individuals in the country. It can also be by great investors who play major roles in Pan-Arab TV broadcasting industry.

Saudi Arabia is one of the Arabic Monarchical states, which has experienced the highest rate of digital movement. Saudi Arabia's media is owned by state agencies which control the biggest share in controlling media. However, this limits the diversity of digital information infrastructure. The government goes to an extent of carefully monitoring what is seen in media. Saudi directs a huge percentage of the Internet traffic to King Abdulaziz City for Science and Technology where content that is considered unwanted is blocked. Saudi also bans access to information-seeking tools and was regarded as the regime that is aggressive in online censorship (Anduiza, James & Jorba 2012).

Regarding to state run broadcasting television services in Saudi Arabia (BSKSA) controlled by the minister of culture and information makes BSKSA to operate almost in all local broadcasting outlets. Secluded TV station is believed that it cannot work in Saudi Arabia but on the other side the country in the major shop for Pan Arab digital television and pay TV. The reason why the government takes full control of the broadcasting outlets is the revenue collection from subscribers.

Saudi government involvement in broadcasting TVs and radios has led to adjust the of information published process while could not conflict with Saudi Arabia society's traditions and morals. The government has directly involved both in the international and local broadcasting in Saudi Arabia. Rules are set to control the journalists by the Ministry of Culture and Information that all journalists are supposed to register with the government and to be issued with a visa that should control their freedom of movements. That may cause blocking of important information that needed by community what leads to a knowledge gap, because the information and news would be available only for opinion leaders and decision-makers.

Percentage of Saudi Arabia Homes using DTV

Graphically the number of homes using digital TV is increasing in Saudi Arabia. The digital TV account claims that the number of paying homes for digital TV rose to 18% in the year 2014. MENA which is the body in charge of the Middle East and North Africa reported that the number of digital TV users will reach 21.3 million by the year 2020.

This automatically suggests that there are increased numbers of people who are using the digital TV in Saudi Arabia but the number is also gradually increasing (Keithw, 2010). Middle East

Broadcasting Centre also provides free air station which air both English and Arabic languages providing both western and local movies.

English channels air a variety of programs such as sports, lifestyle, fashion and children programs. Due to this, the digital TV in Saudi Arabia has gained its popularity making most homes to get subscribed to the pay satellite in order not to miss the preferred programs. The increase rate of homes using digital TV system in Saudi Arabia contributes revenue to the government since they are entitled to pay for the channels.

Arab population is high and therefore, the number of people and homes who may wish to get access to pay satellite must also be high (Keithw, 2010). Level of technology also played bigger role in digital TV transmission. Arabs are mostly technologically informed putting into practice all technological innovations. For this reason, we get to find most homes using modern facilities eliminating free air channels to digital TV.

According to Brzoznowski (2015), Middle East and North Africa (MENA) is expected to generate revenue of about 75% between the years 2010-2020 making it produce about 5.63 billion. The most challenging problem is the issue of piracy. MENA gets its challenge here by losing about 10% constituting about 34.3 million homes in the North Africa and Middle East sub regions. "The issue of piracy is much considered as loss both to the government and the private sectors" as suggested by the principal analyst of digital TV research, Simon Murray.

The use of decoders in pay satellites homes could also find it easy and cheap since one can serve the entire home making them share equally the cost. Satellite penetration in the Saudi Arabia will account for the most paying TV incomes (Keithw, 2010). Paying satellite is expected to rise from 6.9% which it was in the year 2010 to 11.8 come 2020. Such estimations are made in accordance with rate at which the residents of Saudi Arabia get to subscribe to the satellite pay TV. However, the expansion of OSN and the beIN Sports television channels has greatly led to the growth of pay satellite.

According to Murray, who is the principal digital TV analyst states that OSN has about 1, 162, 000 residential subscribers while the beIN Sports has about 819, 000 subscribers (Keithw, 2010). With reference to these approximated values, we get to find that there may homes in Saudi Arabia subscribed to the use of digital TV system.

Factors that also led to more residents of Saudi Arabia to subscribe to the digital TV system were the completion of the implemented project and the upgrade of STC led by the chairman Abdul Aziz Alsugair by the Arabsat. Arabsat also helped STC by providing first-class satellite communication and broadcasting facilities to both the government and the private sectors. Arabsat was regarded as the best communication and broadcasting body that was liked by majority of residents of Saudi Arabia (Keithw, 2010). The partnership of both STC and Arabsat provides extensive experiences for both organizations which helps them to develop their communication services through satellite industry in Saudi Arabia.

Economic Movement of DTV in Saudi Arabia

Information and communication technology (ICT) has played a major role in the current days. ICT is nowadays taken as something important just like electricity and water. Most of the Arabs are technological experienced. With reference to their constant attacks by the AL- QUEDA, we get to find that most technology which has been used is of high standards compared to others.

