



STRUCTURAL REFORM IN TELECOMMUNICATIONS: BUILDING THE FOUNDATIONS OF THE DIGITAL ECONOMY

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Outline

1. Background
2. Internet value chain
3. Internet connectivity segment
4. Overview of the Philippine ICT performance
5. The Philippine regulatory environment: Issues and Challenges
6. Way forward

Background

Objectives of the background papers

Upgrading the ICT Regulatory Framework: Toward Accelerated and Inclusive Digital Connectivity

General Objective

Update the structure and elements of the regulatory environment for ICT, including the regulatory authority.

Specific Objectives

1. Survey best practice regulatory frameworks or approaches.
2. Examine the gaps and/or weaknesses in the Philippine regulatory environment.
3. Provide specific recommendations to improve the regulatory framework for telecommunications.

The Philippine Digital Sector and Internet Connectivity: An Overview of the Value Chain and Barriers to Competition

General Objective

Provide a first look at the digital value chain in the Philippines and evaluate competition issues.

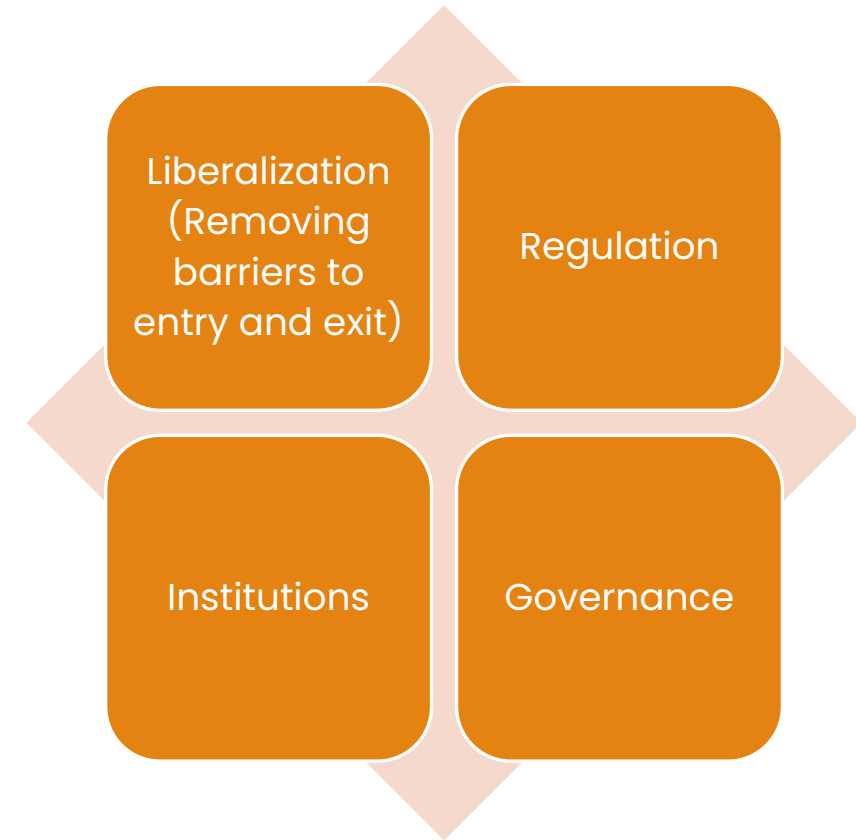
Specific Objectives

1. Describe the current digital value chain including key players, bottlenecks and barriers to competition focusing on a *specific component* of the value chain.
2. Identify potentially anti-competitive laws and regulations that may affect firm entry and expansion.
3. Propose regulations or policies to address the identified competition issues.

What is structural reform?

Structural reform consists of improvements made to institutional frameworks, regulations and government policy which helps foster an economic environment that supports the efficient functioning of markets and ultimately enhances living standards (APEC EC 2006).

“Structural reform is therefore about competition policy in its broadest possible sense” Findlay (2010, p. 5).



Types of barriers

Type	Description and/or examples
Natural barriers	Result from the resources/raw materials or technology needed to become a supplier in the market Existence of large economies of scale and scope, such as with network industries Large 'sunk costs' (i.e., those that could not be recovered if an entrant exits the market.) Limited spectrum
Strategic barriers (or Conduct of incumbent firms)	Result from actions by existing suppliers to protect their position in the market, which could include: <ul style="list-style-type: none">• 'bundling and tying'• arranging long term exclusive contracts and exclusive supply and distribution agreements;• fixed-term/exclusive contracts to lock-in customers;• denying/restricting access to essential facilities, etc.
Policy & Regulatory barriers (can exist at any level of government)	Regulatory rules that limit the number of market participants Government licensing requirements and planning regulations, statutory monopoly power and tariff and non-tariff barriers Regulations by professional organizations Lengthy and costly bureaucratic procedures to start new businesses.

Sources: DFID (2008, pp. 16 – 19); ASEAN (2020, pp. 28-29); CCS (2017)

Recent reforms

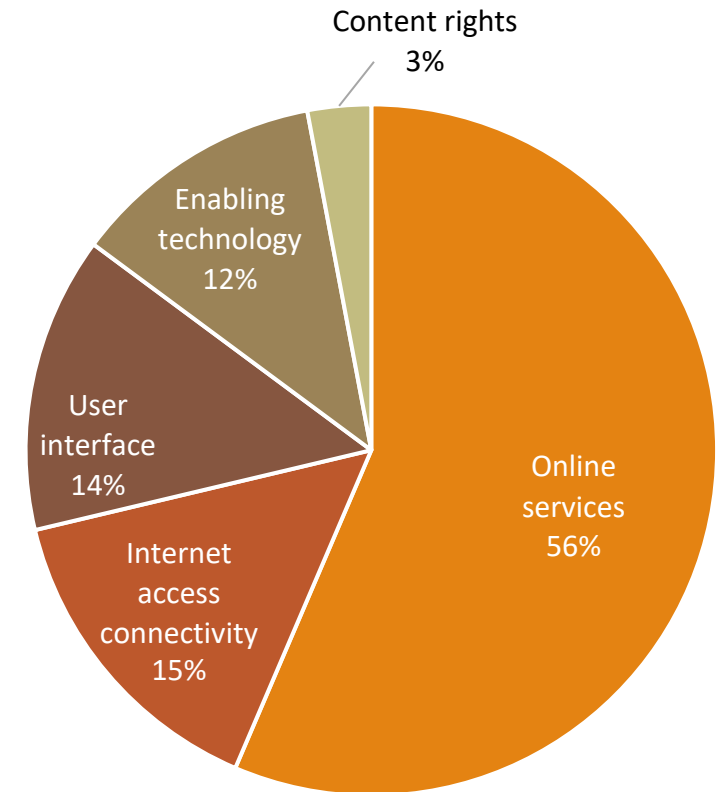
- Public Service Act Amendment (RA 11659)
- Mobile Number Portability Act (RA 11202)
- Inclusive Access to Satellite Services
 - Executive Order No. 127 s. 2021 (Expanding the Provision of Internet Services through Inclusive Access to Satellite Services, Amending Executive Order No. 467 (s. 1998))
- DICT Policy on Shared Passive Telecommunications Tower Infrastructure (Common Tower Policy), 2020
- Streamlining regulatory processes and requirements
 - JMC No. 1, s. 2020: “Streamlined guidelines for the issuance of permits, licenses, and certificates for the construction of shared passive telecommunications tower infrastructure”
 - Revised JMC No. 1, s. 2021: “Revised and expanded streamlined guidelines for the issuance of permits, licenses, and certificates for the construction of shared passive telecommunications tower infrastructure”
 - JMC No. 1, s. 2021: “Streamlined guidelines for the issuance of permits and clearances for the erection of poles, construction of underground fiber ducts, and installation of aerial and underground cable and facilities to accelerate the rollout of telecommunications and internet infrastructure”

The Internet Value Chain

The Internet Value Chain (GSMA 2022)

Content rights	Online services	Enabling Technology & Services	Internet Access Connectivity	User interface
Premium rights <ul style="list-style-type: none"> - Video - Sports - Music - Publishing - Gaming Made for digital <ul style="list-style-type: none"> - Professional - Content Creators & Influencers 	E-retail, E-travel Video, Audio Publishing Gaming, Gambling Search, Social Communication & Collaboration Info & Reference Cloud-based software services Other online services	Design and hosting Payment platforms Cloud Platforms Cloud Platform & Infrastructure Services IOT Platforms Analytics Online Advertising Services Content Delivery Services	Mobile Access Mobile Towers Fixed Access Satellite	Hardware Devices Systems & Software

Share of Global Revenue in 2020



GSMA 2022

Forms of convergence

Network convergence

Where a common standard allows several types of networks to connect with each other

Allows location- and network-independent service provisions

Service convergence or “Multi play”

Use one network to provide multiple services that traditionally required separate networks

Changes the scope and boundaries of markets and alters entry barriers

Technological convergence

Single device performs many types of functions and delivers many formats of content

New concerns include digital privacy and data security

Corporate convergence

Firms in one sector acquire, merge, or collaborate with firms in other sectors.

