**THE CHALLENGES FACING NIGERIA TELEVISION IN SWITCHING TO DIGITAL BROADCASTING IN NIGERIA**

**TITLE PAGE**

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**ABSTRACT**

This study was carried out to examine the challenges facing Nigeria television in switching to digital broadcasting in Nigeria with special reference to ITV Benin City. Specifically, the study aimed to examine if the transition from analogue to digital broadcasting have an impact on broadcast industry in Nigeria, know the challenges that transition from analog to digital poses for the broadcast station in Nigeria, examine whether digital broadcasting service in the country has enhanced broadcast production and study the importance that digitalization will bring to broadcast audience. The study employed the survey descriptive research design. A total of 30 responses were validated from the survey. From the responses obtained and analyzed, the findings revealed that the migration from analogue to digital bring to the broadcast industry in Nigeria is socioeconomic benefits to viewers, additional investment in broadcasting media and the production of local content. The study also revealed the challenges transition from analog to digital poses for the broadcast station in Nigeria are lack of technical and financial resources, knowledge gap and manpower. The study further revealed digital broadcasting services in the country has enhance broadcast production by increase the capacity of transmission networks by improving spectrum efficiency, sound effects and interaction and brings a campaign or story to life. Finally, the study revealed  the importance of digitalization bring to broadcast audience is timely delivery, global reach and Instant feedback & trust. The study thereby recommends there should be effective management of the spectrum dividend that will result from the transition in a manner that brings the greatest benefits to the greatest number of people. Also there should be suitable infrastructural digital broadcasting standards that would ensure compatibility on both national and international levels

****CHAPTER ONE****

****INTRODUCTION****

****1.1       Background of the Study****

Until recently, all broadcasting media have run on an analogue system. Analogue television use complete waves to transmit pictures and sounds. The major drawback of this is that location plays an integral factor, disabling, distorting images and audio on television in rural areas. Digital Televisions are becoming commonplace, with many cable providers encouraging their customers to switch to digital television, so they can take advantage of the providers’ new services. Like the compact disc, digital television information in broken down into binary chunks. Immune to distance and interference, digital TV signals are largely free of visual snow and disruption. Kombol, (2008,p.67) defines digital communication as “an advanced form of information transfer in which messages are converted into a series of 1s and 0s (binary digits) and sent over a channel to the receiver.” Over the years, television transmission has grown from strength to strength. It moved from monochrome (black and white) to colour transmission.

Television is a system of sending and receiving pictures and sound by means of electronic signals transmitted through wires and optical fibbers or by electromagnetic radiation. These signals are usually broadcast from a central source, a television station, to reception devices such as television sets in homes or relay stations such as those used by cable television service providers. (Microsoft Encarta, 2009)

Digital television is a new technology for transmitting and receiving broadcast television signals. Using an additional 6 Megahertz (MHz) of broadcast spectrum temporarily granted by Congress and the FCC for a period of no fewer than 9 years, broadcasters will be able to develop a diverse range of new digital television programming and services while continuing to transmit conventional analog television programming on their existing allotments of spectrum, as required by the Telecommunications Act of 1996 (Telecommunications Act of 1996).

A digital standard is superior to analog because of its greater accuracy, versatility, efficiency, and interoperability with other electronic media. Digital signals also have the advantage of generating no noise or “ghosting,” and being more resistant to signal interference. Within the range of the signal, this results in a perfect signal. Digital Television (DTV) is an advanced broadcasting technology that has transformed your television viewing experience. DTV has enable broadcasters to offer television with better picture and sound quality. It also offers multiple programming choices, called multi-casting and interactive capabilities. (Asemah, 2009,p.23).

Digital television uses technology that records, transmits, and decodes a signal in digital form—that is, as a series of ones and zeros. This process produces much clearer picture and sound quality than analog systems. It also permits additional features to be embedded in signals including program and consumer information as well as interactivities. Early digital equipment included digital television receivers that converted analog signals into digital code. The analog signal was first sampled and stored as a digital code, then processed, and finally retrieved. ATSC digital tuners designed to decode purely digital signals are now standard on new televisions. Daramola, (2003,p.45) Digital TV reception can be affected by nearby moving vehicles, such as cars, trucks, trains and airplanes. In some instances, shadowing or reflections from these vehicles may cause digital picture to temporarily break-up or even disappear completely. If this occurs, you should try moving or reorienting your antenna to find a position that provides the most reliable reception. If you are using an indoor antenna, switching to an outdoor antenna system which may include a directional antenna or rotor could improve reception. In severe cases it may not be possible to completely eliminate the effect of nearby traffic. If reception remains unsatisfactory due

Digital television transition is the technological evolution and advance from analogue terrestrial television, which broadcasts land based (terrestrial) signals. The purpose of digital terrestrial television, similar to digital versus analogue in other platforms such as cable, satellite, telecoms, is characterized by reduced use of spectrum and more capacity than analogue, better-quality picture, and lower operating costs for broadcast and transmission after the initial upgrade costs. A terrestrial implementation of digital television technology uses aerial broadcasts to a conventional antenna (or aerial) instead of a satellite dish or cable connection (Liwhu, 2008).

