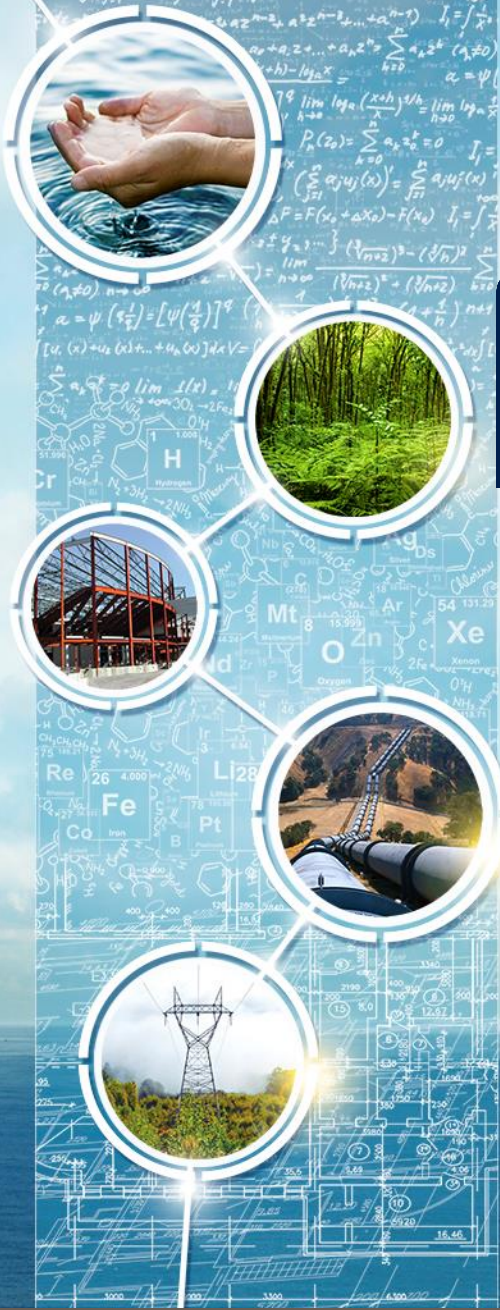

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Competition Policy

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Agenda

- Competition Law & Policy
- Interconnection
- Pricing and Access
- Infrastructure Sharing
- Sector Specific Regulations
- Digital Platforms
- Licenses and Innovative approaches
- Conclusion

Competition Policy-Definition

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- Competition law is a law that promotes or seeks to maintain market competition by regulating anti-competitive conduct by companies.
- Competition law is implemented through public and private enforcement. In the US it is known as "antitrust law" and as "anti-monopoly law" in China and Russia.
- In previous years it has been known as trade practices law in the United Kingdom and Australia. In the European Union, it is referred to as both antitrust and competition law.
- The history of competition law reaches back to the Roman Empire. The practices of market traders, guilds and governments have been subject to scrutiny.

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Competition Law

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- The two largest and most influential systems of competition regulation are United States antitrust law and European Union competition law. National and regional competition authorities across the world have formed international support and enforcement networks.
- The protection of international competition is governed by international competition agreements.
- Competition law, or antitrust law, has three main elements:
  - Prohibiting agreements or practices that restrict free trading and competition between business.
  - Banning abusive behavior by a firm dominating a market, or anti-competitive practices that tend to lead to such a dominant position.
  - supervising the mergers and acquisitions of large corporations, including some joint ventures.

Competition Law (continued)

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- Transactions that are considered to threaten the competitive process can be prohibited altogether, or approved subject to "remedies" such as an obligation to divest part of the merged business or to offer licenses or access to facilities to enable other businesses to continue competing.
- Substance and practice of competition law varies from jurisdiction to jurisdiction.
- Protecting the interests of consumers and ensuring that entrepreneurs have an opportunity to compete in the market are key goals.
- Competition law is closely connected with law on deregulation of access to markets, state aids and subsidies, the privatization of state owned assets and the establishment of independent sector regulators, among other market-oriented supply-side policies.

