TECHNOLOGICAL CONVERGENCE AND REGULATORY DESIGN RESPONSES: A MODEL-BASED ASSESSMENT OF TELECOMMUNICATIONS GOVERNANCE IN NIGERIA

By

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Abstract:

Technological convergence has increasingly blurred the traditional boundaries between telecommunications, broadcasting, and digital services, exposing the limitations of sector-specific regulatory frameworks. This article examines the implications of convergence for Nigeria's telecommunications regulatory framework, with particular emphasis on the challenge of achieving regulatory coherence across overlapping institutional mandates. It argues that the central issue in converged communications governance is not merely institutional consolidation, but the capacity of regulatory systems to ensure coherent, coordinated, technologically neutral, and adaptive regulation. Relying on desktop research, and employing an ideal-type analytical framework, the article examines three broad models of regulatory configuration: siloed, unified, and hybrid; drawing on the experiences of the United States, Singapore, and the United Kingdom, to demonstrate that effective responses to convergence depend less on structural configuration than on the extent of coordination mandate alignment and institutional adaptability within regulatory systems. The article finds that Nigeria's framework remains predominantly sector-specific despite emerging convergence across digital communications sector, resulting in fragmentation, overlap, and regulatory uncertainty. It concludes that a hybrid framework grounded in formalised coordination, clearer mandate allocation, and function-oriented regulation provides the most suitable pathway for enhancing regulatory

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coherence in Nigeria's converged communications environment.

Keywords*: Technological convergence, telecommunications, regulatory design responses, broadcasting, Information technology (IT), digital services*

1. Introduction

Technological convergence is undoubtedly one of the most transformative developments affecting the regulation of the telecommunications sector and underscoring the imperative for legislative reform in telecommunications governance. [1] This phenomenon has far reaching regulatory implications, with jurisdictions adopting varied approaches to regulatory design in response.[2] There is no standard definition of convergence; rather, jurisdictions, institutions, and scholars adopt varying formulations, while consistently recognising that convergence transcends the traditional boundaries of existing industries and technologies, giving rise to new regulatory and market realities.[3] Yoo and Chang define convergence technology as 'a phenomenon that innovates products, services, and processes of other industries, or creates new added values by embedding the sensing, networking, computing, and actuating technologies of [information technology] IT as components or modules'.[4] In a similar manner, the OECD defines convergence as the process by which previously distinct communications networks and services evolve that different network platforms carry similar ranges of voice, audiovisual, and data transmission services, different consumer appliances receive similar services, and new services emerge.[5]

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1 See Klaus Schwab, "The Fourth Industrial Revolution: What it Means, How to React", 14 January, 2016, World Economic Forum, https://www.weforum.org/stories/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/; Commission of the European Communities, "Green Paper on the Convergence of the Telecommunications, Media and the Information Technology Sectors, and the Implications for Regulation", 1997, COM(97) 623, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:51997DC0623

2 Constantijn van Oranje, Jonathan Cave, Martin van der Mandele, Rebecca C Schindler, SY Hong, Daniel Iliev, and Ingo Vogelsang, 'Responding to Convergence: Different approaches for Telecommunication Regulators', (2008) https://ssrn.com/abstract=2142015; Martin Cave and Robert Baldwin, *Understanding Regulation: Theory, Strategy, and Practice* (2nd edn, OUP 2012).

3 Taijong Yoo and Hangbae Chang, 'The IT Convergence Framework Design in the Internet of Things Environment' 53 (2013) *J Wireless Com Network* https://doi.org/10.1186/1687-1499-2013-53.

4 Yoo and Chang, ibid.

5 OECD, p 5.

Convergence has fundamentally altered the technological and market foundations of telecommunications regulations by blurring the traditional distinctions between telecommunications, broadcasting, and data-driven digital services through network digitisation, platform integration, and the rise of Internet Protocol (IP)-based service delivery.[6] As a result, services that were once clearly separable under sector-specific regulatory regimes now operate within a shared and overlapping digital ecosystem. Thus, regulatory responses to these shifts become an important concern.[7]

Despite advancements in regulatory response, Nigeria's regulatory framework remains largely structured along sector-specific lines. [8] Regulatory authority continues to be allocated among separate institutions based on traditional distinctions between telecommunications, broadcasting, IT, and related sectors. The limitations of this architecture in the converged ecosystem are reflected in overlapping agency mandates, fragmented regulatory responses, multiple layers of compliance obligations, and regulatory gaps in services that cut across legacy sectoral boundaries and levels of governance at the federal, state and local government levels.[9] Evidence suggests that no single regulatory model provides a universally applicable response to technological convergence. Nonetheless, the different models share the common objective of achieving coherence through coordination mechanisms and regulatory structures.[10]

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6 Surender Kumar Paliwal and Kuldeep Siwach, 'IP-Based Technologies: The New Face of Traditional Broadcasting, Media Production, and Media Technologies', *Afr. J. Biomed. Res. Vol. 28(1s) (February 2025); 2862-2865*; UK Green.

7 OECD, "The Implications of Convergence for Regulation of Electronic Communications", (2024) OECD Digital Economy Papers, No. 83, OECD Publishing, Paris, p 5. http://dx.doi.org/10.1787/232632377163; Christopher T Marsden, *Internet Co-Regulation: European Law, Regulatory Governance and Legitimacy in Cyberspace* (CUP 2011).

8 Federal Ministry of Communication and Digital Economy, *National Digital Economy Policy and Strategy (NDEPS) 2020-2030*, p 22, 23, https://nitda.gov.ng/wp-content/uploads/2020/06/National-Digital-Economy-Policy-and-Strategy.pdf; World Bank Group, *Nigeria Digital Economy Diagnostic Report* (Washington, DC: World Bank, 2019); National Information and Communication Technology (ICT) Policy, 2012, p 8, noting the persistence of sector-specific institutions.

9 Adeola Kolawole and Faith Oghenerukevwe Okpoji, 'Telecoms, Media and Internet Laws in Nigeria', (ICLJ, 15 December 2025) https://iclg.com/practice-areas/telecoms-media-and-internet-laws-and-regulations/nigeria; International Trade Administration, 'Nigeria Country Commercial Guide' 8 September 2025, https://www.trade.gov/country-commercial-guides/nigeria-information-and-communications-technology

10 ITU, "Trends in Telecommunications Reform, Convergence and Regulation, 1999, p iii, https://www.itu.int/dms_pub/itu-d/opb/pref/D-PREF-TTR.2-1999-PDF-E.pdf.

Against this backdrop, this article argues that while the choice of regulatory model is important in addressing the realities of convergence in Nigeria's telecommunications sector, the primary objective of regulatory response should be the achievement of coherence. Regulatory frameworks must therefore be designed to promote coherence, technological-neutrality, and adaptability within an increasingly converged communications environment. Accordingly, the question is which institutional arrangement is best suited to achieve these objectives in Nigeria.

To address this question, the article adopts a model-based analytical approach, drawing on a typology of siloed, converged, and hybrid regulatory models as ideal-type constructs for examining telecommunications governance under conditions of convergence. The experiences of other jurisdictions are discussed to demonstrate how these configurations operate in practice. The article then situates Nigeria's telecommunications regulatory architecture within this typology and evaluates its responsiveness to the demands of convergence. This analysis ultimately informs suggestions for review.

