Convergence of ICT Policies in the National Communication Systems in Nigeria

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Abstract.
Nigerian information and communication industries have grown from strings of policies and regulations within their separate boundaries to a convergence under the National Information and Communication Technology (ICT) Policy in 2012. It provided a framework for restructuring the industry to transform Nigeria into knowledge based economy and competitive society in the global ICT industry. It sets the guidelines for sub-sectoral policies and specific implementation as appropriate. The technologies, media forms, issues, interests, institutions and organizations in the ICT apparatus are critical to national communication system. Despite the convergence, there is high disparity in access, infrastructure and inefficiency in the provision of networks. Like many nations in the global power grid with vibrant unified system or conglomerates in the communication system, the recent convergence in Nigeria pose the issue of the ability of the national communication system to meet the global agenda of communication systems and apply such to national development. In view of how emerging technological, political, economic and social forces are shaping ICT policies, turning the digital divide into digital convergence and equity, this paper examines the development of ICT policies in Nigeria. It investigates the prospects and challenges of the convergence of telecommunications, information technology, broadcasting and postal services under the 2012 policy. Through a review of literature and comparative analysis, it argues that the convergence of telecommunications, information technology, broadcasting and postal services under the 2012 policy is a positive step but demands faithful implementation.

Keywords: converge; media forms; regulations; technologies

1. Introduction

Policies on information and communication technology (ICT) structure, management and institutions in Nigeria grew from sectional policies to convergence. ICT in the national communication systems is linked with all electronic technologies employed in information storage, retrieval and dissemination (Mehra and Mehra, 2015). Their structure and function bind them to areas of information and communication. They are all the technical equipment and facilities that convert, process, save and transfer information in digital form (Niebel,

Kopp and Beerfeltz, 2013). All the communication gadgets like the telephone, the computers, and the communication medium like the radio and television, the fiber optics and other varieties of wireless technologies constitute such technologies.

Hitherto, ICT related policies were generated by the specific context within which they were situated within the communication systems. Each policy reflects the circumstances, forces and the constituents of the information and communication ecology that informed them. They include information creating activities, information distributors, information dissemination and information users (Yusuf, 2007). These components represent an assortment of issues, interests, principles, media forms, institutions and organizations. They have different scopes, mechanisms and action in specific areas, but they are all within the boundaries of information and communication. The Nigerian Broadcasting Act covers the airwaves and films, while the Nigerian Communication Act dominates the telecommunication environment in addition to other structures of electronic based human interaction and information exchanges. These segmentations possibly resulted in their inability to meet the global agenda of communication systems.

Information and communication technology (ICT) apparatus are critical elements of national communication systems. They have undoubted potential for national development (Tiemo, 2011). The "Nigeria Vision 20:2020" [5] national long term development plan recognized the compelling impact of ICT on globalization which makes it imperative for Nigeria as an emerging market to explore the application and promotion of ICT strategy to its rapid growth and development. It therefore recommended the development of a vibrant ICT sector and its application in the national production frontiers in agriculture, manufacturing and service sectors; and to drive other soft sectors: governance, entertainments, public services, media sector, tourism, et cetera (ICT Policy, 2012).

The national Information and Communication Technology (ICT) Policy, 2012 provided a framework for restructuring the industry to transform Nigeria into knowledge based economy and competitive society in the global ICT industry. It sets the guidelines for sub-sectoral policies and specific implementation as appropriate, yet, there seems to be unmet need in its allignment to national development. In the telecommunication industry, there is high disparity in access, infrastructure and inefficiency in the provision of networks. The convergence provokes the issue of the ability of the national communication system to meet the global agenda of communication systems and apply such to national development (Opata, 2017).

In view of how emerging technological, political, economic and social forces are shaping ICT policies, turning the digital divide into digital convergence and equity, this paper examines the development of ICT policies in Nigeria. Using analysis and comparison, it investigates the prospects and challenges of the convergence of telecommunications, information technology, broadcasting and postal services under the 2012 policy.

2. The development of ICT policies in Nigeria

The development of ICT policies in Nigeria is multidimensional. It started with sectional policies on specific domains of the national communication and media systems. It has been a

common trend in Africa, to have pieces of regulations, guidelines and laws serving specified sectors, like film, telecommunication, news agency, print media, electronic media, etc as against a holistic integrated communication policy (Matumaini, 2010).