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Competition Law

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- First it is necessary to determine whether a firm is dominant, or whether it behaves "to an appreciable extent independently of its competitors, customers and ultimately of its consumer".
- Under EU law, very large market shares raise a presumption that a firm is dominant.
- If a firm has a dominant position, then there is "a special responsibility not to allow its conduct to impair competition on the common market".
- Similarly as with collusive conduct, market shares are determined with reference to the particular market in which the firm and product in question is sold.

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Competition Law (Continued)

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- When firms hold large market shares, consumers risk paying higher prices and getting lower quality products than compared to competitive markets.
- The existence of a very high market share does not necessarily mean consumers are paying high prices it just means that this is a likely outcome.
- Competition law does not make merely having a monopoly illegal, but rather abusing the power that a monopoly may confer, for instance through exclusionary practices.
- A merger or buyout involves, from a competition law point of view, the concentration of economic power in the hands of fewer firms than before.

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Mergers

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- **Mergers**--Merger control is about predicting what the market might be like, not knowing and making a judgment.
- EU law asks whether a concentration *would*, if it went ahead, "significantly impede effective competition... in particular as a result of the creation or strengthening off a dominant position. The US takes a similar role.
- Both rely on the Herfindahl-Hirschman Index to calculate the "density" of the market, or what concentration exists.
  - The H-H Index is a measure of the size of firms in relation to the industry and an indicator of the amount of competition among them.
- Competition law has become increasingly intertwined with intellectual property, such as copyright, trademarks, patents, industrial design rights and in some jurisdictions trade secrets.

Competition Policy: an Overview

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- The aim of competition policy is to promote sustainable competition.
- Competition analysis generally asks the question: Will a given practice, transaction, or business acquisition reduces competition or increase market power in a given market?
- The level of competition in a market depends on the structure of the market, and whether it meets the conditions for effective competition.
  - Whether any firms in the market have market power, and the impact of the trade practice or business acquisition in question on market power
  - Do any firms in the market have a dominant position or significant market power in the market.
  - Are there any barriers to entry or exit and the potential for competition from new entrants and lastly, what is the role of any essential facilities?

Competition Law

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- In a market economy, business competition is generally left to be determined by market forces.
  - However, in some cases this is not possible and competition law is intended to rectify such market failures.
  - One main issue is abuse of dominant position
  - To avoid this most countries have laws requiring the prior approval from competition authorities for firms of a certain size who want to merge.
  - To determine the dominant position, it is important to determine what the relevant market is – the product (or service) as well as the geographical market

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Market Power

- Market power is the ability of a firm to raise prices above competitive levels, without promptly losing a substantial portion of its business to existing rivals or firms that become rivals as a result of the price increase.
- Market power is only damaging if the firm concerned abuses its power. Should a firm with market power raise prices above competitive levels, this can dampen consumer demand, generate efficiency losses, and harm the public interest.
- Firms with significant market power or dominance may be able to implement a range of strategies to reduce competition, and enhance their position in the market.

Dominance

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- Under the European Commission Guidelines, a firm has significant market power if, either individually or jointly with other firms, it has a position that allows it to behave in a way that is appreciably independent of its competitors and customers.
- There is no universally accepted definition of dominance. In general, a firm is considered to be dominant based on its market share
- The European Commission defines "Significant Market Power" SMP as the ability of a firm to act independently of competitors and customers.

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Market Power

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- Under the European model, firms that are found to have SMP are subject to additional ex ante regulatory obligations. This allows telecommunications regulators to impose ex ante regulatory obligations on firms with SMP, such as:
  - Obligations to align interconnection prices with costs,
  - Accounting separation requirements, and
  - Mandatory publication of reference interconnection offers.
- The WTO Reference Paper cites marker power and dominance as key barriers to competition.

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Competition Terms Defined

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- A **barrier to entry** (typically in the long run) is a cost that a new entrant incurs, but that incumbent firms avoid. This cost asymmetry can prevent the potential entrant from competing with the incumbent even if its other costs are exactly the same as the incumbent's, and both face identical prices.
- A **barrier to exit** is a cost (typically experienced only when exiting the market) that is so prohibitive that it can reduce, or destroy altogether, a firm's incentives to enter the market in the first place.