Competing variants of digital terrestrial television technology are used around the world. Advanced Television Standards Committee ATSC is the one used in North America and South Korea, an evolution from the analogue National Television Standards Committee standard NTSC. ISDB-T is used in Japan, with a variation of it used in Brazil, Peru, Argentina, Chile, Venezuela, Ecuador and most recently Costa Rica and Paraguay, while DVB-T is the most prevalent, covering Europe, Australia, New Zealand, Colombia, Uruguay and some countries of Africa. DMB-T/H is China’s own standard (including Hong Kong, though Hong Kong’s cable operators use DVB); the rest of the world remains mostly undecided, many evaluating multiple standards. ISDB-T is very similar to DVB-T and can share front-end receiver and demodulator components.

The switch over from analogue to digital in Nigeria is to take place in the year 2012. DTV is transmitted on radio frequencies through the airwaves that are similar to standard analogue television, with the primary difference being the use of multiplex transmitters to allow reception of multiple channels on a single frequency range (such as a UHF or VHF channel) (Wikipedia,2010).

The digital Television transition refers to the shift from analog broadcasting to digital broadcasting. Many countries of the world have recognized the huge benefit which digital broadcasting offers and are making a huge effort to shift from analog broadcasting to digital broadcasting (Liwhu, 2008).  The transition from analog to digital broadcasting involves many changing the transmission signals as well as making sure that members of the public buy high definition television sets and get rid of standard definition television sets.

In the United States of America, February17 2009 was set as a date when broadcasting in analog will be stopped and the whole country will commerce digital broadcasting. To this effect, the US congress passed the Deficit Reduction Act of 2005. Under this Act all local stations in the US are required to from off their analog channels and start broadcasting in digital format.

The transition to digital broadcasting will mark the end of free television programmes. However, this is not the case. While some television set may be affected by the change, others will not for example, television sets that receive cable and satellite signals will still receive signals from digital transmission. However, television sets that receive analog signals via antenna (these antennas have analog funers) will be out of place in the digital era.

In this state of affairs, old antennas will need to be upgraded to meet up with the technology. In countries like the United States of America where digital transition is planned top take off, all analog television sets will be no longer useful and will have to be dispose of perhaps shipped to other countries of the world where analog broadcasting is still used. People who wish to continue using analog television set in the U.S will need to have a converter installed. This converter changes digital signals which are broadcast to analog signal so that the television set will be able to pick. Traditionally developing countries in Africa, Latin America and South East Asia are often the dumping ground for out molded technology. The digital transition is just one example of the factors that make developing countries recipients of technology that advanced countries no longer need.

Digitization programme in Nigeria commenced in Abuja on June 3, 2008, following a meeting of stake holders in the broadcast industry where forum under scored the need for Nigeria to embrace the new technology, so that the country would not be turned into a dumping ground for obsolete analog equipment reports shows that Nigeria has set June, 17,2010 as the switch- over date from the current mode of broadcasting to the netra modern digital terrestrial broadcasting the date is three years before the June 17, 2015 deadline for the entire world set by the International Telecommunication Union (ITU) after its congress in Geneva, Switzerland in 2006.

However the country officially stated the digitization of its broadcast industry in December 2007, following late President Umaru Musa Yar’Adua’s approval, directing the National Broadcasting Commission (NBC), the industry’s regulator to set motion and pilot the programme towards the target date (Adeniyi 2009).

****1.2       Statement of the Problem****

Despite the overwhelming benefits of digital broadcasting, Nigeria is bound to face the following problems resulting from the low level of our technological advancement and the income level of the individuals. Thus, the following challenged abound.

1. With the current way of picking digital signals, using atenna, viewers are limited to whatever channels the antenna picks up and the signals quality will also vary.
2. Digital television signals must not interfere with each other, and they must also coexist with analogue television until it is phased out.
3. Analogue switch-off would render a non-digital television obsolete, unless it is connected to an external digital tuner, an external converter box for digital signal
4. The adoption of a broadcast standard incompatible with existing analog receiver has created the problem of large number of analogue receivers being discarded during digital transition in the US where an estimate of 99 million unused analogue TV receivers are currently in the storage. Same thing is bound to happen in Nigeria.
5. The economic power of all broadcast station to transit to digital is a big threat. Seeing that million of naira are involved in this transition.

****1.3      Objectives of Study****

i.        To examine if the transition from analogue to digital broadcasting have an impact on broadcast industry in Nigeria.

ii.      To know the challenges that transition from analog to digital poses for the broadcast station in Nigeria.

iii.    To examine whether digital broadcasting service in the country has enhanced broadcast production.

iv.    To study the importance that digitalization will bring to broadcast audience.

****1.4      Research Questions****

i.    What impact would the migration from analogue to digital bring to the broadcast industry in Nigeria?

ii.    What challenges do the transition from analog to digital poses for the broadcast station in Nigeria?

iii. How has digital broadcasting services in the country enhance broadcast production?

iv.     What importance will digitalization bring to broadcast audience?

****1.5       Scope of the Study****

This study would attempt to examine the challenges facing Nigeria television in switching to digital broadcasting in Nigeria, a study of ITV Benin City.

****1.6       Significance of the Study****

 The work will benefit the media houses and media manger on the need to move from analogue to digital.

Media, mass communication, journalism students will see reason to upgrade their skill and experience.

Government at the national level will also find this material relevant to note the reason why Nigeria must not left out.

**CHAPTER TWO**

**REVIEW OF LITERATURE**

**INTRODUCTION**

Our focus in this chapter is to critically examine relevant literature that would assist in explaining the research problem and furthermore recognize the efforts of scholars who had previously contributed immensely to similar research. The chapter intends to deepen the understanding of the study and close the perceived gaps.