The article proceeds as follows: section two examines the concept and implications of technological convergence within the communications sector, and the imperatives of coherence. Section three develops the analytical typology of siloed, converged, and hybrid regulatory models with illustrations from other jurisdictions. Section four assesses Nigeria's telecommunications regulatory framework within this continuum in light of the demands of convergence. The final section advances reform-oriented reflections and concludes.

2.0 Implications of Convergence and Regulatory Response

2.1 Convergence as a Regulatory Challenge

Convergence has been defined in several ways, but largely centred on technologies.[11] Convergence of technologies (or technological convergence) has emerged as a defining feature of contemporary communications ecosystems, reshaping both the technological infrastructure and market organisation of the sector.[12] Technological convergence is driven by the migration of diverse services onto common digital networks and platforms,

11 Anton Klarin, Yuliani Suseno, and Jennifer AL Lajom, 'Systematic Literature Review of Convergence: A Systems Perspective and Re-evaluation of the Convergence Process', (2021) OEEE Transactions on Engineering Management, 70(4) 1531-1543, DOI: 10.1109/TEM.2021.3126055; ITU, 1999; UK Green Paper.

12 Green Paper, ibid.

thereby facilitating broader forms of media and network convergence,[13] and convergence of applications, services, and markets.[14] As traditionally distinct services operate across shared digital networks, the technical distinctions underpinning sector-specific regulatory structures in telecommunications, broadcasting, and IT become increasingly blurred and progressively less sustainable.[15]

Telecommunications operators increasingly extend their activities beyond connectivity into content distribution and service delivery, enabled by technologies that support the integration of voice, data, and audiovisual content and services through shared IP-based infrastructures within integrated digital systems. Consequently, they increasingly operate in areas traditionally associated with broadcasting. Broadcasters, in turn, are extending beyond traditional linear transmission into on-demand and internet-based delivery, thereby encroaching into domains historically associated with telecommunications and digital platforms. At the same time, over-the-top (OTT) services, such as WhatsApp, Facebook, TikTok, X, YouTube, and Netflix, leverage these technologies to provide services comparable to traditional telecommunications and broadcasting services, including voice communication, messaging and audiovisual streaming. These developments reflect a broader process of convergence in which the traditional distinction between telecommunications as 'conduit' and broadcasting as 'content' has become increasingly blurred, while intersecting with broader policies concerning data privacy, consumer protection, fair markets, and cybersecurity,[16] compelling regulators to reassess established institutional and policy frameworks.[17] As technologies increasingly converge, market or industry consolidations are also occurring through mergers and acquisition.[18]

The regulatory implications of these shifts are multidimensional. Regulatory mandates, historically structured around distinct technologies and specific objectives, often fail to align with the realities of the communications

13 Congressional Research Service, 'Technological Conversion: Regulatory, Digital Privacy and Data Security Issues', 30 May 2019, pp 1-4, https://www.congress.gov/crs_external_products/R/PDF/R45746/R45746.1.pdf

14 van Orange op cit p. 9 and Green, op cit, p

15 OECD 2004; **Colloquium No. 6 - Regulatory Implications of Telecommunications Convergence',** Geneva, 11-13 December 1996, http://handle.itu.int/11.1002/pub/800c7e1e-en

16 Linda DB, 'ICT Policies and Regulations in Nigeria', (Host Africa 18 July 2025) https://www.hostafrica.ng/blog/technology/ict-policies-and-regulations-in-nigeria/, outlining the various policy frameworks within the Nigerian ICT Policy Framework.

17 Colloquium No. 6, opcit

18 Fredrik Hacklin, Christian Marxt and Fritz Fahrni, 'Coevolution cycles of convergence: An extrapolation from the ICT Industry', (2009) 76(6) *Technological Forecasting and Social Change* 723-736 DOI: 10.1016/j.techfore.2009.03.003; Klarin, et al, opcit

market they are intended to govern. As van Oranje notes, convergence disrupted long-term governance relations within the sectors. They explain that 'legacy regulators are bound by different constraints, motivated by different values and empowered with different (or differently effective) tools whose operation may prove hard to reconcile'. [19] The OECD observes that the transformative effects of digital technology have altered the traditional characteristics of broadcasting thereby affecting the criteria and method of licensing market entry.[20]

Consequently, although regulatory mandates have expanded to accommodate emerging digital services, fragmentation persists where converged services cut across traditional sectoral boundaries or do not fit neatly within sector-specific mandates, resulting in duplication or gaps, and consequently, jurisdictional conflicts regulatory uncertainty, and inconsistencies. For instance, it is often uncertain whether internet-delivered audiovisual content should be treated as telecommunications, broadcasting, or digital platform services.[21] Convergence affects regulatory structures and underlying policy objectives simultaneously.[22] There is also risk of classifying similar services under different regulatory regimes, leading to regulatory inconsistency and dilution of their original policy rationales.

Therefore, regulatory response to convergence requires more than incremental adjustments to regulatory mandates. As technological convergence continues to blur distinctions between sectors, regulatory effectiveness depends more on ensuring consistency, certainty, and alignment of policy objectives and standards across overlapping regulatory domains, while also limiting gaps.

2.2. Coherence as a Principle in Regulatory Design in Converged Communications

Regulatory coherence has emerged as a central principle in the governance of converged communications markets. The highlighted institutional frictions from persistent sector-specific (siloed) regulatory design within the converged communications ecosystem underscore the importance of regulatory coherence as both a governance objective and a principle of regulatory design, particularly in ensuring alignment across regulatory mandates and effective responses to convergence.[23] However, the OECD cautions that while

19 van Oranje, p v, 2.
20 OECD, 2024, p 3.
21 *Ibid*
22 *Ibid*
23 *Ibid*, p 2.

convergence necessitates more integrated consideration of issues that were once treated separately, achieving structural unification is often complex due to entrenched sector-specific mandates and deferring regulatory objectives, making regulatory coordination an essential operational requirement.[24]

Regulatory coherence refers to the alignment of regulatory systems in contexts characterised by fragmented mandates, overlapping institutional responsibilities, and potentially divergent regulatory objectives.[25] It is a systemic condition achieved through coordination across institutions rather than necessarily through institutional integration or consolidation.[26] Coherence is also concerned with the extent to which regulatory systems can preserve the distinct policy objectives that underpin different sectoral regimes as markets or industries converge. In this regard, regulatory responses to convergence are increasingly shaped by the interconnected principles of regulatory coherence and technological neutrality.

The OECD conceptualises coherence in the foregoing sense - as the integration of regulatory policies and institutional practices into a coordinated and reinforcing system rather than as disconnected sectoral components.[27] Extending this logic, the International Telecommunications Union's (ITU) G5 regulatory approach situates coherence within a whole-of-ecosystem governance framework that transcends traditional sectoral boundaries and encompasses the wider digital and ICT domains, comprising telecommunications, broadcasting, digital platforms, and data driven services. Central to the G5 approach is the coordination of regulatory actions across institutions and collaboration among regulators to address cross-cutting issues and ensure coherence across institutional boundaries in support of digital transformation.[28] In regulatory governance literature, such as the works of Black,[29] and Cave and Lodge,[30] coherence is similarly understood as a systemic quality that ensures consistency of regulatory outcomes across

24 OECD, pp 3-5.

25 *Ibid*

26 Institutional integration/consolidation refers to the unification of regulatory authority within a single agency.

27 *Ibid*

28 ITU, 'Benchmark of Fifth-Generation Digital Collaborative Regulation', (2021) https://www.itu.int/dms_pub/itu-d/opb/pref/D-PREF-BB-2021-01-PDF-E.pdf; ITU, 'Global Digital Regulatory Outlook 2023', (2023) https://www.itu.int/dms_pub/itu-d/opb/pref/D-PREF-BB.REG_OUT01-2023-PDF-E.pdf; ITU, 'Global ICT Regulatory Outlook; (2020) https://www.itu.int/dms_pub/itu-d/opb/pref/D-PREF-BB.REG_OUT01-2020-PDF-E.pdf

29 Julia Black, *'Constructing and Contesting Legitimacy and Accountability in Polycentric Regulatory Regimes',* (2008) 2(2) *Regulation and Governance* 137-164.