Competition Terms Defined

- **Essential facilities** are resources or facilities that are both fully owned and controlled and serve as critical inputs to production.
  - The regulator's responsibility is to ensure fair competition, that services and facilities are made available to consumers, interconnecting operators and service providers at cost based prices, and that operators and service providers in a position of dominance do not discriminate against existing or potential new competitors by subsidizing their competitive business with the benefits of their non competitive businesses or through other anti-competitive practices such as predatory pricing.
- **Predatory pricing:** A pricing strategy used by firms to eliminate competition in the market by offering prices below cost and maintaining this price until competitors are forced to incur large losses & exit the market.

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Competition Terms Defined

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- **Tying** of services occurs where a service provider makes the purchase of one product or service over which it has market power conditional on the purchase of a second, competitively supplied, product or service.
  - By tying services, a service provider can try to use market power in one market to give itself an advantage in another, competitive market.

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Interconnection

Interconnection

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- Although the term interconnection and the term access are often used interchangeably, they are very distinct.
  - Interconnection is a bridge between different networks to enable customers of each network to communicate with each other.
  - Access enables an operator to use the facilities and / or services of another operator
- Interconnection means the physical and logical linking of public electronic communications networks
- Access means the making available of facilities and/or services, to another undertaking, under defined conditions

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Quality of Service in Interconnection

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- Regulators also need to consider quality standards for interconnection.
  - Is the quality of service provided by an incumbent to an interconnecting entrant the same as to its own retail customers?
  - Is the overall level of quality consistent with that of increasing competition; would some customers sacrifice quality for lower prices, sparking a "race to the bottom" for quality?
- Because incumbents perceive that the value of potential losses outweighs the gains, they often engage in strategies to hinder interconnection and protect their markets by delaying implementation of an agreement or by charging excessive fees

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Interconnection in an IP World

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- Traditional interconnection regulation was established for telecom operators with interconnection rates generally based on time (*i.e.,* per minute).
- Services based on IP protocol, however, do not fit within the traditional schemes of switched voice interconnection, e.g., IP interconnection separate out transport from service, while legacy networks combine them.
- Interconnection between PSTN networks is relatively simple and well established, and does not raise interoperability issues, but IP Interconnection requires different kinds of access and different kinds of charges.
- Countries are addressing these needs by introducing: (i) both symmetrical & asymmetrical interconnection, (ii) new kinds of "access" through interconnection regulation and (iii) a technology-neutral interconnection charging system based on capacity, instead of time and distance

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International Gateways

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- An International Gateway is defined as any facility through which international telecommunications traffic is sent and received.
  - IGWs are potential bottlenecks in any nation's telecom market as they often restrict international traffic flows and maintain artificially high prices.
- A nation's ability to fully participate in the global Information Society may be impeded due to the high costs of Internet access or international communications.
- By liberalizing the IGWs and allowing large number of operators, including those who operate domestic networks, to operate international gateways, incentives for illegal behavior, i.e., bypass, will disappear as the termination rate drops significantly.
- International calls will flow through legal channels, yielding taxes to the government and drying up the corrosive flow of black money.

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- One example of the challenges caused by new Interconnection regulations is the wide spread use of text messages or SMS. Today SMS is not only between users within the same mobile operator but can be transmitted from call centers and websites, and even be received by fixed line users.
- This has pushed the boundaries of voice-focused interconnection policies and has forced regulators to consider whether traditional interconnection regulations should apply to SMS traffic between mobile operators, content providers and fixed line operators. In Bahrain, Venezuela, and Mexico, regulators ordered interconnection for SMS providers.
- Another challenge is the emergence of multimedia applications and other applications on mobile phones, prompting questions as to whether mobile operators are ISPs and whether there should be any limitations on the ability of users to access mobile portals.