Precisely, the chapter will be considered in three sub-headings:

* Conceptual Framework
* Theoretical Framework
* Empirical Framework

**2.1 CONCEPTUAL FRAMEWORK**

**The Concept of Digitization**

The word, digital, denotes “a process or device that operates by processing information that is supplied and stored in the form of a series of binary digits” Robinson (2004). Corroborating, Okpanachi (2008, p.4) says: Digital radio is the pure digital transmission medium that improves the sound quality of radio broadcasts, virtually eliminating static, hiss, pops and fades and offers data display capabilities on receivers and opens up opportunity for multicasting: Broadcasting multiple high-quality channels on each frequency. In the same vein, digitization of video signals according to Baran (2010, p.227) “reduces their sizes; therefore, more information can be carried over phone wires and stored.” Corroborating, Hanson (2005, p.241) states: Just as sound recording has moved to digital formats with CDs and MP3 files, so is television in the process of going from analogue technology of Farnsworth and Zworykin to the computerized digital technology. There are two distinct digital formats.

High-definition television (HDTV) is a wide screen format and features an ultra clear high resolution picture with superior sound. The other digital format is standard digital television, TV, which will make it possible to broadcast up to six channels on the same frequency space that now carries only one channel. The above submissions represent the attributes of the digital concepts. They also form opinion for the advantageous need of the process of digitization. That is to say, that the digital technology is paramount in today’s broadcasting. That is why Dominick (2009, p.233) says “the traditional broadcast television industry is in a state of change”. Also Dominick (2009) states: “Hoping to capitalize on the public’s increasing awareness of high-definition television (HDTV) the radio industry is introducing HD radio, a digital service that generally improves the signal quality of terrestrial radio stations.”

HD radio has the ability to enhance FM station to produce sound as good as CD. It can also make AM station sounds as good as current FM station. And the signals are static free. The notion here is that digital signals in broadcasting are superb, that they can be compressed to make one single radio station to broadcast more than one programme at a time. Talking about Television, digital television (DTV) offers many advantages. The pictures are clearer with better sound quality. It also enhances the “rectangle-ness” of the screen (16:9 aspect ratios) unlike the traditional TV which is square (4:3 aspect ratios). Furthermore, the possibility of transmitting on a super-resolution hi-def TV is enhanced by digitization of TV signals. As a footnote to the power of digital technology, Rodman (2006, p.236) submits: Audience fragmentation has encouraged the development of digital radio which can increase format selections... In traditional analogue radio, an electronic waveform represents the sound on a carrier wave. Such a waveform carries static and easily corrupted. In digital radio, transmitted sounds are assigned numbers (digits) that take up less air space than analogue waves. Digital signals can also result in crisp, clear signal.

The keynote of this study which focuses on digitization goes forward to define it as a process through which information, whether relayed or through sound, text, voice or image is converted into digital, binary language for computer use (Okorie: 2008, P. 38). This makes possible the conversion of information from different, though one channel, and to reduce the risks of distortion. Thus, the use of digital language facilitates the coverages of computer, telecommunication, office technologies and assorted audio visual consumer electronics. Their integration, in turn, allows information to be handled at higher speed, with more flexibility, improved reliability and lower cost. Through digitization, the capacity of communication channels are greatly expanded, there is more scope for consumer choice, and more possibilities for interactive system (Kambol: 2008, P. 6). Furthermore, digitization considerably improves the quality of voice and video transmission and, economic efficiency is enhanced because conversion to digital forms of storage, retrieval and editing save time and labour. For high quality video, for example, images can be digitally compressed and then transmitted over satellites at 56,000 bits per second as a 10 computer file. This digital data can be stored on disc system. Until it is played back at the original speed. Since digital compression and storage system are light weight, the news technology can be especially useful in news gathering. Digital compression techniques in television offer important role in economic advantages for satellite broadcasting. (Ekeh: 2009, P. 113). More television channels can be put on fewer transponders, which implies considerable savings. Digital compression techniques will also increase opportunities for projects like video conferencing and pay television. In sum, the principle characteristic of digital technologies is its pervasiveness. They are everywhere, at home from kitchen to living room, in the office from electronic badge to computers among other places.

**Understanding Analogue TV**

To understand digital TV, it’s helpful to understand analogue TV so as to point out the differences to actually help us understand and appreciate the necessity of digital television. Analogue television did not really begin as an industry until the development of the cathode-ray tube (CRT), which uses a steered electron beam to “write” lines of electrons across a phosphor coated surface. (Wikipedia, 2010). The electron beam could be swept across the screen much faster than any mechanical disc system, allowing for more closely spaced scan lines and much higher image resolution, while slow fade phosphors removed image flicker effects. Also for less maintenance was required of an all electronic system compared to a spinning disc system. To review quickly here are the basics of analogue television transmission