Mergers may create new business models and alter the market structure

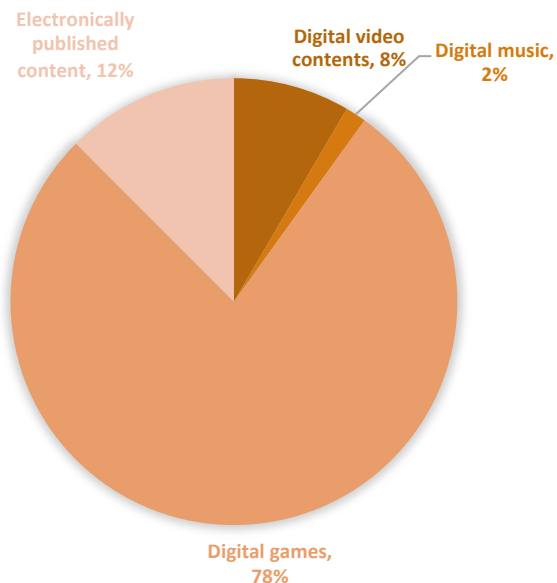
Sources: Singh and Raja (2010); Park (2019)



Participants in the internet value chain

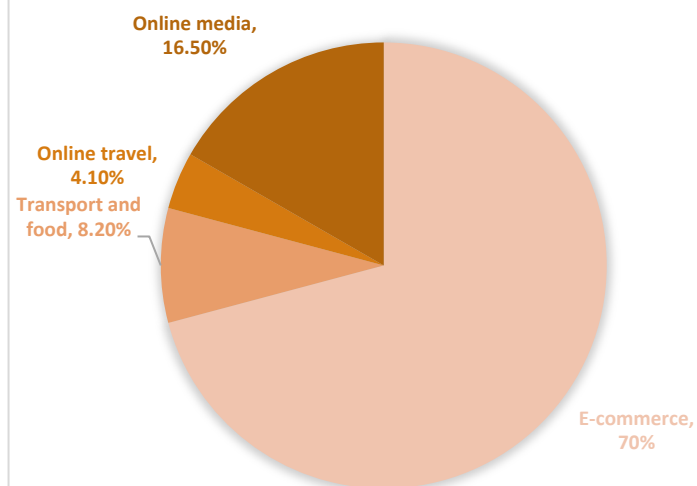
Participants in the internet value chain

Digital market revenue, 2021: USD 1.91 billion



Source: Statista (2021a)

Online services Gross merchandise value (GMV), 2021: USD17 Billion



Source: Google et al. 2021

Payment platform

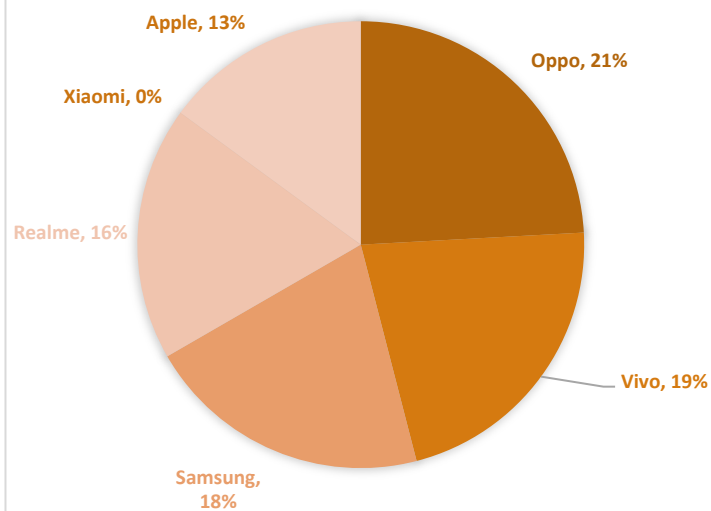
- 97% of **Digital merchants** are accepting digital payments and 67% use digital lending solutions (Google et al. 2021)
- 43.44 million made **digital payments** in 2021 with total annual value of USD 16.11 billion (Kemp 2022)

Online advertising (Kemp 2021)

- **Annual spending** in 2021 reached USD1.07 billion, about 21 percent increase compared to 2020, majority spent on banner ads.

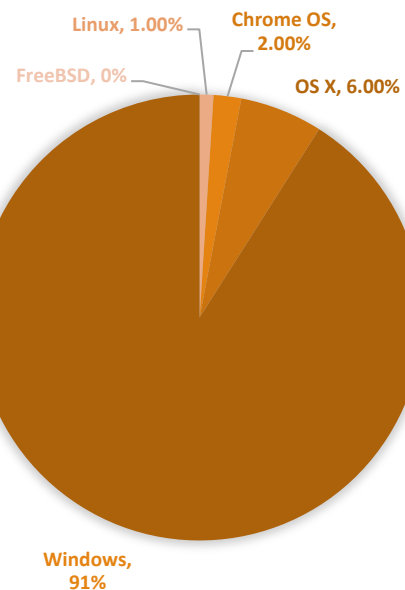
Participants in the internet value chain

Market share for mobile vendor, October 2021 to October 2022



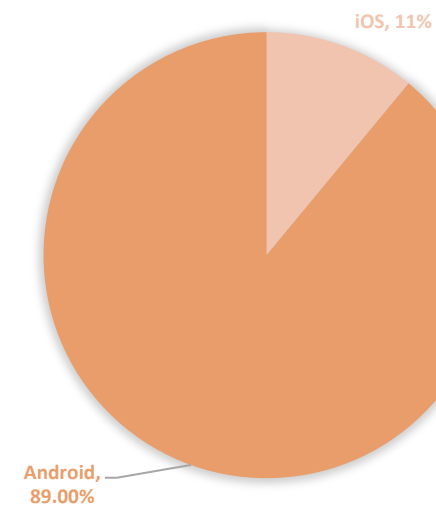
Source: Statcounter (2022c)

Market share of mobile operating system, October 2021 to October 2022



Source: Statcounter (2022d)

Market share of desktop operating system, October 2021 to October 2022



Source: Statcounter (2022e)

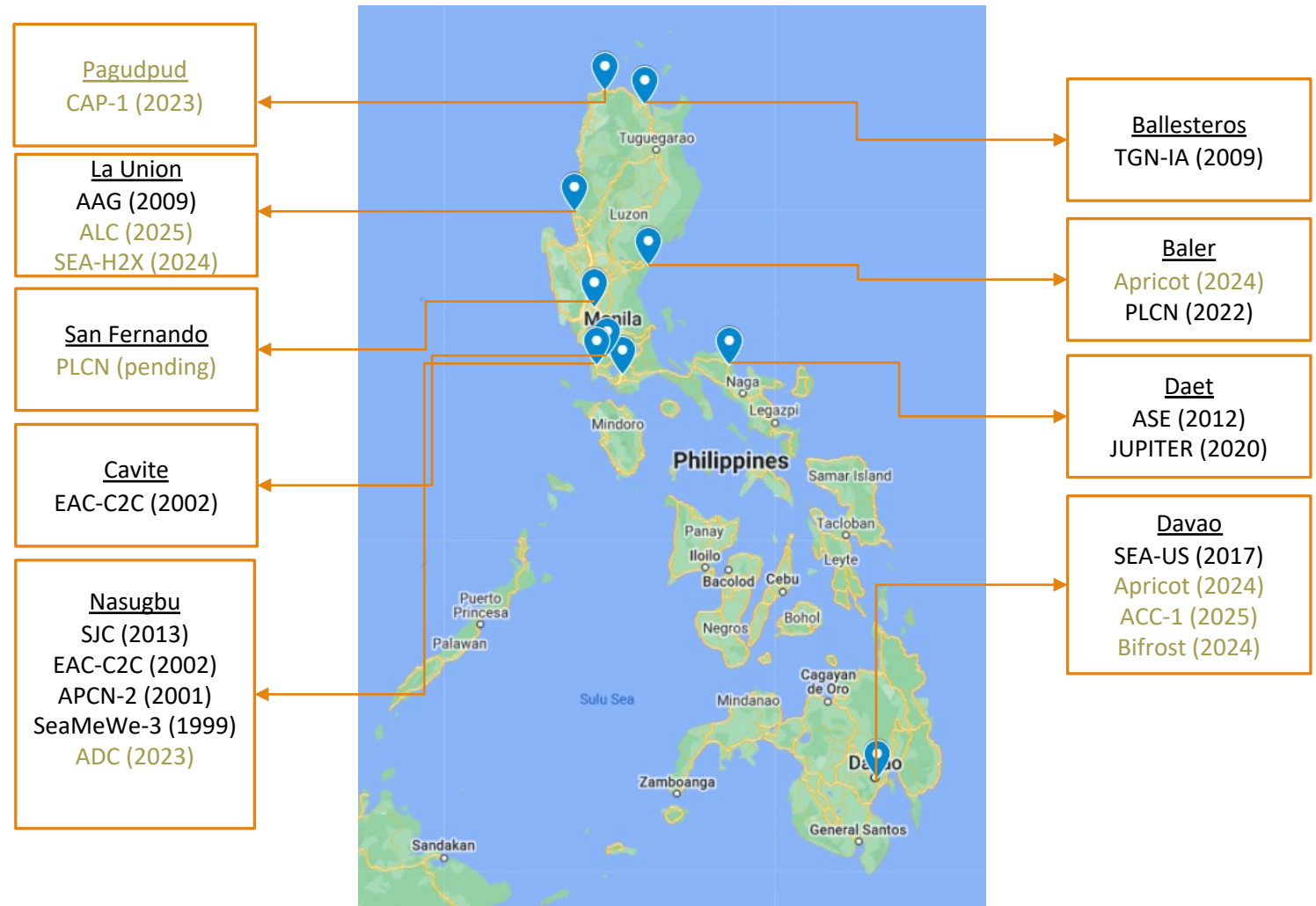
Internet connectivity segment



Source: Mirandilla-Santos (2021); Senate Bill 911 (18th Congress); DICT (2017)