30 Robert Baldwin, Martin Cave and Martin Lodge, *Understanding Regulation: Theory, Strategy, and Practice* (2nd edn, Oxford University Press 2012)

institutions, while avoiding conflicts across institutional mandates and systemic fragmentation. In such contexts, coherence often depends on interagency coordination across regulatory institutions and processes, particularly in relation to converged services and markets.

On its part, technological neutrality requires regulation to focus on functions and services rather than specific technologies, thereby supporting flexible and adaptive systems in response to technological evolution without constant major legislative revision.[31] As a result, technological neutrality often functions not merely as a drafting principle, but as an outcome of regulatory design. Effective responses to convergence require reconciling adaptability in regulatory design with consistency in regulatory outcomes.[32]

Together, coherence and technological neutrality provide a complementary regulatory response framework. While coherence targets system-wide alignment through coordination, technological neutrality ensures adaptive, non-discriminatory rulemaking. In practice, convergence therefore requires enhanced coordination and, in some cases, collaboration, across agencies and institutions, including industry stakeholders. It is worth noting that coordination may facilitate alignment, but does not by itself guarantee coherence. Coherence depends on broader systemic consistency and integration of mandates, rules, and outcomes across the system, underscoring a whole-of-system engagement.

Rather than presenting a comparative account of specific jurisdictions, the analysis employs an ideal-type framework to examine three broad models of regulatory organisation: the siloed (sector-specific) model, the converged (unified regulator) model, and the hybrid (coordinated multiagency) model, in terms of their response to the evolving technological convergence and their capacity to ensure systemic coherence. Jurisdictional examples are used illustratively and do not represent exhaustive or pure embodiments of any single model. Accordingly, the models are treated as analytical constructs reflecting dominant regulatory patterns and different heuristic pathways through which coherence may be pursued in the governance of converged communications ecosystem.

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31 See ITU, 2023; OECD, 'The Evolution of Communications Markets and Regulation – 2019', discussing convergence and regulatory neutrality; EU Commission, *Europe https://www.itu.int/dms_pub/itu-d/opb/pref/D-PREF-BB.REG_OUT01-2023-PDF-E.pdfan Electronic Communication Code* (Directive (EU) 2018/1972), explicit endorsement of technology neutrality.

32 OECD 2019.

3.0 Regulatory Models In Converged Communications Ecosystem

Regulatory responses to convergence in telecommunications governance vary across jurisdictions as countries,[33] thus reflecting the absence of a universal model for addressing convergence. Regulatory models are best contextualised not as isolated examples, but as points along a continuum of institutional design shaped by concern for coherence and adaptability in regulatory design.

3.1 Siloed (Sector-Specific) Model

The siloed model lies at one end of the continuum of regulatory response models to convergence. It is characterised by the allocation of regulatory authority across distinct institutions, each exercising jurisdiction over a defined sector. The model reflects the historical evolution of communications regulation, where technological differences between transmission of media and the distinct related services justified discrete regulatory regimes and specialised oversight.[34]

Within this model, coherence is primarily achieved through interagency coordination and collaboration instead of institutional consolidation. Regulators retain clearly defined mandates while engaging - formally and informally - on overlapping areas. Such engagement may range from ad hoc cooperation to more formalised institutional mechanisms, depending on the legal framework governing interagency interaction.

The model offers certain advantages, particularly in terms of clarity of mandate and assurance of required expertise. Its sector-specific orientation can also accommodate elements of technological neutrality at the level of statutory design, through broad definitions coupled with flexible standards and delineation of roles in cross-cutting areas.

However, these strengths are increasingly constrained by technological convergence, where overlapping mandates across cross-cutting areas may generate uncertainty regarding the legitimacy and accountability of particular assertions of regulatory authority.[35] The model's underlying logic remains anchored in sectoral division, meaning persistent risks of fragmentation and related inefficiencies. Institutional separation constrains system-wide alignment, and coordination mechanisms are often unevenly implemented. Similarly, although technological neutrality may be reflected in broad statutory definitions, its effectiveness may be limited by rigid mandate allocation and fragmented institutional structures. Thus, regulatory design

33 OECD 2019; ITU 2021;
34 Black, op cit.
35 Black, *ibid*.

must incorporate safeguards to strengthen coordination and collaboration across the fragmented sectors to facilitate coherence.

The United States (US) provides a prime illustration of the siloed regulatory model in a converged communications ecosystem. Regulatory authority is functionally distributed across key interrelated areas rather than organised around a single consolidated framework. At the infrastructure layer, the Federal Communications Commission (FCC) exercises primary oversight over telecommunications networks, including broadband internet access, spectrum and underlying transmission systems, and broadcasting,[36] while the National Telecommunications and Information Administration (NTIA),[37] under the Department of Commerce, manages federal spectrum. At the platform and service layer, digital intermediaries such as streaming platforms and messaging services, are not treated as broadcasting under the FCC's authority, but instead subjected to the antitrust and consumer protection frameworks administered by the Federal Trade Commission (FTC) and the Department of Justice (DOJ).[38] Across both layers, the FTC and DOJ also play a central role in antitrust enforcement, particularly in relation to platform dominance and merger control. This functional distribution reflects a system in which regulatory authority is allocated according to infrastructure, platform behaviour, and market effects, rather than the underlying technology used to deliver the service. In other words, the exercise of authority depends on whether the issue relates to communications policy, consumer protection, or market competition.

Notwithstanding the functional and market oriented approach, the US model still faces fragmentation and overlap arising from an institutional structure originally designed for a pre-convergence environment characterised by distinct technologies and policy objectives.[39] Consequently, legacy

36 See the Communications Act 47 USC sections 151-609, establishing and empowering the FCC.

37 Established by the National Telecommunications and Information Administration Act, 47 USC sections 901-904.

38 Federal Trade Commission Act 15 USC section 41 et seq; Clayton Act 15 USC sections 12-27, 29 USC sections 52-53; 28 CFR 0.4

39 US GAO, 'Antitrust: DOJ and FTC jurisdictions overlap, but conflicts are Infrequent, 3 January 2023, https://www.gao.gov/products/gao-23-105790; Allen S Hammond IV and AS Hammond, 'Tripartite Regulation in the Public's Interest: The Overlapping Roles of the DOJ, FCC, and FTC in Consolidation of the Communications Industry' in M Lloyd and L Friedland, (eds) *The Communication Crisis in America, And How to Fix It* (Palgrave Macmillan, New York, 2015) https://doi.org/10.1057/978-1-349-94925-0_10; Crowell & Moring LLP, 'Is section 230 Going to Change? The FTCC, DOJ and FCC Signal Significant Change for Online Business' (April 2025) https://www.crowell.com/en/insights/client-alerts/is-section-230-going-to-change-the-ftc-doj-and-fcc-signal-significant-change-for-online-businesses

jurisdictional boundaries established around telecommunications, broadcasting, competition, and consumer protection continue to overlap within today's hybrid digital ecosystem and cross-cutting communications markets.