The birth of ICT industry in Nigeria is embedded in her colonial history under the telecommunications and broadcasting sectors. Telecommunications facilities came into being in 1886 by the act of the colonial administration for administrative functions in the British colonies, rather than to drive socioeconomic development of the country (NPT, 2000; Tiemo, 2011; Ijewere, 2012). Until 1985, the sector was made up of two departments registered as limited liability companies: Posts and Telecommunications (P&T) in charge of the internal network and the Nigerian External Telecommunications (NET) responsible for the external telecommunications services. In 1985, further split and reconstitution in the sector established the Nigerian Telecommunications Limited (NITEL), solely a telecommunications sector and the Nigerian Postal Service (NIPOST) for postal services. NITEL was trusted with the responsibility to harmonize both the internal and external telecommunications services; rationalize investments in telecommunications development and provide accessible, efficient and affordable services (NPT, 2000; Ijewere, 2012).

Similarly, broadcasting started with the British Empire Service, 1932 with the signals Radio Distribution/ Diffusion System (RDS) for the purpose of economic, political and cultural relationship with the colonies under their control (Ihechu and Okugo, 2013). The Nigerian Broadcasting Service was established in 1951 and became a springboard for subsequent radio and television stations. Policy attempt for the broadcasting media started in 1987 and came into fruition with the 1992 National Broadcasting Commission Act 38; and subsequent 6 editions of the Nigerian Broadcasting Code from 1993 to 2016.

Evidently, there have been so many regulations in the national communication system prompted by political, economic and international communication market ecology, both in terms of demand and supply. The telecommunications industry seems to have experienced more sub sector policy and regulatory frameworks than the broadcasting and postal sectors. Some of them are the National Radio Frequency Management Policy, the Nigerian National Policy for Information Technology, the Nigerian National Broadband Plan, etc (Orji, 2018). These variances in policies, legislations and regulations impacted on how the information and technology contributed to national development, particularly in meeting the international development goals. It resulted in attempts at convergence.

The development in the industry took its first turn on unification under the Nigerian Communication Act 2003 which was created as a regulatory framework for the Nigerian communications industry and all matters related thereto. It specifically provided for the promotion and the implementation of the national communications or, telecommunications policy. The expectations to create an effective, impartial and independent regulatory authority resulted in the establishment of the Nigerian Communication Commission under the Act.

Years on, the Commission's responsibility under the Act could not meet the demands of the growing global communication systems. Amongst them is the change from analogue to digital communication systems. The telecommunication by nature of its services included computer networks, the ARPANET, Ethernet, internet, radio and television networks. Much

as the telecommunication industry is the predominant sector, digitization of radio and television connected them to the platform for information dissemination.

These changes called for an alignment in the industry. In line with the global trend, Nigeria made several moves at convergence, which culminated in the Information and Communication Policy, 2012. In view of the foregoing, formulation and implementation of ICT policies in Nigeria has experienced rewritten boundaries within the communication systems on account of transformations arising from globalization and digitization. The question remains on how the convergence has met the expanded need of the national communications system.

Purpose of ICT Policy Convergence

The main objectives of the different policies in the realm of information and communication, prior to convergence, are to regulate the industry in a way that is consistent with national development goals. This National ICT Policy has been developed to organize the sector for performance and efficiency in this regard. It identifies the sector's institutional mechanism and legislative frameworks. It is a coalition of key stakeholders in information and communication together to accomplish the nations vision and mission. They set out the ICT vision and its link to national development goals (Nicol, 2003). The guidelines establish the statutory foundation for the required regulations, regulatory institutions, and the processes.

The first step is to unify all the ICT related sectors under the Ministry of Communication Technology, with the following agencies under it: Nigerian Communications Commission (NCC), National Information Technology Development Agency (NITDA), and Nigerian Postal Service(NIPOST); also the Nigeria Communications Satellite Limited and Galaxy Backbone Plc. The convergence focuses on the areas of regulation, operation, and service delivery in order to unify all policy administrators under a single Ministry.

Whereas the major objectives of the former information technology sector were on practices, activities, and development of IT, the convergence brought the communication sector which was solely on the regulation of the providers and investment. With the two sectors under the same policy and ministry, the country is poised to derive maximum benefit and save resources in management.

Prospects and Challeneges of the Convergence

The ubiquitous and unprecedented explosion of consumption and services in digital technologies across businesses and cultures are indications that information and communication technologies have evolved into widespread instruments of access and empowerment. The internet, the mobile phone, social media platforms, data generation and consumption, digital broadcasting are significant developments. Convergence in the industry encourages further development. The policy recognized the gap in the unmet need of the populace in the availability and reach of the broadbands.