Internet connectivity value chain:

International link



Note: Pagudpud cable station still in construction
Source: Authors' own, based on Telegeography (2022);
Submarine Cable Networks (2022a); and Atienza (2021)

Internet connectivity value chain:

Domestic backbone

Cable System	Ready for service	Cable length (in km)	Owners	Landing points
Boracay-Palawan Submarine Cable System (BPSCS)	June 2013	332	Globe Telecom	Boracay, Caticlan, Coron, San Jose, Taytay
Converge Domestic Submarine Cable Network (CDSCN)	Q4 2021	1,300	Converge ICT	Baclayon, Bacong, Bogo, Boracay, Buenavista, Cagayan de Oro, Coron, Leganes, Masbate City, Milagros, Naga, Ormoc, Pasacao, Roxas City, Roxas, San Carlos, San Juan, San Remigio, Tagbilaran, Talisay City, Taytay, Toledo
National Digital Transmission Network (NDTN)	March 1999	1,400	TelicPhil	Dumaguete, Iloilo City, Lucena, San Jose
Palawan-Iloilo Cable System	January 2014	300	PLDT	San Jose de Buenavista, Taytay
Philippine Domestic Submarine Cable Network (PDSCN)	April 2023	2,500	Eastern Telecom, Globe Telecom, Infinivan Inc.	Baclayon, Bacolod, Boac, Boracay, Bulan, Cagayan de Oro, Cagdianao, Calatrava, Calbayog, Camiguin Island, Caticlan, Dipolog City, Ilijan, Iloilo City, Kinoguitan, Liloan, Lilo, Lucena, Maasin, Palanas, Palompon, Pasacao, Pinamalayan, Placer, Roxas City, San Carlos, Siargao Island, Surigao City, Tagbilaran, Talisay, Toledo, Zamboanga City, Zamboanguita
PLDT Domestic Fiber Optic Network (DFON)	1997	11,100	PLDT	Butuan City, Cadiz City, Cagayan de Oro, Calbayog, Cebu, Dumaguete, Legazpi City, Masbate City, Nasugbu, Ormoc, Ozamiz City, Pinamalayan, Roxas City
Sorsogon-Samar Submarine Fiber Optical Interconnection Project (SSSFOIP)	2019	21	National Grid Corporation of the Philippines	Allen, Santa Magdalena

Note: TelicPhil= Telecoms Infrastructure Corporation of the Philippines; PLDT = Philippine Long Distance Telephone Company

Source: Telegeography (2022)

Internet connectivity value chain:

Middle mile

(e.g., IXPs, Data centers and cloud services, Telecommunications tower)

Internet exchange points	Data centers	Independent tower companies	
ComClarkIX	Bee Info Tech	Unity Digital Infrastructure Inc.	LBS Digital Infrastructure Corp.
Manila IX	Comclark	Alt-Global-Solutions Inc.	MIESCOR Infrastructure Development Corporation
Globe Internet Exchange	DataOne Asia	American Towers Inc. ATC Asia Pacific Pte. Ltd.	SBA Towers Philippines, Inc.
PCTA-IX	Eastern Communications	CEEC Tower, Inc.	Skytowers Infra Inc.
Philippine Internet Exchange	IP Converge Data Services	Communication and Renewable Energy Infrastructure CREI Phils Inc.	Tiger Infrastructure Philippines, Inc.
Philippine Open Internet Exchange	VST ECS	Comworks Infratech Corp.	Torre, Inc.
Vitro peering solutions (VIX)	Globe Telecom	Desarrollos Terrestres Inc.	Zeal Power Construction & Dev't. Corp.
	PHCOLO	EDOTCO Group SDN BHD	Phil-Tower Consortium Inc.
	ePLDT	Frontier Tower Associates Management Pte. Ltd.	Tower Magkasama, Inc.
	Total Information Management Corporation	ISON ECP Tower Singapore Pte. Ltd.	

Internet connectivity value chain:

Last mile

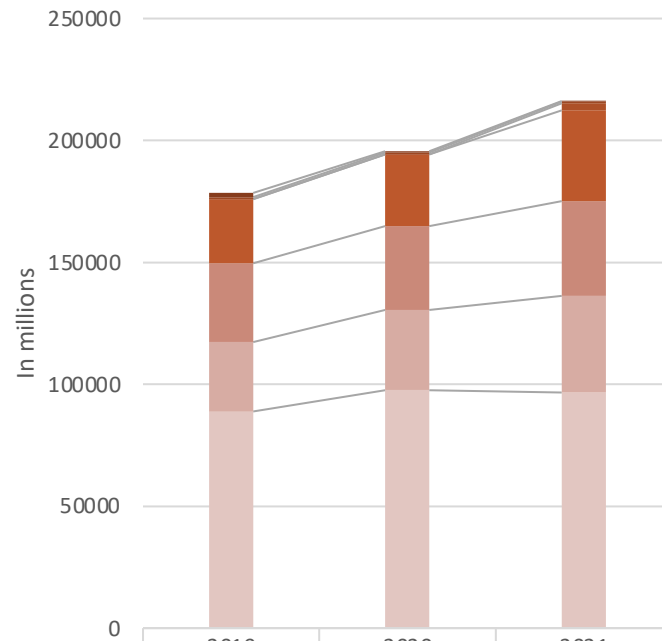
REGION	TELCO	CABLE	NON-TELCO	Grand Total
CAR		1	2	3
NCR	12	12	135	159
Region I		3	13	16
Region II		7	15	22
Region III	1	19	48	68
Region IV-A	2	33	45	80
Region IV-B	2	7	2	11
Region IX		1	13	14
Region V	1	11	20	32
Region VI	1	14	6	21
Region VII		11	32	43
Region VIII		8	15	23
Region X		7	9	16
Region XI		6	7	13
Region XII	2	5	7	14
Region XIII		5	4	9
Grand Total	21	150	373	544

Note: Regional addresses may not necessarily reflect areas of coverage.

Source: NTC (2022)

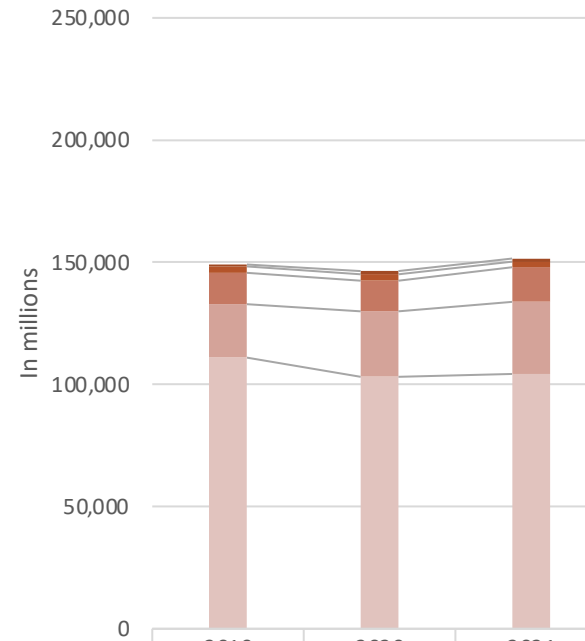
Last mile: Telco operators

PLDT service revenues



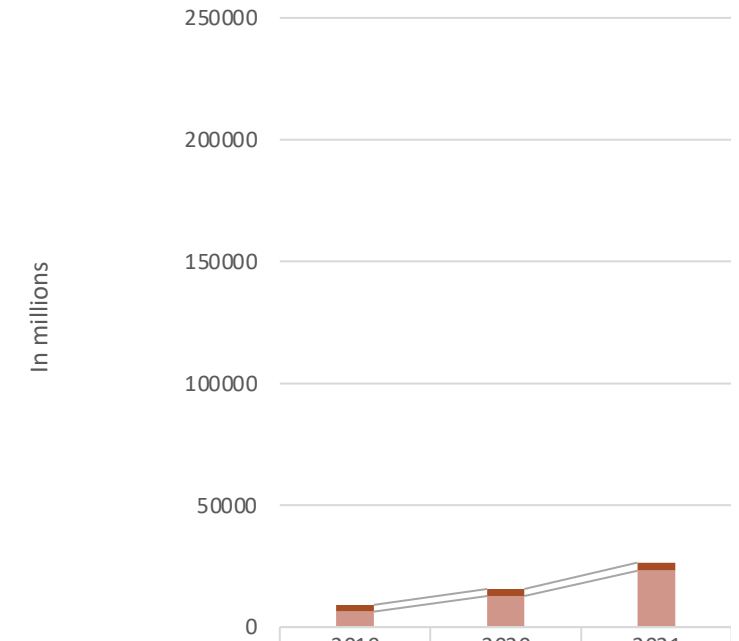
■ MVNO and others	1711	564	212
■ Miscellaneous	788	686	721
■ Fixed Wireless/Home Broadband	85	40	2889
■ Voice	26267	29541	37232
■ Corporate data and ICT	32315	34138	38853
■ Home broadband (Fixed line)	28449	33045	39723
■ Mobile	88865	97566	96538