Coherence is maintained largely through ongoing coordination rather than ex ante institutional consolidation. At the systemic level, this is achieved through formal and informal interagency mechanisms, including MoUs,[40] statutory consultation duties,[41] interagency working groups,[42] and corporative enforcement practices.[43] For example, statutory coordination between the FCC and the NTIA in spectrum management helps mitigate overlapping jurisdictional responsibilities, while the DOJ and FTC have an interagency clearance process to identify which agency leads in antitrust cases, and avoid conflicts.[44]

Beyond interagency coordination, coherence is also reinforced through legislative oversight and judicial review.[45] In areas such as broadband regulation, the allocation of authority between agencies has evolved through statutory interpretation and regulatory classification shaped by changing policy choices rather than fixed institutional hierarchy.[46] These mechanisms

40 E.g., NTIA, 'FCC, NTIA Sign New Memorandum of Understanding on Spectrum Coordination' (Press Release- 22 August 2022, https://www.ntia.gov/press-release/2022/fcc-ntia-sign-new-memorandum-understanding-spectrum-coordination; NTIA-FCC-USDA Interagency Agreement on Broadband Funding Deployment, https://www.fcc.gov/document/fcc-ntia-usda-interagency-agreement-broadband-funding-deployment; Wiley, 'The Spectrum Trap: Why are Federal Agencies Fighting, and Can they Fix it?' 18 February 2022, https://www.wileyconnect.com/The-Spectrum-Trap-Why-are-Federal-Agencies-Fighting-Over-Spectrum-and-Can-They-Fix-It.

41 47 USC section 337(a)(1) requires the FCC to consult NTIA in allocating spectrum and section 992 mandating biannual meeting of the two institutions for joint spectrum management.

42 Broadband USA, Interagency Coordination Milestones: A Decade of Progress, https://broadbandusa.ntia.gov/NTIA_Interagency_Coordination_Milestones

43 McGuirewoods LLP, 'Why Can't we be Friends: FTC and FCC Formalise Cooperation in Consumer Privacy Enforcement' 15 November 2015, https://www.passwordprotectedlaw.com/2015/11/ftc-and-fcc-formalize-cooperation/

44 GOA op cit

45 See FTC vs AT&T Mobility on common carrier exemption

46 See FCC's Protecting and Promoting the Open Internet (Report and Order) 2015, FCC 15-24 (treating broadband as telecommunications services to promote open internet policy, thereby bringing it under the FCC's jurisdiction and limiting the FTC's oversight). See also Simone Friedlander, 'Net Neutrality and the FCC's 2015 Open Internet Order', (2016) 31(2) Berkley Technology Law Journal, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3248473 (highlighting the role of legal interpretation in shaping jurisdiction). The 2017 Restoring Internet Freedom (Declaratory Ruling, Report and Order) 2017, FCC 17-166 (reclassified broadband as an information service thereby restoring FTC's authority in order to promote investment,

help clarify jurisdictional boundaries, resolve interpretative disputes, and maintain regulatory adaptability where coordination alone cannot ensure consistency.

Nonetheless, the model has been criticised for its reactive approach to emerging regulatory challenges,[47] while technological neutrality remains constrained by legacy statutory distinctions, such as the recurring reclassification of broadband and the continued separation between 'telecommunications services' and 'information services'.[48]

Overall, the US model demonstrates that even within a siloed structure, regulatory coherence can be pursued through functional and market-oriented regulation supported by clear mandate boundaries and sustained interagency cooperation among specialised regulators. The example simultaneously illustrates the inherent limitations of coordination-based governance in a converged communications ecosystem.

3.2 Converged (Unified Regulator) Model

At the opposite end of the continuum is the converged model, which represents a more integrated institutional design in which regulatory authority across converged sectors is consolidated within a single agency. The consolidation of authority enhances regulatory coherence and reduces fragmentation, thereby enabling more coordinated decision-making, minimising jurisdictional conflicts, and promoting consistent rule-making and enforcement across the converged communications sectors.[49]

However, while unified frameworks may better accommodate technological neutrality in principle, they also risk insufficient flexibility and dearth of specialty expertise in differentiating across diverse technologies, and services, and regulatory objectives.

It is also questionable whether a single regulatory structure can consistently preserve technological neutrality in practice, particularly where diverse and rapidly evolving services require differentiated regulatory treatment.[50] Additionally, the application of similar regulatory obligations and standards across diverse services within a unified regulatory framework may generate tensions between distinct sectoral objectives, potentially resulting in

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competition and consumer protection). See also *Mozilla v FCC* 940 F 3d 1 (DC Cir 2019).

47 NTIA Testimony of Assistant Secretary

48 47 USC section 153(24) defines 'information service' and section 153(50) "telecommunications" in discrete manner.

49 ITU 2023

50 Marsden 2010

overregulation in some areas[51] and under-regulation in others due to sectoral variations in cost structures, risks, and market dynamics. The concentration of extensive regulatory functions within a single authority may consequently complicate the balancing of competing regulatory priorities especially within technically complex and rapidly evolving domains. It also raises accountability concerns, making transparency, oversight, and effective appeal processes, increasingly critical. Addressing these tensions is critical to the effectiveness of the unified model. Moreover, while the model offers a high degree of coherence, its implementation may require significant institutional restructuring, which may be difficult to achieve in jurisdictions with entrenched sector-specific mandates.

Overall, the model offers strong coordination gains, but with potential trade-offs in coherence, adaptability, accountability and the depth of expertise required across diverse technologies and regulatory functions. These concerns underscore the need for institutional safeguards that can mitigate the associated risks.

Singapore illustrates the converged regulatory model. Singapore has a population of approximately 6 million people as of 2022 (UNDESA, 2022[3], a centralised government and efficient administrative ...[52] Its communications regulatory system reflects a highly unified framework centred on the Infocomm Media Development Authority (IMDA) under the Ministry of Digital Development, by virtue of the Telecommunications Act 1999[53] and the Infocomm Media Authority Act.[54] These statutes consolidate oversight function over infocommunications and media within the IMDA as a single regulator, overseeing telecommunications, broadcasting, media, internet services, postal services, and related facilities. The IMDA exercises broad end-to-end authority, including matters relating to licenses, competition, consumer protection, cybersecurity, interconnection and access, and content standards, while also promoting innovation.[55] It is also responsible for

51 Fon Wei Li, 'From Liberty to Liability, Shifting Sands in Sing's Internet Governance' (April 2024, Law Gazette), https://lawgazette.com.sg/feature/from-liberty-to-liability-shifting-sands-in-singapores-internet-governance/

52 OECD Singapore, p 134

53 Cap 323, 2020 Rev Ed

54 No. 30 of 2016. See also the recently passed Info-Communications Media Development Authority (Amendment) Bill No. 9/2026, which amends the IMDA Act. See also OECD, 'Extending Band Connectivity in South East Asia', 2023, chapter 4, https://www.oecd.org/content/dam/oecd/en/publications/reports/2023/12/extending-broadband-connectivity-in-southeast-asia_74819f28/b8920f6d-en.pdf.