1. A video camera takes a picture of a scene at a frame rate of 30 frames per second.
2. The camera rasterizes the scene. That is the camera turns the picture into rows of individual dots called pixels. Each pixel is assigned a colour and intensity.
3. The rows of pixels are combined with synchronization signals, called horizontal sync and vertical sync signals, so that the electronics inside a TV set, will know how to display the rows of pixels (Wikipedia, 2010). This final signal, containing the colour and intensity of each pixel is a set of rows, along with horizontal and vertical sync signals which is called composite video signal sound is completely separate. These video signals can be used in the following ways:
4. You can broadcast them as radio waves when you attach antenna to your TV set and pick up local stations for free, you’re receiving broadcast television from TV stations.
5. You can record them with a VCR.
6. You can transmit them through a cable Television system along with hundreds of other composite signals. When a composite video signal is broadcast over the airwaves by a TV station, it happens on a specific frequency. The composite video signal is transmitted as an AM signal and the sound as FM signal on these channels. When the VCR wants to display its signal on a normal analogue TV, it takes the composite video signal and the sound signal off the tape and then modulates those signals. A cable box or satellite box does the same thing. The set-top box receives a digital signal from the satellite or cable, the box then converts that signal to an analogue signal and sends it to your analogue TV.

**Getting Ready for a Digital Television**

By 2015, all analogue television getting programming over the air through antenna will need to be plugged into a special box television set-top box to receive digital broadcasts. Digital television (DTV) is more than just a digital version of the analogue TV programming view. Today it is a new transmitting high quality video and audio to your TV-set using DTV, broadcasting cable system operators and satellite program service can transmit audio and news service such as multi-casting (more than one programme on the same channel) and data casting (Electronic program guides and interactive television). To get a better idea of the difference between digital and analogue TV, compare a DVD movie with a VHS movie. A VHS tape will allow you to play, fast forward, pause and rewind the programme. But a DVD allows you to go directly to any “chapter” use interactive means and select a wide screen formats. Those affected by this transition are consumers who receive files-to-air television signals through a television set that are equipped with analogue turners. What to do to be connected is to have a CTV set-top box or purchase a television set with a built in digital turner. A digital “set-top box” is a digital to analogue signal converted device that easily plays into television to allow audience to continue to get programmes (sennette, 2008). The converter options is not free for everyone, some people have television set already connected to cable, if the cable service producer carries terrestrial signals, settop boxes will not be needed for this people.

**The Concept of Broadcasting Media**

Broadcasting is a form of mass communication that involves the dissemination of information, news and entertainment to a large audience through electronic transmitters. When the signals transmitted are audio (sound and speech) it is reffered to as radio broadcasting, but when both visuals (motion pictures) and audio signals are transmitted it is called television broadcasting (Adeniyi, 2009, P. 46). Aside the importance of Broadcasting for Education, Entertainment and information, the society cannot maximize its potential for development and prosperity without a strong broadcast media organizations such as CNN, BBC and Al Jazeera have contributed immensely to the economic strength of their host countries. Few can deny the power of the media in shaping the destiny of any nation. Mass communication scholar, Dr Ibrahim of the University of Lagos, said in a recent lecture in 2010 at the university campus that the potential of the media as a tool for political and economic power cannot be easily measured. This is why nations around the world are moving fast towards the digitization of broadcast media. The global drive is so crucial because digital format of broadcasting is of higher quality than analogue.

**Challenges Of Digital Broadcasting In Nigeria**

* **Deadline**

The main challenge, according to Ekeh (2009, p. 2), of digital broadcasting lies with the actual migration from analogue to digital. Although, other challenges rest on this one, the issue of meeting the set 2012 deadline is something to worry about. This position is dependent on the fact that the politico-economic circumstances in Nigeria tend to tilt to a level the citizens are not confident about some of the policies. There are no available stringent measures put in place to make sure all broadcast stations comply (Ibulubo 2008). Considering the slow approach to issues and projects in Nigeria like reinvigorating the power sector, infrastructural development, offering political solutions, reversing the brain drain syndrome, etc; one would wonder why the country chose a date, three years earlier than the ITU’s mark. It is on record that NigComSat-1, the Nigeria Communication Satellite, launched into space in May 2007 was shut down in 2008. Since then, nothing has been done about the project that cost the country 340 million dollar (BBC 2008, p. 1). In the face of all these, the deadline factor, however, embodies some other challenges.

* **Technical and Financial Challenges**

The switchover from analogue to digital broadcasting requires huge investment on the equipment and gadgets. To acquire this, there must be finance. The technical and financial issues are two-fold: The involvement of the broadcaster and the implication for the audience. The broadcasters need to acquire new digital equipment ranging from production equipment to transmission equipment. In this vein, broadcast organizations like Nigerian Television Authority, NTA, and Federal Radio Corporation of Nigeria, FRCN, will be hit severely. The technological cum infrastructural challenge manifested in USA where “less than 15% of the stations signed off at the June 12, 2009 deadline” (Mishkind; 2009, p.4). Furthermore, the masses will be seriously affected. The broadcast audience without digital compliant sets will have to acquire them. Considering the low economic standard of most Nigerians; it will be a herculean task for all the audience to comply with the deadline. Take for instance, in 2005, “HDTV sets start at $1,000 and go as high as $16,000” (Hanson ‘2005, p.241). It is true the prices will go down with time. But the question is: How soon will that be? Even when Set Top Boxes (STBs) are going to be used, they have to be acquired first. STBs are used to connect sets that are not compliant to digital signals. It is on this note that the financial and technical factors are considered big challenges to the digitization process.