Globe service revenues



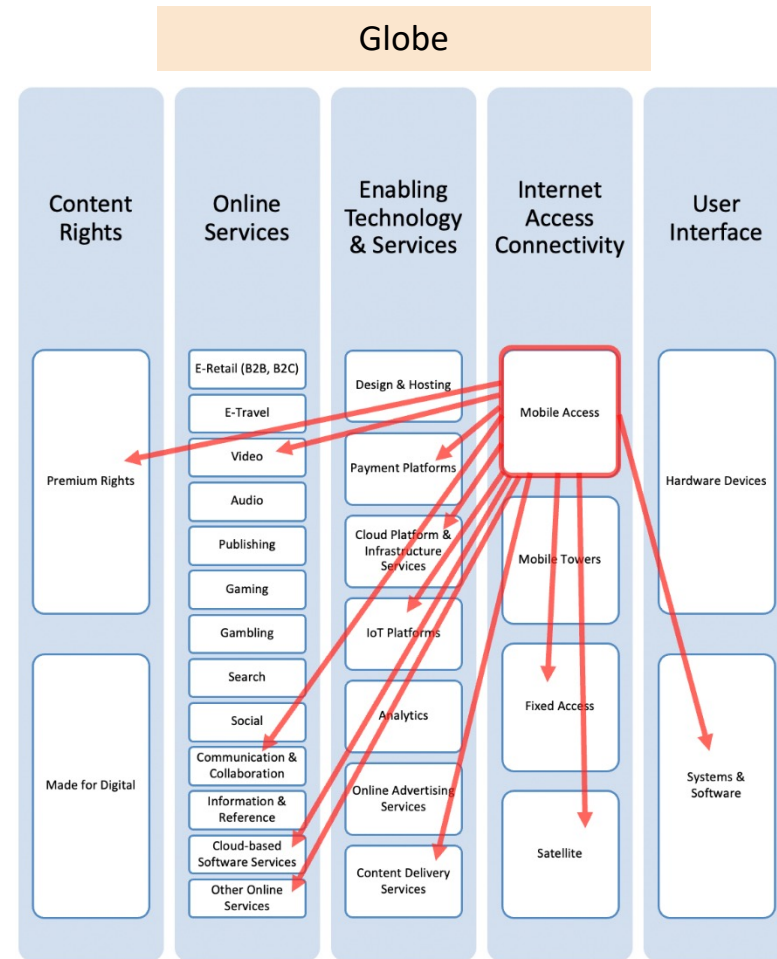
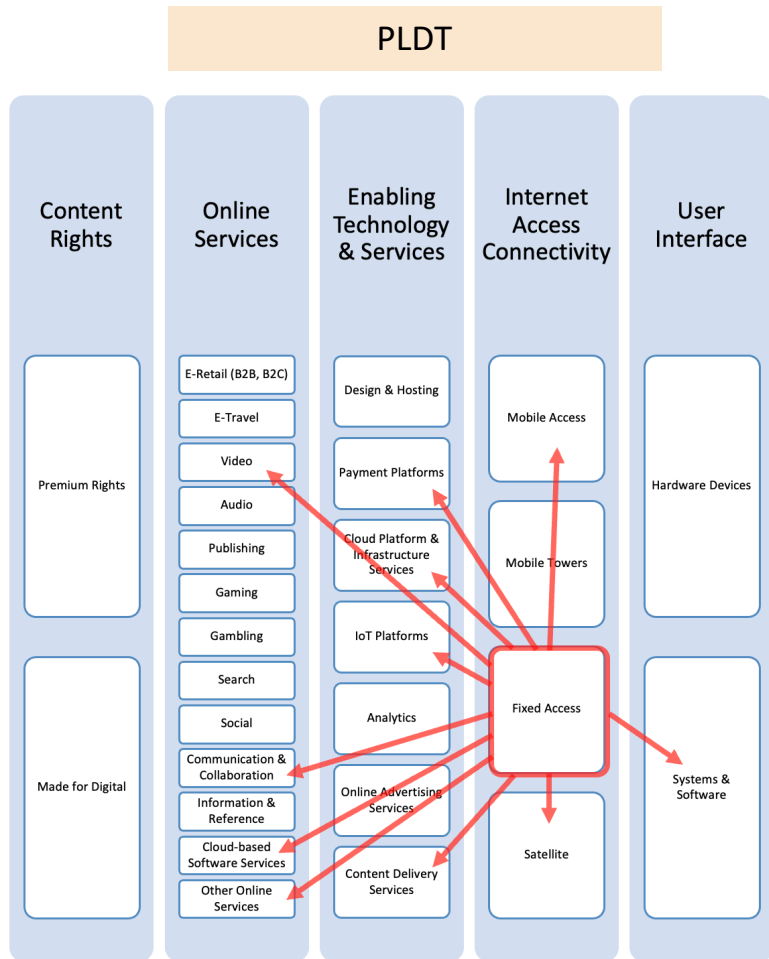
■ Others	662	1,317	1280
■ Fixed line Voice	2,668	2,620	2280
■ Corporate Data	12,969	12,539	14170
■ Home Broadband	21,747	26,798	29392
■ Mobile	110,965	103,113	104392

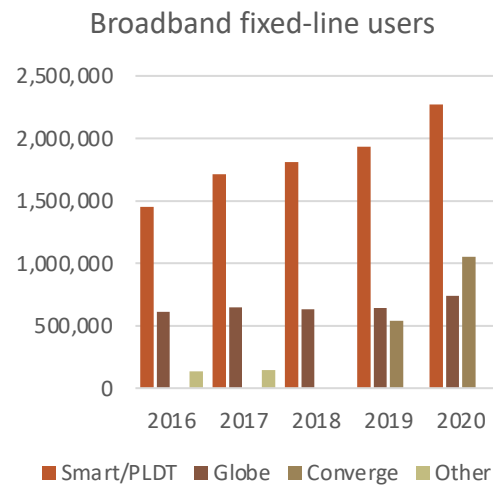
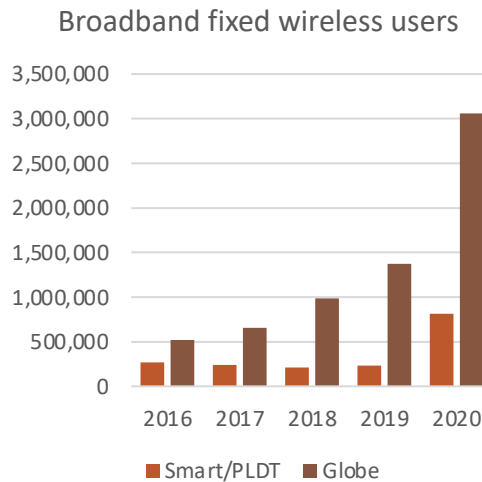
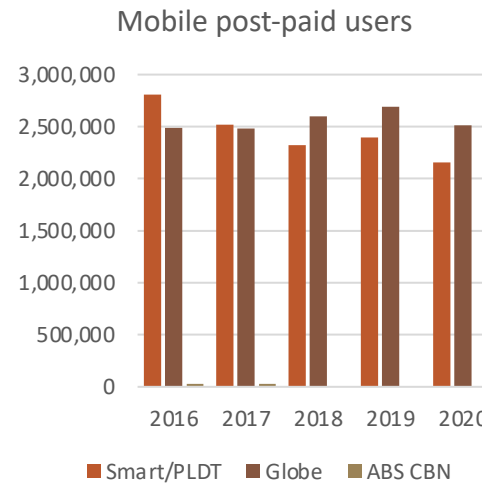
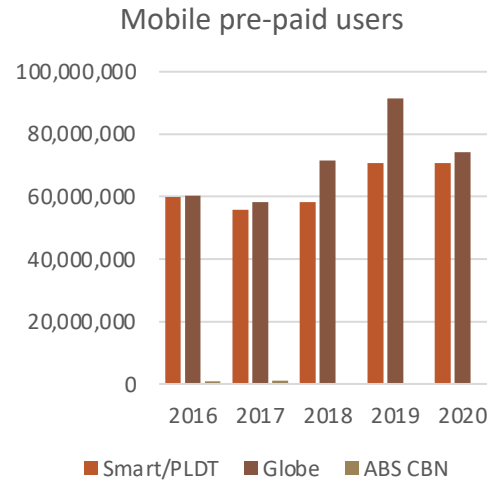
Converge ICT revenues