55 Sections 5, 32, and 61 Telecommunications Act; IMDA 'Codes of Practice and Guidelines', https://www.imda.gov.sg/regulations-and-licences/regulations/codes-of-practice/codes-of-practice-and-guidelines---infocomm

licensing, spectrum management, policy formulation, and enforcement and decision-making.[56]

Furthermore, it exercises competition oversight by virtue of the the Code of Practice for Competition in the Telecommunication and Media Services 2022.[57] It "imposes binding legal obligations" on relevant licensees,[58] enabling coordinated market regulation within the converged framework. The recently passed IMDA Amendment Bill 2026, further aligns media merger regulation with telecommunications competition regulation within the IMDA framework, in order to address lingering duplication across the converged communications sectors and strengthen the IMDA's capacity to apply consistent competition and consumer protection standards across digital markets.[59]

Mandate clarity is maintained through explicit internal statutory delineation of functions. For example, the Telecommunications Act expressly distinguishes telecommunications services from broadcasting services regulated under the Broadcasting Act 1994,[60] thereby preserving the policy distinctions between domains while reducing duplicative licensing and jurisdictional uncertainty.[61] The clarity of the IMDA's mandate over competition issues in the communication sector has also resulted to minimal overlap with the Competition and Consumer Commission, the general competition authority.[62]

Even with such level of institutional consolidation, interagency coordination remains critical in crosscutting areas such as digital infrastructure resilience and cybersecurity,[63] particularly through mechanisms such as the Digital Infrastructure Act (DIA) Taskforce led by the Ministry of Communications and Information, which coordinates IMDA and other

56 IMDA Act 2016.

57 IMDA (2022), Code of Practice for Competition in the Provision of Telecommunication and Media Services 2022, InfoComm Media Development Authority, https://www.imda.gov.sg/regulations-and-licensing-listing/telecom-competition-code

58 IMDA, 'Codes of Practice and Guidelines – infocomm' https://www.imda.gov.sg/regulations-and-licences/regulations/codes-of-practice/codes-of-practice-and-guidelines---infocomm, for a compilation of Codes of Practice and other IMDA Instruments

59 See Chin Hui Chan and Sarah Koh, 'parliament passes bill to tighten merger rules in media sector, give regulator greater oversight' (The Straits Times, 7 May 2026), https://www.straitstimes.com/singapore/politics/parliament-passes-bill-to-tighten-merger-rules-in-media-sector-give-regulator-greater-oversight

60 *Ibid* FOQ

61 Section 2 of the Telecommunications Act.

62 OECD Singapore, 2023, 149

63 Cyber Security Agency and GovTech/Smart Nation on digital infrastructure resilience

agencies on infrastructure risks governance.[64] Coherence is further reinforced through formal industry stakeholder engagements. The Technical Standards Advisory Committee (TSAC) provides guidance on telecommunications standards, while public consultation informs regulatory reform in areas such as interconnection frameworks and competition codes.[65]

Singapore's regulatory approach is also characterised by technological neutrality, reflected in statutory drafting that defines telecommunications broadly to accommodate evolving technologies, including fixed, mobile, and satellite services.[66] This supports regulatory adaptability.

Overall, Singapore's model demonstrates strong coherence and institutional efficiency within a converged environment. However, the concentration of extensive regulatory powers within a single institution creates risks of overreach, overconcentration of authority, and weakened accountability.[67] Concerns have also been raised that the Minister may exercise significant influence over the IMDA despite its status as an independent statutory body, potentially limiting its institutional independence.[68] [see 41] There are further concerns that consolidating competition and content regulation within a single authority may generate normative tensions, where interventions aimed at market efficiency may be construed as content censorship and vice versa.[69]

Nonetheless, Singapore's reptation for good governance and low levels of political corruption arguably reduces the significance of such risks of political influence and unaccountability. Also, although its tiered licensing framework seeks to mitigate risks of over or under-regulation, the determination of licensing categories remains substantially discretionary. The model is classified as highly successful, attributed to broader features of its governance system, including strong centralised administration, high bureaucratic capacity, coordinated digital policy planning, and a technocratic approach to regulatory governance,[70] and a relatively small population size.[71]

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64 Ministry of Digital Development and Information, 'Digital Infrastructure Act to Enhance Resilience and Security of Digital Infrastructure and Services' 1 March 2024, https://www.mddi.gov.sg/newsroom/new-digital-infrastructure-act/

65 IMDA, 'Pubic Consultation on the Code of Practice for Competition in the Provision of Telecommunications and Media Services' 20 February 2019, https://www.imda.gov.sg/regulations-and-licences/regulations/consultations/consultation-papers/2019/consultation-for-converged-competition-code.

66 *FAQs ibid.*

67 Li, op cit

68 P 144 OECD Singapore

69 *Ibid*

70 ITU, 2021, op cit pp 60-63;

71 OECD, Singapore

3.3 The Hybrid (Coordinated Multi-Agency) Model

Between the siloed and integrated models lies the hybrid model, which combines a partially converged core regulator with formalised interagency coordination among specialised agencies. The hybrid model may be understood within broader theories of polycentric governance, which conceptualise hybrids as institutional arrangements combining multiple coordination modes across overlapping regulatory domains.[72] Within this framework, coherence is pursued less through complete institutional consolidation than through structured coordination, concurrent jurisdiction, and collaborative governance mechanisms among specialised institutions.[73]

In practice, most regulatory systems exhibit hybrid characteristics. Here, however, the hybrid model refers to systems where institutional consolidation coexists with specialised cross-sectoral authority. It represents an intermediate approach that combines a partially converged core regulator with coordinated specialised institutions in order to balance sectoral expertise with regulatory coherence. Rather than eliminating institutional boundaries completely, the hybrid model relies on formalised cooperation and collaborative mechanisms, including coordinated policy development, shared enforcement strategies, and interagency agreements, to manage overlapping mandates. or formalised consultative processes. In principle, the hybrid model offers flexibility and adaptability by combining specialised regulatory competence with coordinated governance across cross-cutting issues. However, like both the siloed and unified models, its effectiveness depends less on institutional structure or design than on the consistency and strength of its coordination mechanisms. Where these are weak or unevenly applied, the model risks replicating the fragmentation it seeks to mitigate.

The United Kingdom (UK) provides a practical illustration of the hybrid model. At first glance, the UK appears to operate a converged regulatory system centred on the Information Commissioner's Office (Ofcom), which consolidates authority over telecommunications, broadcasting, spectrum, and postal services.[74] However, closer scrutiny reveals a more hybrid arrangement characterised by concurrent and coordinated oversight in cross-cutting

72 Black, op cit.

73 Andreas Thiel, Elizabeth Baldwin Mark, Stephen, and Sergio Villamayor-Tomas, 'Developing a Conceptual Framework for Analyzing Hybrids', 2025, DOI: 10.1093/9780198944720.003.0002, pp 20-42.

74 See also OFCOM, "What is OFCOM", https://www.ofcom.org.uk/about-ofcom/what-we-do/what-is-ofcom; van Orange, p 56; Communications Act 2002 C11, which establishes Ofcom and Communications Act 2003, C2, which prescribes its substantive powers and functions.

regulatory domains. Although Ofcom functions as a converged core regulator, key responsibilities remain distributed across specialised agencies such as the Competition and Markets Authority (CMA)[75] and the Information Communications Office (ICO), with coherence pursued through formalised coordination mechanisms including concurrent powers, statutory consultation duties,[76] MoUs, joint statements.[77]

Unlike Singapore's predominantly unified framework, regulatory authority in the UK is not fully unified. Ofcom shares concurrent competition powers with the CMA in electronic communications, broadcasting, and postal services,[78] while coordinating with the ICO on data protection and digital regulation.[79] Coordination is further institutionalised through collaborative regulatory initiatives and joint workplans. For example, Ofcom and the CMA coordinate interventions in digital markets where competition measures intersect with online safety obligations. Similarly, although both bodies exercise concurrent powers under the Competition Act and subsequent digital competition legislative reforms,[80] the CMA generally leads on merger assessment and competition enforcement, while Ofcom addresses sector-specific remedies and market conditions.[81] Additional coordination occurs through the Digital Regulation Cooperation Forum (DRCF) - which brings together Ofcom, the CMA, the ICO, and the Financial Conduct Authority (FCA) - to align regulatory approaches across digital services through joint workplans and coordinated guidance.[82] This reflects a coordinated allocation of overlapping mandates rather than strict institutional separation.