Due to this, Saudi Arabia residents (Arabs) are well informed on issues related to technology. For example, most of the people in Saudi Arabia are internet users.

Pay satellite also contributed to majority to move to digital broadcasting channels even though it seems expensive (Rishi, 2012). Channels in pay satellites were much better compared to free air channels since they were clear to most viewers regardless where and when. Pay satellites have advertisement programs while on free air stations they go missing.

The SK Telecom officially announced their collaboration with the Saudi telecom company (STC) where they signed memorandum of understanding. The two aimed at creating new growth engine for development, modernization and the capabilities of their residents (Rishi, 2012). They agreed to discover new developments in Saudi Arabia more so to the broadcasting sectors.

STC being the leading telecommunication firm in Saudi Arabia, it has about 160 million subscribers. It is estimated that about 70% of its shares belongs to the government of Saudi Arabia. The large geographical area of Saudi Arabia makes it possess great number of people with different thinking capabilities (Rishi,2012). The economic engine of digital TV in Saudi Arabia is mainly based on gradual subscription.

Regulation that was passed by the government of Saudi about provision of quality information and show to the public also made some economic drive to the digital TV. All the stations are licensed to produce quality to the viewers and listeners of Saudi Kingdom. Quality is what majority are after of. Religion is also a major economic drive of the digital broadcasting television system in Saudi Arabia.

Most homes in access to digital TV system are entitled to pay satellite where they subscribe to the channels of their choice. However, some adverts must again be involved in television channels that make it interesting. Adverts are always involved where there is something new useful to the members of the community.

Although some digital television stations in Saudi Arabia air free channels to the residents, the majority still are involved in pay satellite. The reason majorities are influenced by pay satellite yet there is free air stations are that the pay for satellite TV has modernized programs airing both local and international programs. The pirated channels on the other hand provide their own programs but at a cheaper price to their subscribers. Both the private and government sectors get their revenues from their subscribers.

Population level also acts as an economic drive to digital TV transition. Their well-informed nature makes them to give modern technology first priority (Rishi,2012). Large population in most cases creates competition both to the public and the broadcasting channels. Such competition contributes to new discoveries both to the young and the adults in Saudi Arabia.

The regulatory and administrative challenges are the major concern to transition. Processing of license is not an easy task but every broadcasting organization more so the private ones must possess it (Rishi, 2012). The expenditure cost is very high and the regulations given are also technical but must be adhered to accordingly.

It is clear that that the economic engine of the Digital TV in Saudi Arabia is mainly based in subscription. Only very few homes are involved in free air but advertisement is involved in both the private and government sectors.

Results & Discussion

Challenges faced by Saudi Arabia in Compliance with International regulations on Digital Broadcasting

DTV in Saudi Arabia did not face many problems in switching from analogue to digital platforms of broadcasting and had started the process of digital migration by 2006 being the first country in the Middle East to migrate its broadcasting to digital platforms. Forty Saudi cities were included in the digital terrestrial television transmission first phase (ITU, 2015). Saudi Telecom Company (STC) used its fibre-to-home (FTTH) network to deploy IPTV and triple-play services and the launch of “Invasion” in August 2010 by STC resulted in the bundling of IPTV, fixed telephony, and broadband internet. PAL and SECAM systems are used in Saudi Arabia with foreign sets having to be compatible with these standards to work in the country. By the 2015 switch-off date, Saudi Arabia had put in place mobile televisions broadcasting (IP-based/DVB) service, IPTV service, And Digital terrestrial broadcasting service (ITU, 2015).

When compared to Saudi Arabia, in Romania, the journey of DTV began in 2005 with Nationala de Radio Communication S.A., the largest network operator in Romania ordering DVB-T transmitters to open the way for digital migration. However, it has gotten that digital migration in Romania has faced stiff challenges that prevented the country from achieving digital transmission because of the 2015 deadline. Romania chose the DVB-T2 broadcasting standards and slated the day for analogue switch-off as June 17, 2015.

Challenges Faced in Saudi Arabia’s Transition to Digital Broadcasting and Comparison to Romania

The migration from analogue to digital broadcasting is wrought with challenges and opportunities for broadcasters, the public, government and regulatory authorities (ITU, 2015). Different countries have faced different challenges in the course of complying with the 2015 digital migration deadlines. The International Telecommunication required all countries to broadcast in digital versions from June 2015 resulting in a move by countries to comply with the requirement. The main difference between Saudi Arabia and Romania regarding compliance with digital transmission deadlines set by the International Transmission Union (ITU) as June 2015 is that Saudi Arabia was not faced with many challenges met the international requirements for the switch as early as 2006. The other difference is that Romania was under the European Union pressure to comply with the set deadlines and is among few countries that did not make the switch until the deadline was reached. Romania was among the last countries to comply with digital transmission requirement in Europe with digital broadcasting starting on June 17, 2015, while Saudi Arabia was the first country in the Middle East and North Africa (MENA) region starting broadcasting digitally on June 11, 2006. The huge difference in compliance dates depict the differences in challenges and difficulties faced by the two countries.