* **Manpower**

As the complex and fragile equipment are coming in, there is need for matching manpower. The task of training and retraining personnel to fit into the digital process pose a challenge to the race. On the other hand, the process will definitely increase the number of stations. Thus, the existing broadcast personnel who may likely fit in may not be enough to fill the spaces and as such, pose an initial challenge. However, some of the existing personnel may be adversely affected too. Those who may not be able to understand the flexibility and, or, cope with the fragility of the new technology may be thrown to the labour market. That will eventually add to the burden of unemployment that has bedevilled the nation in recent times.

* **Power Supply**

The power sector in the country is nothing to write home about. The country has spent huge sums of money, though not accountably, to revive the power supply to no avail. Consequently, the sound of generators at every corner of a Nigerian street calls for alarm. But the people have to use these generators to at least, “live life”. Also, all the companies in the country – petrol stations, telecom, banks, manufacturers, broadcast organizations, etc rely on standby generators to carry on their businesses. In the long run, it impacts on the cost of production or service rendering costs. The charges are later transferred to the consumers. It would be apt to point here, that the epileptic power supply and the invariable dependence on generators pose big challenges to the digitization process. It would create high cost of programme production and presentation.

* **Knowledge Gap**

Another challenge, though not easily noticed, is the issue of awareness of the audience, government officials and sundry, of the digitization process. Nigeria has a large segment of illiterate population. Most of this population dwell in the rural areas. They do not readily get information concerning the process. Also in the government offices, the awareness is not yet there. These scenarios create a gap between those that are aware of the process and those that are not. In this wise, the digitization process is faced with the challenge of being drawn backwards by people who do not understand the issues and other intricacies of the programme.

**The Gains of Digital Broadcasting**

Generally, digital broadcasting has enormous benefits it can render to both the audience and broadcasters. These benefits could be in the direction of programme content, media convergence, quality signals and multiple channels. Nevertheless, Udeorah (2009) submits that the PAC “deliberated and determined the benefits s of digitization”. Different sectors of the society shall benefit in different ways. Below are the advantages of digitization.

* **National interest**

When the transition is fully completed, the spectrum will be freed up. Thus, the spectrum can be applied to other services. This is in line with Mishkind (2009) submission that American Congress had a “desire to generate more money by auctioning spectrum space.” The implication is that “a huge spectrum will be available for radio and television stations in Nigeria” (Ocholi; 2009). This is because, digital transmission enhances “limited spectrum use” (Uzor; 2008, p.2). However, Baran (2010) argues that “if broadcasters opt to devote their entire spectrum space, as technologically required, to the transmission of high definition images, they will lose audience share to cable, the internet and DBS, all of which offer multiple channels of programming and data.” In the light of the benefits regarding national interest, Ekeh (2009) notes that “Nigeria is ahead of most African countries in the march towards 2012 switchover date as well as in the state of the industry.”

* **Viewers’ Interest**

Digital broadcasting will afford the viewers “more programming choice arising from efficient spectrum utilization” (Udeorah, 2009). Digital broadcasting “plays a vital role in information dissemination due to its high receptivity, vast coverage and efficiency” (Bunshak; 2006). The viewers are going to receive clearer pictures because digital broadcasting “promises television pictures that are as clear and crisp as a Cineplex feature” (Rodman; 2006, p. 268). There will be optimum utilization because the viewers will be able to receive multiple channels from one station. The variety will, therefore, enhance the gratification efficiency of broadcasting. More so, digital broadcasting enhances media convergence which affords the audience to use TV in conjunction with telephone, computer and other information and communication technologies. Duke (2001) sums up the above submissions thus: The technological possibilities of digital television are immense. It could provide the broadcast of theater quality sound and picture via cable, antenna or satellite; multi-casting which enables the transmission of multiple programmes within one digital signal; and signals for data communications that could potentially bring to TV the capabilities of web pages and interactive compact discs .

* **Broadcasters’ Interest**

the broadcasters are going to enjoy an era of cost effectiveness with digital broadcasting. This is because; a station can carry up to four channels on the same frequency. Also digital programme productions are flexible and faster than the analogue. Again, stations may generally rely on syndicated programmes because the digitalization process encourages equal opportunities that result in healthy competition. Consequently, this will “delineate content, multiplexing and transmission” (Uzor; 2008 p. 2). However, the amount of money spent on salaries and maintenance and infrastructure will reduce because digital technology does not go with bulky equipment. And few people are required for the manipulation of such equipment. It was on this basis that Dokpesi, (2008, p. 2-3) supports the cost effectiveness of digital broadcasting. He states: “In the master control where we used to have about 12 people working, it’s only one person doing that now. In programme injection, you only need two, now as a result of new (digital) technology.” Corroborating, Okpanachi (2008, p. 4) says “doing so, they can realize ways to make more money. Digital radio gives more business opportunities for radio stations.”

* **Content Providers’**

Interest The content providers do not only have increased avenue for “legitimate exploitation of works and avenue for airing programmes, but increased demand for all genres of programmes to fill the additional programming demands in the increased available channels” (Udeorah; 2009, p. 7). As the existing broadcast stations start increasing the number of channels resulting from the digitization process, the demand for programme will increase. Consequently, the content providers will be well engaged in the bid to satisfy the numerous stations that will be yearning for programmes. This will create competition which will result to quality content provision. At the end, the content providers will maximize profit.

* **Regulator’s Interest**

The regulator, in this case, NBC, will be acquiring increased revenue that will be accruing from additional licences. On the long run, specialized areas of broadcasting will be encouraged, thereby addressing areas of that were hitherto neglected by commercial broadcasters.