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75 Established by the Enterprise and Regulatory Reform Act 2003, C24

76 Under their MoUs, Ofcom must consult CMA on significant market power. See the CMA Ofcom MoU for Regulatory Coordination updated December 2024, https://www.gov.uk/government/publications/cma-and-ofcom-memorandum-of-understanding-for-regulatory-coordination.

77 MoU, ibid.

78 See sections ... of the Communications Act, and the Enterprise and Regulatory Reform Act 2003, C24.

79 "A Joint Statement by OFAM and the Information Commissioner's Office on Collaboration on the Regulation of Online Services", 1 May 2024, https://ico.org.uk/media2/migrated/4029425/joint-statement-ofcom.pdf

80 See the Digital Markets, Competition and Consumers Act 2024 C13.

81 See e.g., CMA and Ofcom memorandum of understanding for regulatory coordination; Online Safety and Competition in Digital Markets: a Joint Statement between the CMA and Ofcom'' CMA provisionally finds Vodacome/Three could address competition concerns through network investment and customer protections. See the Communications Act 2003; Digital Markets, Competition and Consumers Act 2024.

82 ICO, Digital Regulatory Cooperative Forum, https://ico.org.uk/about-the-ico/what-we-do/digital-regulation-cooperation-forum/

The UK's model is therefore closer to the converged end of the spectrum than purely siloed systems, yet remains structurally hybrid as significant regulatory authority continues to be distributed across specialised institutions. At the same time, the bifurcated arrangement mitigates some of the risks associated with highly consolidated regulatory systems by separating competition adjudication from sector-specific promotion and content regulation. Appeals against decisions of both the CMA and Ofcom are subject to review before the Competition Appeal Tribunal, providing for accountability and institutional oversight.[83]

3.4 Synthesis and Concluding Insights

The foregoing models confirm that regulatory responses to technological convergence in the communications sector cannot be adequately assessed on the basis of institutional form alone, but also on the extent to which coherence is maintained in practice across converged communications environment.

The model-based analysis further demonstrates that no single institutional model offers a universally superior response to convergence. Siloed systems preserve specialised expertise but risk fragmentation; converged systems enhance coherence and administrative efficiency but may generate concerns relating to overconcentration of authority and accountability; while hybrid arrangements seek to balance coordination with sectoral specialisation, and depend heavily on the strength of interagency cooperation mechanisms. Consequently, the adequacy of regulatory response lies less in the institutional regulatory structure than in the clarity, coordination, and functional alignment of regulatory mandates across overlapping communications domains.

4. Nigeria's Telecommunications Regulatory System in the Context of Convergence

The regulation of telecommunications in Nigeria has followed a long trajectory, evolving from a state-owned monopoly to a liberalised industry.[84] This transition has generated significant growth, also driven by advances in digital technologies.[85] Total telephony subscriptions currently stand at about 182.23 million hitting about 84% teledensity, and

83 *Ibid*

84 Kabiru Garba Muhammad and Sa'Ad Bunza Sani, *'An Appraisal of Legal History of Telecommunication System in Nigeria'* (2019) 7(8) *International Journal of Business & Management,* DOI: 10.24940/theijbm/2019/v7/i8/BM1908-040

85 Oxford Business Group, 'Expansion and Investment Continue in Nigeria's Telecoms and IT Sector', (12 October 2016) https://oxfordbusinessgroup.com/reports/nigeria/2016-report/economy/high-capacity-market-expansion-and-investment-have-continued-swiftly-despite-tightening-economic-conditions?utm_source=chatgpt.com;

increasing.[86]Correspondingly, the regulatory landscape has expanded to accommodate emerging issues such as data governance and cybercrime, in addition to traditional concerns of licensing, technical standards, spectrum management, and consumer protection. However, these developments have also generated regulatory complexity, as multiple institutions now exercise overlapping mandates within the same digital space. This section examines the extent to which Nigeria's existing institutional arrangements ensure regulatory coherence, coordination, and adaptability against this scenario, and determines the appropriate regulatory model.

4.1 Regulatory Architecture and Manifestation of Fragmentation

Nigeria's telecommunications regulatory infrastructure comprises multiple institutions exercising jurisdiction across distinct statutory domains. The Nigerian Telecommunications Act 2003 establishes the Nigerian Communications Commission (NCC) as the central telecommunications regulator, with broad responsibilities covering licensing, spectrum management, competition oversight, consumer protection, and aspects of subscriber data management.[87] To operationalise this mandate, the NCC has developed regulatory frameworks aimed at promoting access to communication services, market transparency, consumer welfare, and competitive markets.[88] Its oversight of subscriber information also situates it within the broader data governance landscape.[89]

Alongside the NCC, the National Broadcasting Organisation (NBC) regulates broadcasting, including broadcasting licensing and content standards. However, its broader mandate, particularly in relation to spectrum use and digital broadcasting, increasingly intersects with areas falling within NCC's remit,[90] creating jurisdictional overlap within the converged communications environment. Lack of mandate clarity is also present creating confusion in the regulation of IPTV and OTT services like DSTV Stream,

86 Royal Ibeh, 'Nigeria's Telephony Subscriptions Hits 180m as Teledensity Crosses 87% - NCC', (Business Day 10 March 2026), https://businessday.ng/news/article/nigerias-telephony-subscriptions-hit-182m-as-teledensity-crosses-84-ncc/

87 Sections 1-4.

88 For a list of NCC regulations, guidelines, and other regulatory instruments, visit NCC, "Regulations", https://ncc.gov.ng/operators/regulations-guidelines/regulations.

89 See the Data Protection (Communications Services) Regulations 2003, specifying rules governing the handling of data specifically within the communications sector; Cybercrime (Prohibition, Protection, etc) Act 2015 which requires service providers to retain subscriber data and traffic information for 2 years, and user billing information for 12 months.

90 *National Broadcasting Commission Act* N11 LFN 2024, section 1 and 2(d) and *the Broadcasting Code, Sixth edition,* https://www.nbc.gov.ng/nbcode/.

Showmax, Netflix, and Youtube. This arises from the broad definition of 'broadcasting' under the NBA and 'telecommunications' under the NCA, without proper distinctions between the regulation of content and the regulation of conduit,[91] and lack of express delineation of roles.