The lack of good regulatory, economic, and technical circumstances for a smooth switchover from analogue to digital broadcasting affected the ability of Romania to meet the 2012 deadline set by the EU and ITU. One of the challenges that were faced by Romania was the 2008-2009 economic recession that affected the country deeply and affected economic potential and ability to purchase by citizens. The 2008 financial crisis resulted in Romanian citizen’s inability to purchase digital sets. The Romanian government was forced to look for subsidies to cater for the purchase of digital sets. Funding is one of the main impediments that resulted in Romania not

meeting the 2012 deadline for the digital switchover. The process involves huge costs and massive investments for the development and improvement of transmission and production infrastructure, and the users have also to contend with high costs of accessing digital content on television. Meeting the deadline would require huge sacrifices by the Romania government, providers, regulators, and the public that could not be possible considering the huge effects of the 2008 financial crisis on the economic position of the government and citizens.

The other challenge faced by Romania in complying with the digital migration from analogue broadcasting was the need for the improvement and change of broadcasting systems by providers. The delay to 2015 in making the switch from analogue to digital broadcasting in Romania was aimed at providing digital platform providers sufficient time to buy new equipment and adjust their systems to meet digital version requirements and guidelines. The government lacked the capability to provide subsidies to television companies and other forms of funding owing to the detrimental effects of 2008 financial crisis. The lack of government funding and low economic potential also had a negative impact on the ability of television companies to purchase and install necessary changes to production and transmission infrastructure for the 2012 digital switchover deadline to be met.

Romania lacked sufficient preparation of different stages of digitalization to achieve the 2012 switchover deadline. The first stage of digitalization entailing allocation of two national multiplexes had not been complied with by Romania despite the process having started by August 2010 when the government decided to extend the deadline to January 2015. However, extending the deadline resulted in the process of digitalization starting over and companies that had made acquisitions of the digital multiplexes had to be repaid. The lack of enough coverage by the 2012 deadline with less than 95% of the Romanian population not having access to digital terrestrial service depicted the lack of adherence to predefined steps for digital switchover in Romania.

The other factor was that analogue transmission continued in Romania, and the requirements for the digital transmission had not been met with the allocation of providers with required multiplexes having not been done. There was no strategy in place for the Romania government and other stakeholders to follow in achieving digital transmission by the 2012 deadline with challenges regarding the issuance of licenses to government-owned broadcasters and private companies. The supporting legislation for digitalization in Romania was not also in place to ensure a smooth transition and avoid challenges that prevented the completion of the different stages of digitalization in Romania.

Potential Measures to Avoid Challenges in Complying with Switchover Deadline

Participation by relevant parties in the Romania switchover was not enough since NGOs, government authorities, regulatory offices, and television companies were not collaborating effectively to meet the deadline and achieve digital broadcasting. The different stakeholders in the digital transmission in Romania did not have effective collaboration and understanding that would result in better handling of the digital switch process. Accusations of unfairness by regulating authorities on the licenses by private companies and delays in the process of auctioning all resulted in a lack of participation and effective collaboration by parties to the digital switch process affecting measures aimed at meeting the 2012 deadline. The lack of sufficient will by the government authorities to meet the deadline is also evident owing to delays in making legislation guiding the process and the appointment of members of regulating

commission to facilitate faster decision-making. The inadequate cooperation between parties is evident with the provision of subsidies to state-owned SRTV while other broadcasters were not considered. SRTV was also given an upper hand in the allocation of licenses for digital broadcasting creating differences with the other broadcasters affecting chances of collaboration. The inadequate regulatory framework is also the other factor that contributed to Romania not meeting the 2012 digital switchover deadline as evidenced in the award of a technical license for digital broadcasting to SNR Radiocom, a technical state authority not legally allowed to hold licenses (Preoteasa et al., 2010). The Romania parliament and senate adopted the regulation on digitalization of broadcasting services in 2009, but the implementation of these legislations was not undertaken despite the understanding of limited time for compliance with the digital switch off.