* **Other Interests**

In considering all the gains of digital broadcasting as highlighted above, one should not lose sight of other benefits as they relate to the media and the society. In this wise, the media convergence will create a good avenue for advertisers. Many channels will be available for them to market their products and have wider reach to consumers. This is in line with Ekeh (2009) assertion that: “The migration of television from the traditional television set to the mobile device will portend a whole new world of opportunity to advertisers wishing to reach customers and prospects and to the entire advertising industry itself.” In addition to this, digital broadcasting will enhance the full propagation of local content being emphasized by NBC. Also, the clamour for community broadcasting will have reduced setbacks because with the multiple channel approach, some of the channels of a station could be community oriented. In fact, the benefits of digitization are not limited to the ones presented here; they are numerous.

**Remedies**

Through the challenges of the digitization process in Nigeria are not limited to the ones discussed above, it would be pertinent to proffer some remedial measures to overcome them, or even prevent other covert ones. Firstly, there should be a framework that world separate broadcast content providers from the content distributers. To do this, a new licensing structure that will be of two regimes – one each for the providers and the distributers – is advised. When this is done, it will lead to efficient digital broadcasting in the face of competitiveness.

Secondly, sensitization of government policy makers, stakeholders and officials will contribute positively to the process. The audience also needs awareness campaigns to reduce the incomprehensibility of information regarding digitization. They should be made to understand the nitty-gritty of the entire process so as to become partakers, and not observers. Furthermore, convergence of broadcasting with other related technologies is also advised. For instance, the recent convergence between MTN and DSTV extends the potential of the transmission of signals. In addition, the government should promulgate laws that will enhance delivery (like mandating the assemblage of the digital equipment in Nigeria to help bring the presence of the manufacturers) for affordability.

**2.2 THEORETICAL FRAMEWORK**

**Diffusion and Technological determinism theory**

This research work is anchored on the Diffusion and Technological determinism theory propounded in 1986 by Everest Rogers. The diffusion side of the theory talks about the use of communication to transfer technological innovation from development agencies to their clients so as to create an appetite for change though raising a climate for modernization among members of the public. Annato et al (2008) explains that technology in mass communication serves a dual role in diffusion. They are channels for messages, as well as messages of innovation. This theory states that technology can transform any environment, and in a communication sense, media technology can be both a channel and a message at a time since technological innovations can imbibe development through the diffusion of the message it carries. Then one can say, that digital broadcasting will no doubt break the barriers associated with analogue broadcasting.

**2.3 EMPIRICAL REVIEW**

1doko,E. O (2010). Digital Television Transition in Nigeria and its implication on the Nigerian Society, Unpublished Project Work, Benue State University, Makurdi Idoko, in her work, explored the importance of digital television transition. She observes that the television of the near future will resemble a movie screen more closely than a TV set, the picture will be sharper and wider. The TV may soon become more than just an appearance on which to watch a game or a show. Instead, it may serve as the display, for a variety of entertainment and information devices. He also pointed out that there will be wide range distribution of information and content can turn broadcast into an almost universal access platform. According to the researcher the Nigeria society is bound to encounter some of the following challenges in her journey to digital broadcasting. They include, lack of trained personnel, poverty, ignorance, corruption. This research and the current study are related in the sense that both studies are focused on the digitization of the broadcasting media in Nigeria. The reviewed study failed to specify its scope of study while the current study defines its scope to be NTA Enugu.

Ifeanyichukwu, I. (2012), Digitalization of the Nigerian Broadcasting Media, Challenges and Possibilities, Unpublished Project Work, Enugu State University, Enugu. He observes that some of the dividends that modern society is expected to reap from broadcasting digitization are: Efficient use of available spectrum which will allow more channels, thus bringing more choice to the viewer, high quality audio (sound) and video (images), digital television signals can carry extra information such 15 as electronic programme guide that can provide more traditional programme information. The researcher indicated the challenges which could be: Economic, political and technological which affect the entire gamut of stakeholders. The research therefore is relevant to the current study because it answers one of the research questions posed in the current study as whether digitization of TV broadcast is going to enhance the audio visual transmission. The scope of the reviewed study is too wide and not effectively executed while the present study is limited to a particular location (NTA Enugu) to exhaustively execute the research and generate data.

**CHAPTER THREE**

**RESEARCH METHODOLOGY**

**3.1 INTRODUCTION**

 In this chapter, we described the research procedure for this study. A research methodology is a research process adopted or employed to systematically and scientifically present the results of a study to the research audience viz. a vis, the study beneficiaries.

**3.2 RESEARCH DESIGN**

Research designs are perceived to be an overall strategy adopted by the researcher whereby different components of the study are integrated in a logical manner to effectively address a research problem. In this study, the researcher employed the survey research design. This is due to the nature of the study whereby the opinion and views of people are sampled. According to Singleton & Straits, (2009), Survey research can use quantitative research strategies (e.g., using questionnaires with numerically rated items), qualitative research strategies (e.g., using open-ended questions), or both strategies (i.e., mixed methods). As it is often used to describe and explore human behaviour, surveys are therefore frequently used in social and psychological research.

**3.3 POPULATION OF THE STUDY**

 According to Udoyen (2019), a study population is a group of elements or individuals as the case may be, who share similar characteristics. These similar features can include location, gender, age, sex or specific interest. The emphasis on study population is that it constitute of individuals or elements that are homogeneous in description.