In the digital sphere, the National Information Technology Development Agency (NITDA) evolved from a primarily IT-focused institution into a broader digital governance authority involved in policy development relating to areas such as digital services, online platforms, cybersecurity standards, and information governance.[92] However, responsibility over data protection has since fallen on the Nigerian Data Protection Commission (NDPC), which now serves as Nigeria's primary data protection authority, further expanding the institutional framework surrounding telecommunications and digital services.[93]

The foregoing institutional configuration reflects a sectoral allocation of regulatory authority grounded in distinctions between telecommunications, broadcasting, IT, and data governance. As services increasingly converge across networks, platforms, and content layers, these statutory boundaries have become progressively porous in practice. The resulting distribution of regulatory responsibilities across separate institutions reveals growing tensions between agencies over unclear and overlapping institutional mandates in the integrated digital communications ecosystem, and risk of role duplication and forum hunting, due to the blurring of boundaries.[94] For instance, the blurring of telecommunications, IT, and digital economy has led to persistent tension between the NCC's and NITDA's mandates over digital services,[95] which even the proposed Digital Economy and E-Governance Bill 2025, does not resolve.[96]

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91 Sections 2(1)(2) NBCA and NBC Code 6th Edition; Sections 31 and 157 NCA

92 National Information Technology Development Agency Act 2007

93 See sections 1-4 of the NDPA, 2023; Patience Aliu and Nkechi Udeze, 'An Overview of Key Changes in the Nigerian Data Protection Bill', 22 February, *Mondaq* 2023, https://www.mondaq.com/nigeria/privacy-protection/1283496/an-overview-of-key-changes-in-the-nigeria-data-protection-bill-2022.

94 Ekhaator, *op cit*; ITU, 'Collaborative Regulation: Accelerating Nigeria's Digital transformation', 2023, https://digitalregulation.org/wp-content/uploads/d-pref-them.33-2023-pdf-e.pdf.

95 Olajide Oyewole, 'Lawful Interception of Communications under the Nigerian Communications Act and the Peculiarities of the NITDA Draft Code of Practice for Interactive Computer Platform/Internet Intermediaries', Mondaq, 1 August, 2022.

96 Lucas Ajanaku and Sanni Onogu, 'Telecommunications Operations Fault e-Governance Bill on Regulatory Overlaps', (The Nation, 11 November 2025) https://thenationonlineng.net/telecommunication-operators-fault-e-governance-bill-on-regulatory-overlaps/; Osamu Ekhator, 'United Nations' Telecom Union Advises Nigeria to Clarify NCC and NITDA Roles', (Techpoint, 6 August 2024)

The table below maps the principal areas of regulatory competence and overlaps among key Nigerian regulators within the converged communications ecosystem:[97]

Functional Area	**Lead Regulator(s)**	**Overlapping Regulator(s)/Relevant Legal Provisions**	**Nature of Overlap**
Telecommunications Infrastructure & Connectivity	Nigerian Communications Commission (NCC)	National Information Technology Development Agency (NITDA). Ss 3, 4, 31-32 NCA;	Functional overlap: IT systems and digital services operate over telecom networks, creating shared regulatory interest in internet-based services
Broadcasting & Audiovisual Services	National Broadcasting Commission (NBC)	NCC	Sectoral convergence: Delivery of broadcast content over telecom networks (e.g. IPTV, streaming) blurs content–carriage distinctions
Spectrum Management & Allocation	National Frequency Management Council (NFMC) (allocation); NCC (telecoms); NBC (broadcasting)	NCC, NBC. Ss 121-122 MCA;	Layered governance: Spectrum is centrally allocated but assigned according to sector, requiring vertical coordination across telecommunications and broadcasting uses
Broadband Infrastructure			
Internet Services & Digital Platforms (OTT)	NCC	NITDA	Functional convergence: Distinction between communications services and IT/digital services is

https://techpoint.africa/news/un-telecom-nigeria-ncc-nitda/.

97 Generated via ChatGPT.

			increasingly blurred
Data Protection & Privacy	Nigeria Data Protection Commission (NDPC)	NCC, NITDA. NCC Consumer Code Regulations	Cross-cutting overlap: Telecom operators process subscriber data (NCC), while digital platforms and IT systems fall within NITDA's ecosystem under NDPC oversight
Consumer Protection in Digital Services	NCC (telecom services)	NDPC, FCCPC. Ss 107-108 MCA; s.104, FCCPA; NCC Consumer Code Regulations	Cross-cutting overlap: Consumer rights, data protection, and digital service obligations intersect across regulatory mandates
Cybersecurity in Communications Networks and Digital Services	NCC[98]	NITDA, NDPC, Office of the National Security Adviser (ONSA)	Overlap in telecommunications security, data protection, cyber resilience, and digital infrastructure governance

This mapping illustrates a regulatory system that remains largely rooted in legacy sector-specific institutional design despite convergences across the communications ecosystem and intertwined and overlapping mandates resulting from the blurring of jurisdictional boundaries.

In practice, converged services that combine telecommunications infrastructure, digital platforms, and content delivery increasingly fall within the remit of multiple regulatory authorities. For example, internet-based audiovisual services such as Netflix and YouTube raise regulatory questions spanning telecommunications regulations, broadcasting standards, and digital platform governance, due to the absence of clear delineation of primary responsibilities. Infrastructure and data transmission issues generally fall within the NCC's jurisdiction, while data governance and intermediary

98 NCC, 'Cyber resilience Framework for Nigeria Communication Sector, 2026, https://ncc.gov.ng/sites/default/files/2026-03/Cyber-Resilience-Framework-for-Nigeria-Communication-Sector-%28CRF-NCS%29.pdf

responsibilities increasingly implicate the NDPC and NITDA. Similarly, OTT platforms such as WhatsApp blur distinctions between telecommunications and digital services. Likewise, spectrum governance and broadband regulation reflect layered institutional arrangements requiring sustained coordination across regulatory levels, including the NCC, and the Federal, State, and Local Governments.[99]

4.3 Locating Nigeria Within the Model Typology: Implications and Weaknesses

Situated within the continuum of regulatory models discussed earlier, Nigeria's telecommunications framework remains predominantly siloed, albeit with emerging but weak hybrid characteristics. Regulatory authority continuous to be formally segmented across telecommunications, broadcasting, competition, and digital governance, even as converged services increasingly cut across these traditional boundaries. This underscores the growing imperative for coordination and coherent governance across overlapping regulatory domains.

The framework demonstrates limited substantive adaptation to convergence. Regulatory design continues to reflect legacy distinctions between sectors, creating uncertainty in emerging areas such as OTT services, digital platforms, and integrated data-driven communications ecosystems where no single institution exercises clear and comprehensive oversight, and overall fragmentation.[100] Subsequent policy initiatives aimed at broader digital governance and coordination objectives have remained insufficiently institutionalised with persistent predominantly sector-specific regulatory architecture.[101] Coordination measures, mainly through MoUs, have been described as largely reactive rather than proactive, thus unable to ensure sustained cooperation, accountability, predictability, and coherent regulatory action across overlapping domains.[102] Even where collaboration between sectors is statutorily obligated – such section 105 of the FCCPA which mandates sector-specific interagency collaboration - the formal structure for operationalisation is mostly lacking.[103] The DEPS acknowledges these

99. Strategies for the promotion of broadband services and infrastructure: A Case Study on Nigeria, 2012

100 Nigeria's National ICT Policy 2012

101 particularly the National Digital Economy Policy and Strategy (NDEPS) 2020–2030

102 P 29. 63 See ITU GSR-21 Best Practice Guidelines: https:// www .itu .int/ en/ ITU -D/ Conferences/ GSR/ 2021/ Documents/ GSR -21 _Best -Practice -Guidelines _FINAL _E _V2 .pdf].

103. See *Emeka Nnubia v Honourable Minister of Industry, Trade and Investment & Others (FCCPC and MTN Communications Nigeria Plc),* Suit No:

challenges and identifies convergence and co-regulation as key responses.[104] However, their effectiveness ultimately depends on sustained cooperation and institutional alignment among the relevant regulators.