Incapacity to foresee potential economic and technical impediments was the other challenge that contributed to the inability of Romania meeting the 2012 switch offer deadline. Romania could not correctly predict changes in the country's economic environment when agreeing to switch to digital broadcasting since the 2008 financial crisis could not be correctly predicted. The lack of an understanding of the huge impacts on the country's economic position of the 2008 financial crisis and even its occurrence prevented Romania from knowing that the time schedules for implementation of the digital switchover would not be appropriate. A slow process of passing legislation and laying important strategies for the switch to digital broadcasting resulted in the switchover the period (2009-2012) falling in a year when the country faced the effects of a financial crisis. There was a lack of understanding by Romania of the huge technical requirements associated with digital transition resulting in numerous technical impediments that prevented Romania meeting the deadline. The regulatory authorities and legislators should have been aware of the many technical impediments that could affect switching from analogue to digital broadcasting to allow for preventive and corrective measures to be undertaken.

The challenges that Saudi Arabia faced in the rollout of digital broadcasting entailed reduced control of mediated information by authorities in Saudi Arabia. The effect would be an increase in popularity of digital transmission and augment the uptake of digital transmission in the country. This was made possible by the lack of uprising in Saudi Arabia that prevented other countries in the Arab world from giving up control of mediated information owing to the fear that it could result in more instability. These countries were not in a position to comply with digital transmission switch owing to this challenge and have up to 2020 to comply with ITU resolution on digital broadcasting.

The other challenge was the harsh desert climate that required the use of specific transmitters for broadcasting to achieve high levels of clarity and quality of video and sound. The problem was solved by upgrading the broadband to DVB-T technology and introducing the use of UHF and JUHD broadband antenna to allow improved quality of digital broadcasting in Saudi Arabia.

Despite the delay, Romania was in a position of making the transition to digital broadcasting in June 2015 choosing to use Digital Video Broadcasting Terrestrial (DVB-T), which is a similar platform used by Saudi Arabia. There are several reasons for the choice of DVB-T platform in Saudi Arabia and Romania including that it provides an efficient platform for ensuring all citizens have equal access to information including news and programs of regional and national importance. Achieving free access through DVB-T in the countries in which they are used involves offering free to air packages to ensure citizens are not obligated to pay for access to information of national and regional interest. DVB-T was also chosen for the ability of the

platform to use existing infrastructure including frequencies and network of transmitters used in analogue broadcasting limiting costs and ensuring profits for the providers. Opportunities for mobile reception in cars, bus, or train, and the creation of new markets including pay TV, interactive services, and video on demand are the other reasons that Romania and Saudi Arabia chose to use the DVB-T for their digital broadcasting requirements.

Conclusion

The digital switchover offers several benefits to both Romania and Saudi Arabia including viewers in both countries having access to more choice and quality including high-definition television, more channels, and better image and sound clarity (Jaksic et al., n.d.). The other benefits of digital switchover are the ability to transmit more channels and lower distribution costs at reduced costs to the providers, spectrum use efficiency owing to more service provision using the same bandwidth, and offers platforms for sending interactive data and personalization (Sutu, 2013). Kingdom of Saudi Arabia is in full control of state broadcasting services that operate both the domestic television channels and radio stations. Since the digital TV system started in Saudi Arabia, all the broadcasting channels were registered and issued with the broadcasting license. Broadcasting in Saudi Arabia is a bit technical. However, journalists find it easy when they adhere to the regulations. All broadcasting channels in Saudi Arabia are entitled to give first priority to the Islamic rules. Any information based on Christianity should not be heard in any broadcasting channel, which contributed to reducing the knowledge gap between the public and decision-makers in the government.

The broadcasting channels in Saudi Arabia were entitled to provide the public with high quality group entertainment. Most listeners have the desire to be entertained well when they tune to the respective channel. Broadcasting channels that offer adequate entertainment have more listeners and viewers compared to other channels (Yusuf et al.2014). Generally, contents of regulations used in Saudi Arabia had some positive impacts to the public but the negative impact outweighs the positive ones (Yusuf et al., 2014). These tell us that the government of Saudi Arabia does not allow any forms of cross misconduct of any side that may lead to misleading of the citizens.

The challenges faced by Romania were widespread including economic, technical, and regulatory, while the challenges Saudi Arabia faced were operations that were easily ironed out and allowed for a smooth transition from analogue to digital broadcasting. The minimal challenges faced by Saudi Arabia were as a result of effective coordination and collaboration by stakeholders and large government support regarding financial and technical assistance and guidance. These were not available in Romania with collaboration non-existent and the government not offering enough assistance to parties involved in the digital switchover because of the impact of the financial crisis. Saudi Arabia was also faced with minimal challenges because of clear regulations and legislation on the transmission in the digital platform. Romania could not make effective legislation timely and after the legislation had been passed, they were shelved until it was too late for implementation to be done in a timely manner.

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