■ Enterprise business	2786	3024	3350
■ Residential business	6354	12628	23129

Telco operators: Service portfolio





Market share
based on number
of subscriptions

Market concentration of mobile services in selected ASEAN countries

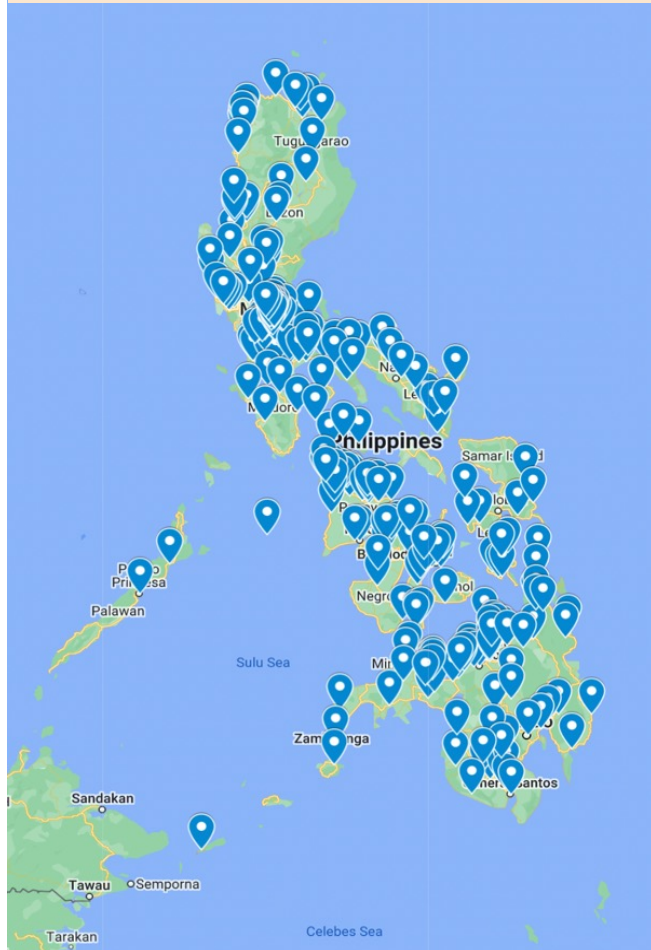
Country	Population (2021)	Population density (2021)	Land area in sq. km (2021)	Income status	HHI	Market Concentration	Major rival firms or industry players (rounded down)
Philippines	111,046,910	372	298,170	Lower middle income	4,942	Highly concentrated	Globe and Smart
Vietnam	98,168,829	317	310,070	Lower middle income	4,099	Highly concentrated	Viettel and VNPT
Malaysia	32,776,195	100	328,550	Upper middle income	2,089	Moderately concentrated	Maxis, Digi, Celcom, and MVNOs
Thailand	69,950,844	137	510,890	Upper middle income	3,425	Highly concentrated	AIS and True
Singapore	5,453,566	7,692	709	High income	3,705	Highly concentrated	Singtel and Starhub

Note: This table is used only as a summary. The computed HHI may not be comparable across the countries since it was based on mobile subscriptions or revenue at different years, depending on data availability. For the Philippines, HHI is computed in terms of mobile subscriptions as of the 2nd quarter of 2022; For Malaysia and Thailand, HHI is computed in terms of mobile subscriptions in 2021; For Singapore and Vietnam, HHI is calculated using the mobile market share by revenue in 2019. Population density = People per sq. km of land area.

Sources: MCMC (2021); Statista (2021c; 2022a); Rasmussen (2022); MIC (2020)

Last mile: Cable TV Operators

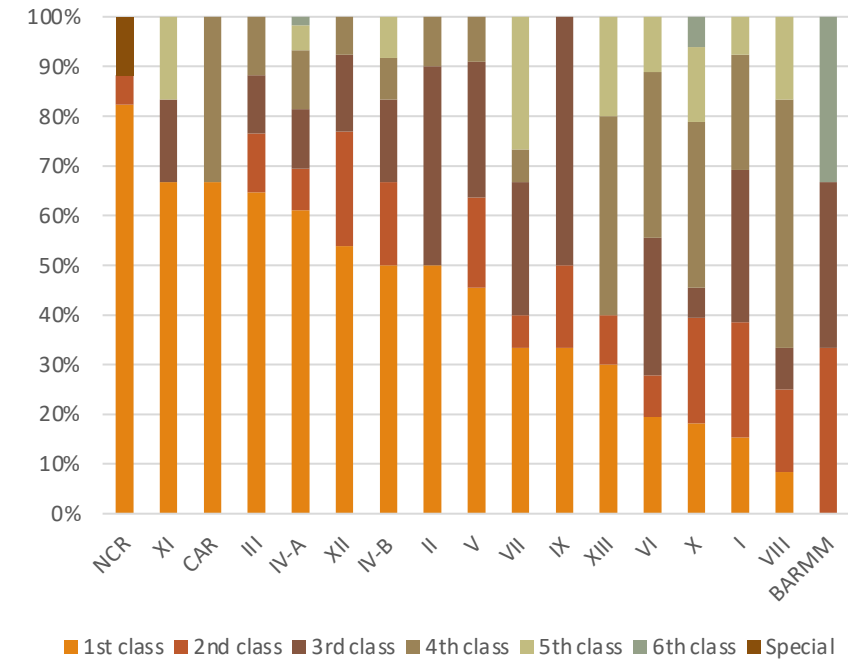
Income classification by region for cities/municipalities with at least one PCTA cable TV operators, September 2022



Region	Services areas
IV-A	59
VI	36
X	33
III	17
NCR	17
VII	15
I	13
XII	13
VIII	12
IV-B	12
V	11
II	10
XIII	10
IX	6
XI	6
BARMM	3
CAR	3
Total	276

Note: Service areas refer to the number of cities and municipalities covered by at least one PCTA member (Cable TV operators). This is an underestimation since there is no regional data for 175 cities and municipalities served by First United Broadcasting Corporation (FUBC).
Source: Authors' own based on personal communications with PCTA on October 26, 2022

Income classification by region for cities/municipalities with at least one PCTA cable TV operators, September 2022



Note: This is an underestimation since there is no regional data for 175 cities and municipalities served by First United Broadcasting Corporation (FUBC).
Source: Authors' own based on personal communications with PCTA on October 26, 2022

Last mile:
Satellite/VSAT
 providers
 with coverage
 including
 Philippines

Satellite/VSAT providers	Office location	Website address
TS2 Space	Poland	https://ts2.space/en/
Starlink SpaceX	Californium, US	https://www.spacex.com/
Kacific	Singapore	https://kacific.com/ph/
Businesscom Networks	South Africa	https://www.bcsatellite.net/
OneWeb	United Kingdom	https://oneweb.net/
Syntelix	Panama	https://www.syntelix.net/en
Enhanced Electronics and Communication Services, Inc.	Pasig City, Philippines	https://www.enhanced.com.ph/
Thaicom (IPSTAR)	Makati City, Philippines	https://www.thaicom.net/
AZ Communications Network, Inc.	Makati City, Philippines	https://azcomm.net/
Jason Electronics Philippines Co., Inc.	Quezon City, Philippines	https://jasonelectronicsph.com/
DelNet International Corp.	Manila, Philippines	https://www.delnetinternational.com/
iXSForAll, INC.	Makati City, Philippines	https://www.ixs.ph/
We Are IT Philippines Inc.	Mandaluyong City, Philippines	http://www.philsat.com/
Philippine Communications Satellite Corporation (PHILCOMSAT)	Makati City, Philippines	https://www.philcomsat.com.ph/
EasyCall Communications Philippines Inc. (ECP)	Taguig City, Philippines	https://www.easycall.com.ph/

Summary

- The size of the digital sector is significant and comprises various activities, processes, and industries. The digital economy in the Philippines accounts for the 9.6% of GDP in 2021.
- The internet connectivity segment is the most critical element of the internet value chain. Participants in the internet value chain ultimately depend on broadband networks to reach final users or consumers.
- The internet access connectivity segment is dominated by vertically integrated telecommunications companies, PLDT and Globe. The dominant firms in the internet connectivity segment have also expanded their footprint to other segments of the internet value chain.
- Other than telco operators, Cable TV operators and satellite/VSAT providers also provide broadband services.

Overview of the Philippine ICT performance

ICT Prices

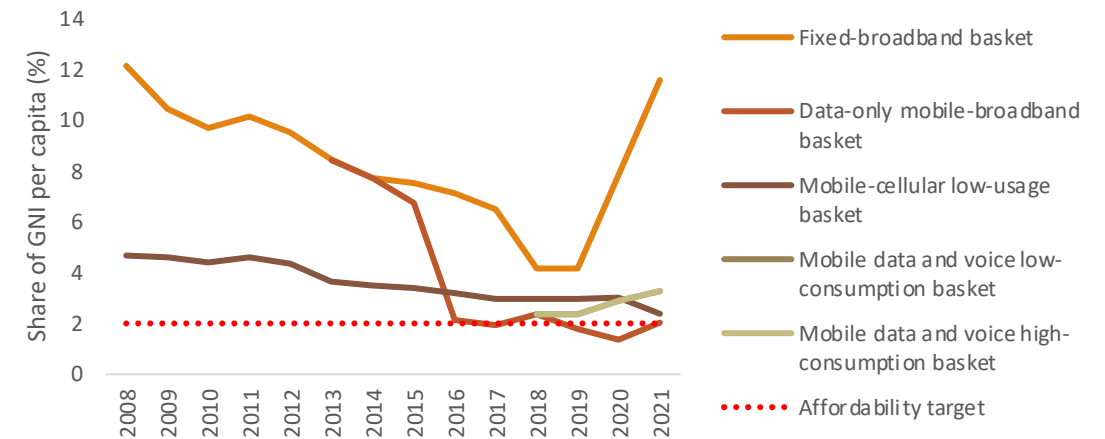
Philippines has the **3rd most expensive** ICT services across all price baskets among the **ASEAN** countries.