This study was carried out to examine the challenges facing Nigeria television in switching to digital broadcasting in Nigeria using ITV Benin City, Edo State as a case study. Staff of ITV Benin City form the population of the study.

**3.4 SAMPLE SIZE DETERMINATION**

A study sample is simply a systematic selected part of a population that infers its result on the population. In essence, it is that part of a whole that represents the whole and its members share characteristics in like similitude (Udoyen, 2019). In this study, the researcher adopted the convenient sampling method to determine the sample size.

**3.5 SAMPLE SIZE SELECTION TECHNIQUE AND PROCEDURE**

According to Nwana (2005), sampling techniques are procedures adopted to systematically select the chosen sample in a specified away under controls. This research work adopted the convenience sampling technique in selecting the respondents from the total population.

In this study, the researcher adopted the convenient sampling method to determine the sample size. Out of all the entire population of Staff of ITV Benin City, the researcher conveniently selected 36 out of the overall population as the sample size for this study. According to Torty (2021), a sample of convenience is the terminology used to describe a sample in which elements have been selected from the target population on the basis of their accessibility or convenience to the researcher.

**3.6 RESEARCH INSTRUMENT AND ADMINISTRATION**

The research instrument used in this study is the questionnaire. A survey containing series of questions were administered to the enrolled participants. The questionnaire was divided into two sections, the first section enquired about the responses demographic or personal data while the second sections were in line with the study objectives, aimed at providing answers to the research questions. Participants were required to respond by placing a tick at the appropriate column. The questionnaire was personally administered by the researcher.

**3.7 METHOD OF DATA COLLECTION**

Two methods of data collection which are primary source and secondary source were used to collect data. The primary sources was the use of questionnaires, while the secondary sources include textbooks, internet, journals, published and unpublished articles and government publications.

**3.8 METHOD OF DATA ANALYSIS**

The responses were analyzed using the frequency and percentage tables, which provided answers to the research questions.

**3.9 VALIDITY OF THE STUDY**

Validity referred here is the degree or extent to which an instrument actually measures what is intended to measure. An instrument is valid to the extent that is tailored to achieve the research objectives. The researcher constructed the questionnaire for the study and submitted to the project supervisor who used his intellectual knowledge to critically, analytically and logically examine the instruments relevance of the contents and statements and then made the instrument valid for the study.

**3.10 RELIABILITY OF THE STUDY**

The reliability of the research instrument was determined. The Pearson Correlation Coefficient was used to determine the reliability of the instrument. A co-efficient value of 0.68 indicated that the research instrument was relatively reliable. According to (Taber, 2017) the range of a reasonable reliability is between 0.67 and 0.87.

**3.11 ETHICAL CONSIDERATION**

he study was approved by the Project Committee of the Department. Informed consent was obtained from all study participants before they were enrolled in the study. Permission was sought from the relevant authorities to carry out the study. Date to visit the place of study for questionnaire distribution was put in place in advance.

**CHAPTER FOUR**

**DATA PRESENTATION AND ANALYSIS**

**INTRODUCTION**

This chapter presents the analysis of data derived through the questionnaire and key informant interview administered on the respondents in the study area. The analysis and interpretation were derived from the findings of the study. The data analysis depicts the simple frequency and percentage of the respondents as well as interpretation of the information gathered. A total of thirty-six (36) questionnaires were administered to respondents of which only thirty (30) were returned and validated. This was due to irregular, incomplete and inappropriate responses to some questionnaire. For this study a total of 30 was validated for the analysis.

**4.1 DATA PRESENTATION**

**Table 4.2: Demographic profile of the respondents**

|  |  |  |
| --- | --- | --- |
| **Demographic information** | **Frequency** | **percent** |
| **Gender**Male |  |  |
| 17 | 56.7% |
| Female | 13 | 43.3% |
| **Age** |  |  |
| 20-25 | 9 | 30% |
| 25-30 | 8 | 26.7% |
| 31-35 | 6 | 20% |
| 36+ | 7 | 23.3% |
| **Marital Status** |  |  |
| Single  | 19 | 63.3% |
| Married | 11 | 36.7% |
| Separated | 0 | 0% |
| Widowed | 0 | 0% |
| **Education Level** |  |  |
| WAEC | 0 | 0% |
| BS.c | 25 | 83.3% |
| MS.c | 5 | 16.7% |
| MBA | 0 | 0% |

**Source: Field Survey, 2021**

**ANSWERING RESEARCH QUESTIONS**

**Question 1: What impact would the migration from analogue to digital bring to the broadcast industry in Nigeria?**

**Table 4.2:** Respondents on the impact migration from analogue to digital bring to the broadcast industry in Nigeria

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Options** | **Yes** | **No** | **Undecided** | **Total %** |
| socioeconomic benefits to viewers | 30100% | 00% | 00% | 30100% |
| additional investment in broadcasting media | 30100% | 00% | 00% | 30100% |
| the production of local content | 30100% | 00% | 00% | 30100% |

**Field Survey, 2022**

From the responses derived in the above table, 100% of the respondent said Yes. There was no record for no and undecided.