The convergence further enhances infrastructural advancement, which includes access and affordability: access to relevant content and services at a readily affordable cost. Providing support and eliminating constraints. The same ministry oversees the provider's activities in accordance with desirable impact on the end users. These are also linked to national development goals. The legal, institutional and regulatory framework covers intellectual

property protection, digital contracting, privacy and data protection, cybercrime, etc. Recently the NITD issued a social media regulation for the public sector. This is a security measure for social media use in government establishments.

A review of ICT policies by Yusuf (2007) recommended five basic cornerstones of information activities to be integrated into the policy as: free access to information, information security, information storage and retrieval, information dissemination especially to rural areas and the less privileged and information distribution. The ICT 2012 Policy seems to have considered these measures except the last.

One major challenge is driving ICT policies to adapt to new technologies and the developing cultural, political and economic contexts, brought by globalization. The pressures of globalization expanded the policy environment to include diverse stakeholders. The ICT Policy 2012 focus was on regulations and institution without much on a strategic plan to meet the global standards. China counted on ICT industry in their transition from a manufacturuing to a knowledge based economy. Aware of the impact of technology on the economy and the society, China adopted "informatization" as a national strategy for economic development and modernization. The target was to improve the global competitiveness of their ICT industry, institute the national information security systems and improve citizens efficiency in the use of information technology. By this, China focused on developing overarching long-term, midterm, and industry-specific information and communication technology policies (Atkinson, 2014).   The long term policies advanced informatization in all sectors of life: government, education, agriculture, health care and public safety. They established cutting-edge internet culture, expanded the information infrastructures like the wire line broadband and 3G/4G wireless networks and information resources were exploited more efficiently (Atkinson, 2014).

Liberalization of the markets is also worthy of consideration. Privatization stimulates competition and specialization, offering variety of products and job opportunities. Opportunities abound in reaching unserved and underserved markets, generating jobs, thus catalysing economic growth and development.This area is still underutilized in Nigeria.

The Vision 2020 on national development acknowledges the hindrances of digital illiteracy across geographical, gender and cultural dimensions. To this end, the convergence envisaged knowledge generation and penetration of ICT across these demographics. The reality is that access and usage of internet and telephone penetration have improved, but still a far cry form the global standards.

The convergence could be considered as a first step. There should be subsequent reforms in line with public interest. China consistently engages in ICT reforms with both political and economic considerations. There is emphasis on ICT industry development rather than ICT use, though it is envisaged that more economic benefits come from ICT use that production. Many of the policies demonstrate expanding government influence on market forces. For example, the Integrated Circuit Plan of 2013 by MIIT provide massive subsidies to Chinese-owned integrated circuit companies, while imposing forced R&D and IP localization measures on foreign firms. It also supported the development of Chinese-only technical standards, and established discriminatory government procurement measures. The Chinese

ICT market is neither fully open to foreign investment nor avail equal treatment to foreign and domestic providers (Atkinson, 2014).

The Convergence and Global Policy Environment

In comparison to countries advanced in ICT the policy environment in Nigeria is basically regulatory and might tilt to one side on the scale of development (Odufuwa, 2014). The convergence anticipates a liberalized and regulated ICT sector though not so eveident in the management processes (Obute, 2017). Possibly accounts for a high disparity in access and infrastructure, inefficiency in the provision of networks. India demonstrated commitment to participation in the global digital economy through National Digital Communications Policy-2018 (NDCP-2018). It is a telecom policy that ensures India's digital sovereignty to be achieved within a set date 2022. Its major step is to provide universal broadband connectivity at 50 Mbps to every citizen, with timeline targets. This was prompted by the recognition of digital infrastructure and services, through telecommunications and software, as emerging key enablers for the country's growth. The consequence in Nigeria is an environment where ICT is not properly integrated into the development agenda, but focuses more on regulation and operations rather than production.

This contrasts with China, where the ICT Policy covers short term, mid term and long term development plan accordingly. A core component of China's ICT strategy has been the development of indigenous ICT technologies and industries so that China is less dependent on imports in these technologies, even though China continues to run trade surpluses overall (Atkinson, 2015). One strategy for doing so is to become more involved in the development of international standards, governance, and trade rules across many areas of ICT—such as the 3G/4G standards and Internet governance—in order to preference Chinese companies and technologies. Toward that end, the government has made it a priority that its companies be involved in these international bodies. However, such a strategy of indigenous standards development runs the risk that China will develop what is known as the Galapagos Island syndrome, similar to Japan, where the technologies and related industries cannot effectively scale globally (Atkinson, 2015).