**In terms of share of GNI per capita:*

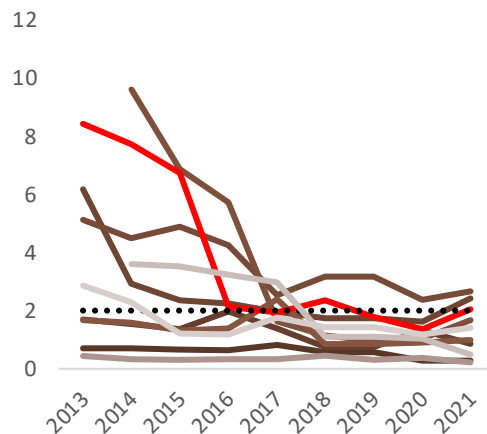
Data only mobile broadband - **most affordable** (2.04%*)

Fixed broadband - **most expensive** (11.56%*)

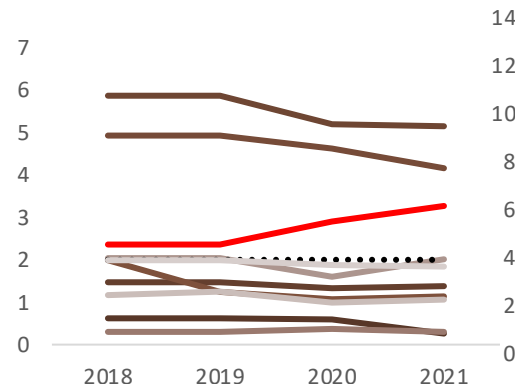
Philippine ICT price baskets



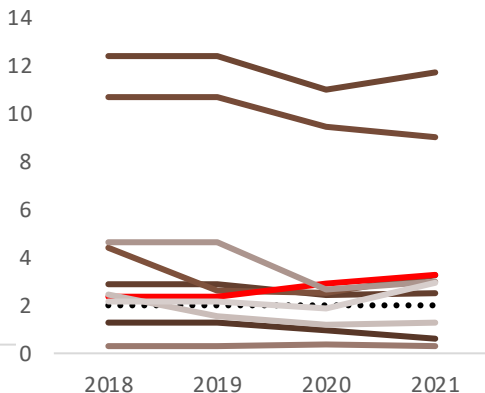
Data-only mobile broadband



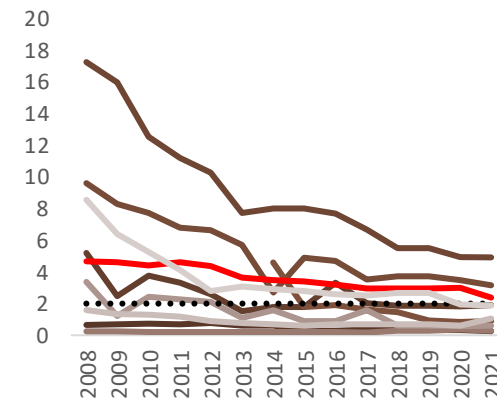
Mobile data and voice low-consumption basket, by ASEAN states



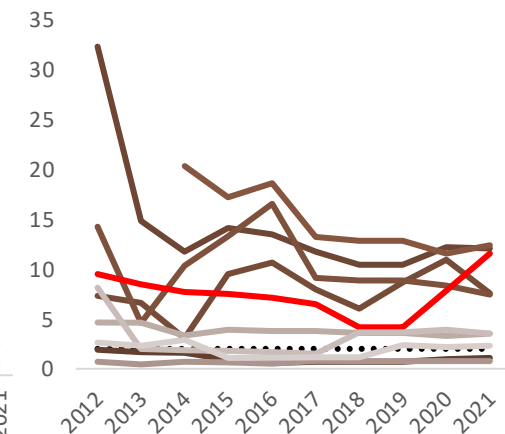
Mobile data and voice high-consumption basket



Mobile-cellular low-usage basket



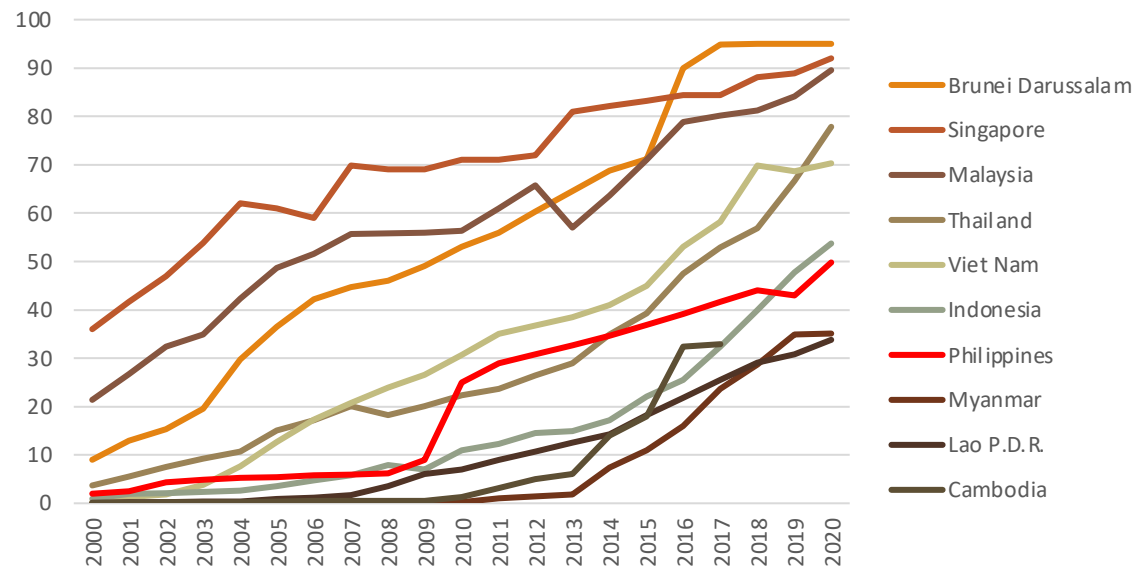
Fixed broadband basket



Availability

- In 2020, only **49.8% of individuals** in the Philippines are internet users.
- The Philippines, along with Cambodia, Laos, and Myanmar, **lags behind** other six (6) ASEAN members.

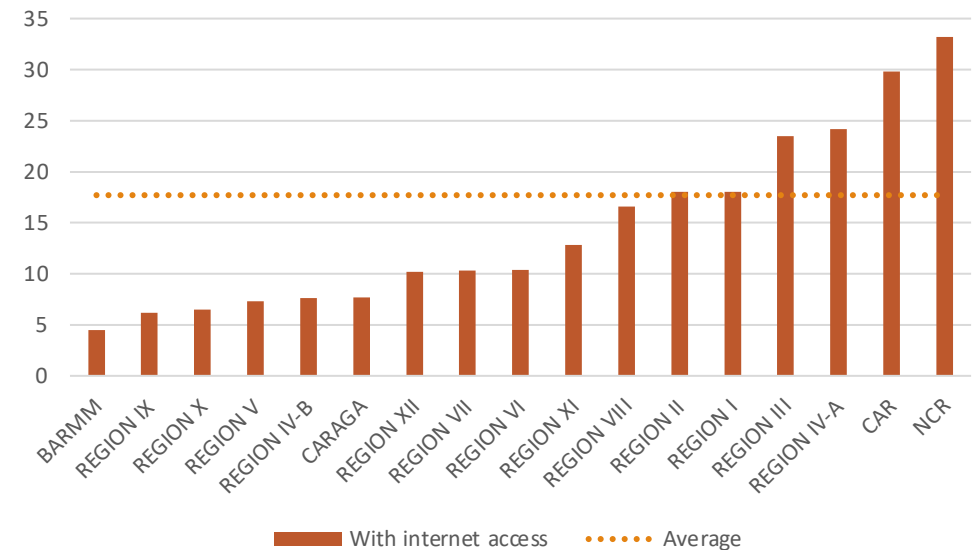
Percentage of individuals using the internet in ASEAN countries, 2000-2020



Source: <https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>
(accessed on April 21, 2022)

- **17.7% of households** in the Philippines have internet access.
- Regions NCR, CAR, IV-A, III, I, and II fall **above the average** number of household with internet access (**Luzon area**).
- Regions IX, X, and BARMM have the **least proportion** of household with internet access (**Mindanao area**).