Nevertheless, some efforts have been made to improve coordination through interagency collaboration, joint working groups, shared implementation structures. For example, the Nigerian e-Government Master Plan requires Federal Public Institutions to establish Digital Transformation Working Groups (DT-TWG) to facilitate coordinated implementation of digital projects, programs, and policies.[105] Although DT-TWGs were subsequently inaugurated and integrated into aspects of the NDEPS, coordination remains largely programme-driven and unevenly institutionalised across MDAs.[106] The e-Governance Master Plan itself seeks to enhance interoperability among government institutions, while initiatives such as the Government Wide Messaging and Collaboration Service (GWMCS) reflect broader attempts to establish whole-of-government digital coordination frameworks.[107]

Interagency cooperation is also common, including formalised mechanisms like MoUs.[108] In addition, the NCC has increasingly adopted co-regulation and adaptive approaches through public consultations, multistakeholder task forces, regulatory impact assessment, and review mechanisms for aggrieved stakeholders.[109] Co-regulation defined the making

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FHC/L/CS/1009/2024, unreported, concerning conflict between the FCCPC's jurisdiction and the NCC's jurisdiction under section 90 of the NCA over competition matters in the telecommunications industry.

104 Federal Ministry of Communication and Digital Economy, *National Digital Economy Policy and Strategy 2020-2030*, https://nitda.gov.ng/wp-content/uploads/2020/06/National-Digital-Economy-Policy-and-Strategy.pdf

105. Federal Ministry of Communications', https://fmcide.gov.ng/wp-content/uploads/2023/11/NgeGovMP.pdf

106 Nigeria Communications Week, 'FG Inaugurates Technical Working Groups for Digital Transformation' 28 August 2020, https://www.nigeriacommunicationsweek.com.ng/fg-inaugurates-technical-working-groups-for-digital-transformation/?utm_source=chatgpt.com; NDEPS, p 10; The e-Governance

107 E-Government, pp 16-18.

108 'Telco Consumer Protection Fortified by NCC-FCCPC MoU', (Africa Telecom Review, 17 January 2025) https://www.telecomreviewafrica.com/articles/general-news/4686-telco-consumer-protection-fortified-by-ncc-fccpc-mou/; Ayodeji Adegboyega, 'FCCPC, sign MoU to Streamline Telecoms Regulation – Strengthen Consumer Protection' (Premium Times, 15 January 2025) https://www.premiumtimesng.com/business/business-news/766979-fccpc-ncc-sign-mou-to-streamline-telecoms-regulation-strengthen-consumer-protection.html

109 ITU 29.

of the TV White Space Regulatory framework, which involved iterative stakeholder engagement, convergence analysis, and joint participation by the NCC and NBC.[110]

The limitations of the existing structure in delivering coherent, coordinated, and adaptive governance have consequently generated proposals for the establishment of a converged regulator covering telecommunications, broadcasting, information technology, and postal services.[111] However, strong concerns remain regarding the suitability of a fully unified model within Nigeria's institutional context. A fully converged authority may be difficult to implement effectively due to entrenched sector-specific mandates, institutional complexity, and the absence of the highly centralised administrative structure and coordinated governance culture that have supported converged regulation in jurisdictions such as Singapore. Given the diversity of regulatory objectives across the converged sectors, as well as cross-cutting issues in competition, data governance, and cybersecurity, extensive institutional consolidation may also create risks of institutional overload and insufficient expertise within a unified authority. Conversely, a purely siloed approach is increasingly inadequate due to fragmentation. A strengthened hybrid model therefore presents a more viable pathway for Nigeria's converged communications environment, combining institutional specialisation with organised coordination to mitigate fragmentation and improve regulatory coherence.

Most importantly, the ongoing effort to amend the NCA driven by the NCC targets agency overlaps, especially between NCC and NITDA/NDPC/FCCPC, as well as technological neutrality.[112]

5.0 Recommendations and Concluding Statements

The preceding analysis demonstrates that the principal weaknesses of Nigeria's telecommunications regulatory framework lie not simply in institutional fragmentation, but in the absence of sufficiently coordinated and adaptive mechanisms capable of ensuring coherence across converged

110 Ogechi Onuoha, 'Nigerian Communications Commission Develops Draft Guidelines for Use of TV White Spaces in Nigeria' (Space in Africa 9 January 2020) https://spaceinafrica.com/2020/01/09/nigerian-communications-commission-develops-draft-guidelines-for-use-of-tv-white-spaces-in-nigeria/; NCC, 'NCC holds Stakeholders Consultative Forum on Television White Space – Set to Harness Television White Space for Broadband Penetration' https://ncc.gov.ng/media-centre/press-releases/ncc-holds-stakeholders-consultative-forum-television-white-space-set

111 *Ibid*

112. NCC Set to Review 2003 NCC Act to Secure Nigeria's Digital Future (ThisDay Live, 17 May 2026) https://www.thisdaylive.com/2025/04/29/ncc-set-to-review-2003-ncc-act-to-secure-nigerias-digital-future/

domains. As digital services increasingly integrate telecommunications infrastructure, broadcasting, platforms, data governance, and cybersecurity functions, regulatory effectiveness will depend less on rigid institutional boundaries than on the extent to which overlapping mandates are aligned and coordinated in practice.

Accordingly, regulatory reform should focus on strengthening coherence within the existing institutional framework through a more structured hybrid approach that combines sector-specific expertise with formalised coordination mechanisms. The following priority reforms are proposed:

First, regulatory mandate should be clarified and modernised to ensure greater alignment within the converged communications ecosystem. Enabling statutes and subsidiary regulations should be reviewed to reduce ambiguity, eliminate unnecessary overlaps, and ensure that responsibilities reflect the functional realities of converged services. This does not require rigid separation, but a coherent allocation of authority that enables complementary regulatory action.

Second, coordination mechanisms should be formalised and institutionalised. Existing patterns of interagency engagement should be embedded through legally recognised mechanisms.

Third, regulatory approaches should be more function-oriented and technologically-neutral.

Moving away from rigid technology-specific classifications towards function-based regulation would enable equivalent services to be treated more consistently, as reflected in the converged and hybrid models examined in this article. This would reduce regulatory arbitrage and duplicative obligations while enhancing coherence within rapidly evolving digital markets.

Conclusion

Technological convergence has increasingly blurred the boundaries between telecommunications, broadcasting, and digital services, exposing the limitations of sector-specific regulatory approaches. In this context, the central challenge is not simply institutional design, but the achievement of coherent and adaptive governance across overlapping communications domains.

This analysis demonstrates that regulatory effectiveness depends less on institutional consolidation than on the capacity to ensure coherence through clear mandates and strong and sustained coordination and collaboration mechanisms. While siloed, converged, or hybrid models offer different responses to convergence, none is inherently sufficient. Their effectiveness depends on how coordination is institutionalised and how regulatory frameworks respond to technological change.

The analysis further shows that coherence does not necessarily require a single ‘super regulator’. Although converged systems such as Singapore may enhance

administrative coordination, relatively siloed systems such as the US continue to manage fragmentation through organised interagency coordination, while hybrid arrangements such as the UK seek to balance sector-specific experts with formalised coordination.

Against this background, Nigeria's telecommunications framework remains predominantly sector-specific despite increasing convergence across digital communications markets. Although elements of coordination exist, they remain weakly institutionalised and largely reactive. Accordingly, the case for reform lies not in wholesale institutional consolidation, but in a strengthened hybrid framework.