Existing and emerging threats in Nigeria lie in equitable accessibility and affordability. The information and communication infrastructure hardly serve the populace, given their wide demographic profile along the indices of location, literacy, social and economic status (Chadhuri, 2019). These are issues yet to be strategically addressed through policies. Note the example of India, where the National Digital Communications Policy-2018 (NDCP-2018) aims at universal coverage rather than revenue maximization. Increasing their digital footprints and profile. "With over a billion mobile phones and digital identities and half a billion internet users, India's mobile data consumption is already the highest in the world. Over 200 million Indians regularly use social media and in the last year alone, over 200 million Indians took to mobile banking and digital payments. At the current pace of digitisation and digitalisation, it is estimated that India's digital economy has the potential to reach one trillion USD by 2025" (National Digital Communications Policy, 2018). The scope of ICT policy in Nigeria presents an ICT industry at a developmental level.

3 Conclusion

Convergence has removed some regulatory barriers, reduced regulatory burden that hinders mobility and made way for the full potential of the information and communication sector to be actualized. It is a coalition of key stakeholders in information and communication together to accomplish the nations vision and mission. It has combined security, entertainment, usability, etc with the intention to achieve the sovereignty in the sector of national communication systems communities. The challenges abound, but development of the sector in Nigeria is still a work in progress. There is room for expansion and improvement.

Government leadership in communication and information industry was initially fragmented among different ministries and policies. The convergence is to effectively provide the relevant rules and regulations, creating a certain level of uniformity, consistency and careful investments in the right type of technology systems. A developed ICT is a panacea for a knowledge society, a pivot for national development and can form a complete web for the economic, social, cultural and political domains.

It is also an attempt on alignment with international ICT policy status. Many international forces come into play when countries begin to define the policies that shape the new technologies and the internet to their own development goals. The World Bank Group is instrumental in defining global agenda for development and identifying progress towards market liberalization as a key determinant of development. ICT 2012 as a national policy should ultimately reflect the international agenda without succumbing to the pressure of intergovernmental decision-making bodies, including the ITU, WB and WTO. Picard and Pickard (2017) recognized that broadcasting, telecommunications, and media policies are often inadequate for contemporary media and communications. The complexities of contemporary digital systems and networks, cable and satellite operations, internet-distributed content, social media, and cross-platform activities necessitate that domestic policies can address some issues, but global policy is progressively more germane to address communication challenges.

ICT policy must also incorporate social goals by building human capacity and creating the conditions for the development of relevant applications and content. While policies must address the extension of the communications infrastructure through telecommunications reform to stimulate private sector growth and create job opportunities, this is a necessary but by no means sufficient condition for an effective ICT contribution to national development goals.

While encouraging investments, policies should ensure that multi-nationals transfer technical knowledge. At the level of consumption, to ensure affordability and accessibility of broadband. The ubiquity of smartphones is an enabling condition already. The broadband and

advanced data application accelerates e commerce, e government, e payment, etc. We need to borrow the example of Rwanda in this regard (Agbata, 2018).

Conferences and industry association used in China on data innovation can also be emulated. Though the ICT 2012 Policy recognized the dearth of professionals, it lacks a strategic plan in this regard. It is expected that this measure will be addressed in the guidelines to be subsequently issued.

There should be consolidated plan for both hard and soft ware development, procurement of resources for the sector and plan to build capacities for data collection across institutions. Planning should take into account the multifaceted dimensions surrounding the issue of intellectual property. Also pedagogical efforts and research endeavors to stimulate innovation and creativity in the industry.

The development of ICT industry in Nigeria can also be keyed into the development of national cultural identity. It requires the ability to relate the nation's heritage with the economy and politics. The policies should integrate the promotion of national history and other enduring aspects of its nature by adapting them to contemporary demands and circumstances, through policy enactment in the ITC industry. The industry as a key tool in national development should engender a public communication model that projects its identity. Voltmer (2008) contended that from a normative standpoint, the appropriateness or adequacy of public communication model to consolidate a new democracy depends on its overall context and interaction with the other elements in the system. Digital communication has wide reach and should be used effectively.

Nigeria could also borrow from Asian journalism where the role of the media is to ensure social and political stability and assist the economic development of the country. Thus Western sense of neutrality and objectivity cannot be universal values of the media as watchdog. The convergence should empower the broadcasting media to integrate features of traditional African values. The media should have a framework of rediscovering national cultural values.

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