Regional distribution of households with internet access, Philippines, 2019

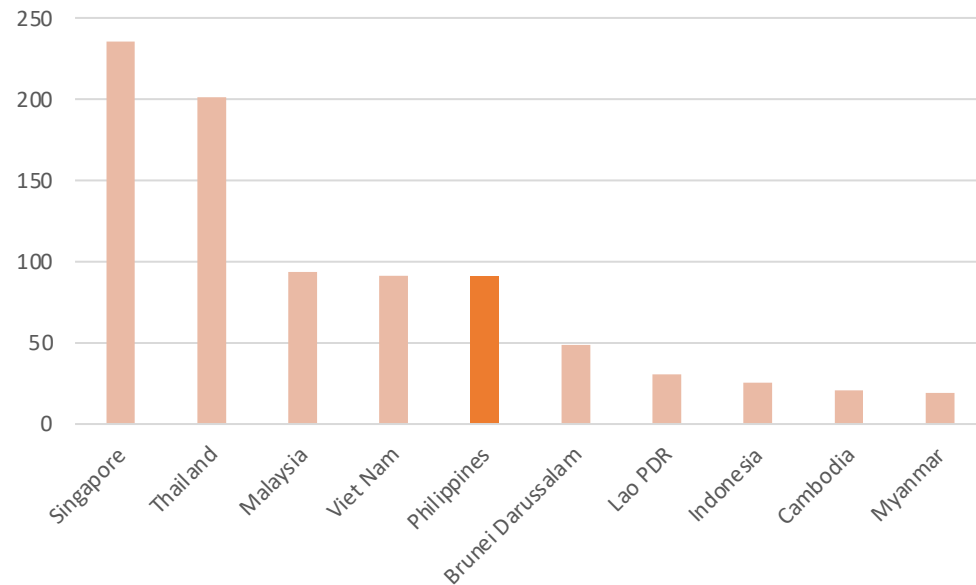


Note: NCR = National Capital Region; CAR = Cordillera Administrative Region; BARMM = Bangsamoro Autonomous Region in Muslim Mindanao
Source: NICTHS (2019) <https://dict.gov.ph/ictstatistics/nicths2019/>

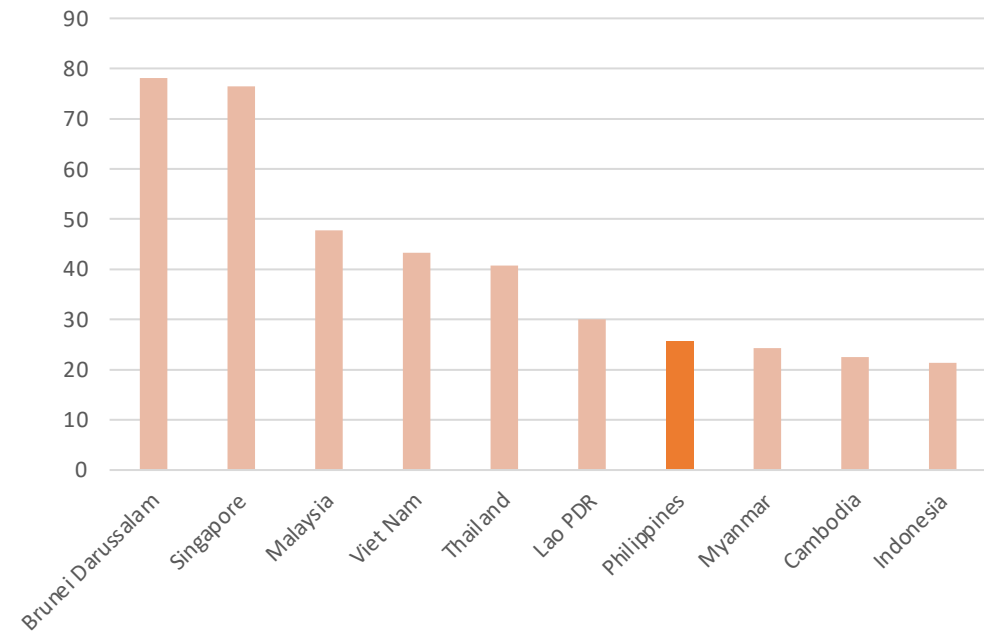
Speed

Philippines: Fixed and mobile download speed (Mbps), March 2023

Fixed broadband download speed (Mbps), March 2023



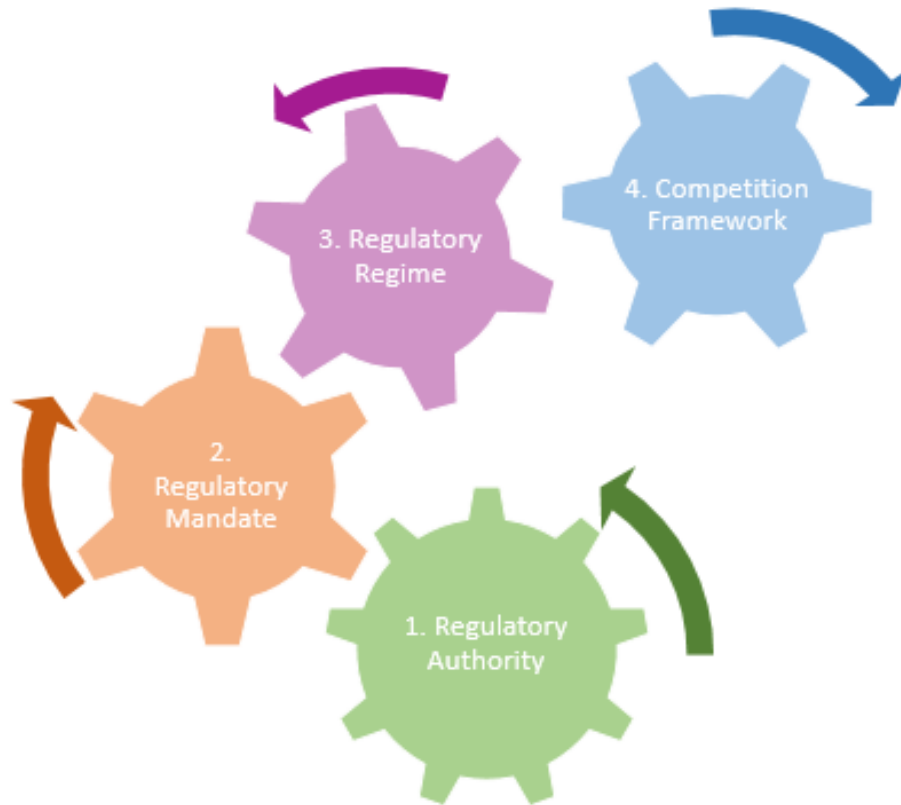
Mobile broadband download speed (Mbps)



Source: <https://www.speedtest.net/global-index> (accessed on April 18, 2023)

The Philippine regulatory environment: Issues and challenges

Four clusters of the telecommunications/ICT regulatory environment according to the ITU



Regulatory Authority

- Separate telecom/ICT regulator
- Autonomy in decision making
- Percentage of diversified funding
- Accountability, Enforcement power, etc.

Regulatory Mandate

- Distribution of regulatory functions
- Traditional mandate
- New mandate
- In charge of spectrum

Regulatory Regime

- Licenses
- Interconnection
- Quality of services, Infrastructure sharing, etc.

Competition Framework

- Level of competition allowed in different ICT services
- Legal concept & criteria of dominance & significant market power
- Foreign participation/ownership, etc.