**Question 2:   What challenges do the transition from analog to digital poses for the broadcast station in Nigeria?**

**Table 4.3:** Respondent on the challenges the transition from analog to digital poses for the broadcast station in Nigeria

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Options** | **Yes** | **No** | **Undecided** | **Total %** |
| lack of technical and financial resources | 30100% | 00% | 00% | 30100% |
| knowledge gap | 30100% | 00% | 00% | 30100% |
| manpower | 30100% | 00% | 00% | 30100% |

**Field Survey, 2022**

From the responses derived in the above table, 100% of the respondent said Yes. There was no record for no and undecided.

**Question 3:** How has digital broadcasting services in the country enhance broadcast production?

**Table 4.4:** Respondent on how digital broadcasting services in the country enhance broadcast production.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Options** | **Yes** | **No** | **Undecided** | **Total %** |
| increase the capacity of transmission networks by improving spectrum efficiency | 30100% | 00% | 00% | 30100% |
| sound effects and interaction | 30100% | 00% | 00% | 30100% |
| brings a campaign or story to life | 30100% | 00% | 00% | 30100% |

**Field Survey, 2022**

From the responses derived in the above table, 100% of the respondent said Yes. There was no record for no and undecided.

**Question 4:** What importance will digitalization bring to broadcast audience?

**Table 4.5:** Respondent on the importance digitalization will bring to broadcast audience

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Options** | **Yes** | **No** | **Undecided** | **Total %** |
| Timely Delivery | 30100% | 00% | 00% | 30100% |
| Global Reach | 30100% | 00% | 00% | 30100% |
| Instant Feedback & trust | 30100% | 00% | 00% | 30100% |

**Field Survey, 2022**

From the responses derived in the above table, 100% of the respondent said Yes. There was no record for no and undecided.

**CHAPTER FIVE**

**SUMMARY, CONCLUSION AND RECOMMENDATION**

**5.1 SUMMARY**

In this study, our focus was on the challenges facing Nigeria television in switching to digital broadcasting in Nigeria using ITV Benin City as a case study**.** The study specifically was aimed at highlighting if the transition from analogue to digital broadcasting have an impact on broadcast industry in Nigeria, know the challenges that transition from analog to digital poses for the broadcast station in Nigeria, examine whether digital broadcasting service in the country has enhanced broadcast production and study the importance that digitalization will bring to broadcast audience. A total of 30 responses were validated from the enrolled participants where all respondent are drawn from staff of ITV Benin City.

**5.2 CONCLUSION**

Based on the finding of this study, the following conclusions were made:

i.  The migration from analogue to digital bring to the broadcast industry in Nigeria is socioeconomic benefits to viewers, additional investment in broadcasting media and the production of local content.

ii.    The challenges transition from analog to digital poses for the broadcast station in Nigeria are lack of technical and financial resources, knowledge gap and manpower.

iii.  Digital broadcasting services in the country has enhance broadcast production by increase the capacity of transmission networks by improving spectrum efficiency, sound effects and interaction and brings a campaign or story to life.

iv.     The importance of digitalization bring to broadcast audience is timely delivery, global reach and Instant feedback & trust.

**5.3 RECOMMENDATION**

Based on the responses obtained, the researcher proffers the following recommendations:

i.There should be effective management of the spectrum dividend that will result from the transition in a manner that brings the greatest benefits to the greatest number of people;

(ii) There should be suitable infrastructural digital broadcasting standards that would ensure compatibility on both national and international levels;

(iii) The general public should be able to access and afford the new programming regime, through the traditional Set Top Box;

(iv) Emphasis should be given to effective training and capacity development in the industry;

(v) A relentless consumer awareness campaign as well as consumer protection, including controls and distribution of consumer equipment should be ensured.

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**QUESTIONNAIRE**

**PLEASE TICK [√] YOUR MOST PREFERRED CHOICE AND AVOID TICKING TWICE ON A QUESTION**

**SECTION A**

**PERSONAL INFORMATION**

Gender

Male ( )

Female ( )

Age

20-25( )

25-30( )

30-40( )

40+ ( )

Marital status

Single ( )

Married ( )

Widow ( )

Separated ( )

Education Level

WAEC ( )

BS.c( )

MS.c( )

PH.d( )

**Section B**

**What impact would the migration from analogue to digital bring to the broadcast industry in Nigeria?**

|  |  |  |  |
| --- | --- | --- | --- |
| **Options** | **Yes** | **No** | **Undecided** |
| socioeconomic benefits to viewers |  |  |  |
| additional investment in broadcasting media |  |  |  |
| the production of local content |  |  |  |

**What challenges do the transition from analog to digital poses for the broadcast station in Nigeria?**

|  |  |  |  |
| --- | --- | --- | --- |
| **Options** | **Yes** | **No** | **Undecided** |
| lack of technical and financial resources |  |  |  |
| knowledge gap |  |  |  |
| manpower |  |  |  |

**How has digital broadcasting services in the country enhance broadcast production?**

|  |  |  |  |
| --- | --- | --- | --- |
| **Options** | **Yes** | **No** | **Undecided** |
| increase the capacity of transmission networks by improving spectrum efficiency |  |  |  |
| sound effects and interaction |  |  |  |
| brings a campaign or story to life |  |  |  |

**What importance will digitalization bring to broadcast audience?**

|  |  |  |  |
| --- | --- | --- | --- |
| **Options** | **Yes** | **No** | **Undecided** |
| Timely Delivery |  |  |  |
| Global Reach |  |  |  |
| Instant Feedback & trust |  |  |  |