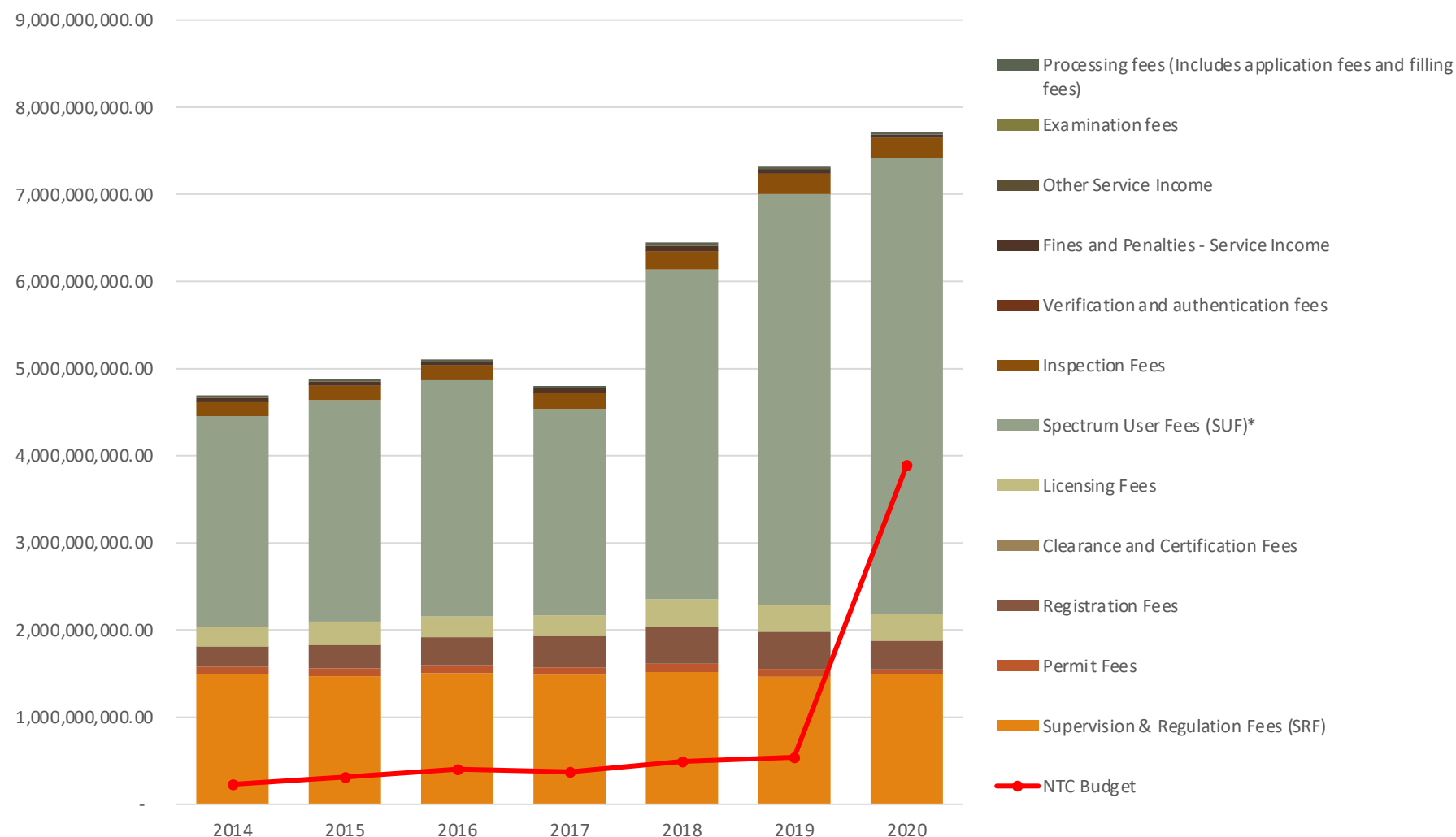
Relevant laws and regulations

- Public Telecommunications Policy Act of 1995 (RA 7925) and various Memorandum Circulars of the NTC
- Radio Control Law as Amended (RA 3846)
- Regulating the Operation of Cable Antenna Television (CATV) Systems (EO 205, s.1987); Prescribing Policy Guidelines to Govern the Operations of Cable Television (EO 436, s. 1997)
- Mobile Number Portability Act (RA 11202)
- Expanding the Provision of Internet Services through Inclusive Access to Satellite Services (Executive Order No. 127 s. 2021, Amending Executive Order No. 467 s. 1998)
- Public Service Act as Amended (RA 11659)
- Philippine Competition Act (RA No. 10667)
- Administrative Order (AO) No. 44 (s. 2021) – Directing the Adoption and Implementation of the National Competition Policy

Regulatory authority and independence

Independent regulator (the gold standard for the regulation of infrastructure services)	NTC
Created by law	Executive Order No. 546 s.1979
Board of commissioners (decision makers)	Headed by a Commissioner and two Deputies
Fixed terms for regulatory agency commissioners	NTC officials do not have a fixed term of office
Personal independence	NTC officials are not shielded from litigation NTC does not pay for the costs related to the litigation of its officials
Financial and organizational independence	Administrative structure and personnel decisions require approval by the DBM
Stable and reliable source of revenue; Diverse source of funding	Source of funding solely from government annual appropriations from Congress

NTC Budget vs. Revenues by source (PHP), 2014-2020



Regulatory mandate

- To regulate the installation, operation and maintenance of radio stations both for private and public use (Radio Control Law, Act No. 3846, as Amended).
- To regulate and supervise the provision of public telecommunications services (Radio Control Law, Act No. 3846, as Amended and Public Telecommunications Policy Act of 1995, RA No. 7925).
- To manage the radio spectrum (Radio Control Law, Act No. 3846, as Amended and Public Telecommunications Policy Act of 1995, RA No. 7925)
- To regulate and supervise radio and television broadcast stations, cable television (CATV) and pay television (EO No. 546 s.1979 and EO No. 205).
- Regulate, supervise and control all radio communications, telecommunications and broadcast, including cable television, facilities and services, and promote consumer welfare and protection

It is the role of the National Telecommunication Commission to “foster fair and efficient market conduct through, but not limited to, the protection of telecommunications entities from unfair trade practices of other carriers” (RA 7925 Art III Sec 5 d).

Spectrum management

- Radio spectrum is a finite resource. It is also a national resource.
- NTC grants permits for the use of radio frequencies via an administrative process. Any change in the assigned frequencies (e.g., recall) requires quasi-judicial process.
- Spectrum assignment is done using a “Beauty Contest” model (to the best qualified), but open tender is allowed by law
- No transparency in spectrum assignment
- Primary spectrum users not prioritized (e.g., military, law enforcement, and emergency services). No special consideration for public R&D.
- No coherent framework for all spectrum users
- No spectrum roadmap for future expansion

Licensing and authorization

Best practice (1 - Regulator) vs Philippines (2 - Congress and NTC)

Public Telecommunications Policy Act of 1995 (RA 7925)

- Congressional franchise - local exchange operator; inter-exchange carrier; international carrier; VAS (with network); Mobile radio services; Radio paging services
- Certificate of Public Convenience and Necessity from the NTC

Radio Control Law (RA 3846, as amended) - to construct, install, establish, or operate a radio station

Other licenses and permits (national and LGU level)

- 25 permits (average)

Quasi-judicial vs administrative process

Conditions to supply internet service

Internet service is considered a value-added service (VAS)

Two types of VAS providers:

PTE VAS provider

- Cannot cross-subsidize VAS offerings from the proceeds of utility operations
- Cannot discriminate other providers of VAS in terms of rates or deny equitable access to facilities
- NTC MC No. 02-05-2008: Public telecommunications (PTEs) shall offer leased line service to VAS providers at the same quality and at a price not higher than the prevailing leased line prices offered by the PTEs *to the public* [emphasis added]. Moreover, the PTE shall not deny requests by VAS providers for leased line service (Sec. B.4).
- Must maintain separate books of accounts for the VAS.

Non-PTE VAS provider

- Not required to secure a franchise from Congress.
- Cannot put up its own network. Should use the transmission network, toll or local distribution, of the authorized PTEs.

Interconnection and access pricing

The access charge or revenue sharing arrangements should be negotiated between interconnecting carriers.

NTC can intervene if parties fail to reach an agreement. Compulsory Arbitration and Interconnection Mandate considers various factors.

All authorized public telecommunications entities must submit Reference Access Offers (RAOs)

The NTC is responsible for determining if the terms and conditions of the RAO are reasonable, fair, consistent and non-discriminatory, in line with EO 59 s.1993 and RA7925.

NTC MC 10-07-2007: The terms and conditions of access are deemed discriminatory if they have an effect on the quality and timing of access that are not equivalent to that which the access provider supplies *to itself or affiliates* [emphasis added] (Art. II Sec.6.4).

Accounting separation

Where a single entity spans more than one category of telecommunications service, a separate book of accounts shall be maintained for each category or specialized classification.

PTEs must maintain separate books of accounts for their VAS.

NTC MC 12-05- 2000 - Uniform System of Accounts was developed which PTEs must use in all of the reports required to be submitted to the Commission.

Competition law & mainstreaming

Competition Law

- ❑ Prohibited acts under the PCA
 - Anti-Competitive Agreements
 - Abuse of Dominant Position
 - Anti-competitive Mergers & Acquisitions
- ❑ Mandatory notification of M&A
 - Threshold based on Size of Party (SoP) and Size of Transaction (SoT)
- ❑ Concept of dominance or Significant Market Power

Mainstreaming of Competition Policy

Administrative Order (AO) No. 44 (s. 2021) – Directing the Adoption and Implementation of the National Competition Policy.

All national agencies, GOCCs, and LGUs are directed to comply with the NCP by 1) adopting pro-competitive policies and interventions, 2) fostering a level playing field between public and private sector businesses, and 3) assisting the Philippine Competition Commission in enforcing the competition law.

Barriers to entry & expansion

- High cost of bandwidth
- Congressional franchise requirement
- Expensive pole rental and bureaucratic requirements
- Lack of technical competence

Examples of complaints or cases

- Interconnection
- Mergers & Acquisitions
- Exclusive dealings
- Spectrum assignment

Way forward

Recommendations (1/2)

- The agency responsible for regulating ICT must be strengthened to effectively carry out its mandate. The **independent regulator** model is the gold standard in the regulation of infrastructure services such as telecommunications. The NTC must possess the attributes of an independent regulator.
- A policy framework for the management of **radio spectrum** is needed to ensure proper sub-allocation, assignment, use, and valuation.
- There is need to reform the **licensing regime**. It is restrictive and burdensome, resulting in costs and delays in network buildup and the deployment of new technology. A main barrier to entry is the legislative franchise requirement. Obtaining and renewing a franchise, which is inherently a political process, contributes to uncertainty and increases the risks of investing in the digital infrastructure in the Philippines.
- Along the entire value chain, internet access connectivity is the most critical element linking the various participants in the digital sector. This segment also has the highest barriers to entry. Although natural barriers to entry exist, regulatory and strategic barriers further constrain competition.

Recommendations(2/2)

- **Access regulations** exist to ensure that PTEs in the upstream wholesale market do not hurt the viability of downstream retail firms, but these will need to be strengthened and effectively enforced.
- An **open access framework** and increased **transparency** will reduce the barriers to entry and help facilitate the growth of broadband.
- **M&A review criteria** may need to adapt. Thresholds for compulsory notification of M&As are based on the value of assets or revenues, which determine the size of the party or transaction.
- Various permits and procedures add to the cost and delays. National and local regulators must continue to work together to streamline requirements. **Collaboration** among various stakeholders is also needed to identify existing and emerging issues.
- Invest in developing the **broadband workforce**. Ensure that the workforce needed for the deployment of broadband networks across the country is available.
- Reducing the **digital divide** in terms of internet access must continue to be the policy priority.



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