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WTO Reference Paper

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- WTO established certain principles for Interconnection
  - Charges should be cost-based
  - They should be non-discriminatory
  - Agreements should be made public (transparency)
- The terms of interconnection between the networks of different operators or between the national backbone network and the network of other operators, are often described in a reference interconnection offer (RIO).
  - RIOs typically provide the complete terms and conditions applicable to an Operator's offerings

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Regulators Toolkit

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- The key concepts in the regulator's access pricing tool kit are:
  - Cost Oriented pricing
  - Cost models
  - Regulatory Accounting
  - Benchmarking
  - Bill and Keep
  - Volume Based Charging

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Pricing

- It is important to be clear about what is meant by "prices".
  - A price for a given telecommunications service is more than just the charges for that service it consists of a description of the service, the terms and conditions of service provision and the applicable charges
- Prices are based on underlying cost using an acceptable methodology, LRIC, FDC
- Prices are non-discriminatory
- Prices are transparent

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Pricing Issues (continued)

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- **Cost Oriented Pricing**--These can be bottom up or top down cost models or from benchmarking rates in similar countries who have used cost models.
- **Cost Model**--These can be bottom-up costing for LRIC (long-run incremental costs) where a firm prices in such a way as to cover only the incremental costs of the product (ie the product's LRIC), sales of that product make no contribution to the firm's common costs. There are many variations around this but it is sufficient to consider LRIC to understand the issues and principles
- **Regulatory accounting**---top-down costing associated with FDC (fully distributed costs) where all costs, including joint and common costs, are fully allocated to all the operator's services/products according to a specified distribution/allocation key. The costs of a given service/product are composed of direct volume-sensitive costs, direct fixed costs and a share of joint and common costs.
- **Benchmarking**---compares access prices across a peer group of countries to determine what price would be reasonable.

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Cost Models

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- What is a cost model?
  - A methodology for estimating a provider's cost of offering a service (or facility)
  - Motivated by widely-accepted premise that service tariffs/prices should be cost-orientated
    - Prices should relate to underlying costs
  - Measures the direct and indirect costs of providing interconnection
- Captures the volume sensitive & fixed costs that are directly identified with interconnection + a share of common overhead cost
  - Involve determination of many input variables
  - Typically implemented in spreadsheet program or similar software

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Types of Cost Models

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- Fully Distributed Costs
  - Allocating all costs of the firm to the services provided
- Incremental Costs
  - Changes in firm's cost due to change in output of one service, holding other output constant
  - Must account for fixed ("overhead") costs
- "Long Run" adds notion of efficient costs, rather than embedded costs. These are the Costs associated with a provider employing efficient technology & operations

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Benchmarking

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- A more practical alternative to developing cost models for a developing country with limited resources is benchmarking.
- Regulators in many jurisdictions have used benchmarking to set initial interconnection rates.
- For example Botswana used benchmarking to resolve an interconnection dispute quickly.
- Benchmarking has two main purposes in interconnection pricing.
- Where detailed cost models can be estimated, benchmarking can be used as a check on the results of the modelling.
- Alternatively, benchmarking can be used directly to set interconnection prices.

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Regulatory Accounting

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- A top-down model separates the firm's assets and costs into service groups, and then adds the extra costs associated with interconnection to arrive at an estimate of LRIC.
- Top-down modelling uses the firm's current operating costs and either historic cost accounting (HCA, which HCA reflects the cost at the time of purchasing the asset) or current cost accounting (CCA, where network assets are valued at replacement costs).
- This usually involves the following five steps:
  - **1: Identify the firm's services** and separate out interconnection services
  - **2: Identify and separate all costs and assets** in the firm's accounts
  - **3: Allocate all directly attributable costs.** If a cost item or asset is attributable to only one service, allocate it to that service
  - **4: Allocate shared and common costs** across services using allocation rules
  - **5: Calculate LRIC for each service** by adding up the costs allocated to that services, including an appropriate return on those assets allocated to the service.

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Infrastructure Sharing

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Infrastructure Sharing

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- The General Consensus among Regulators is that infrastructure sharing should be based on cost-oriented pricing and open access models.
- The EU considers infrastructure sharing to be just another example of unbundling.
  - It says access to existing civil engineering infrastructure of a regulated operator such as in a wholesale network infrastructure should be priced with the same methodology used for pricing access to the unbundled local copper loop. As such it takes into account actual lifetimes of the relevant infrastructure.
  - The same method applies to new (fiber) infrastructure except that a higher risk premium may be allowed in the return to capital (WACC).

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Infrastructure Sharing

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- Infrastructure sharing is a key element in promoting competition among market players.
- Infrastructure sharing limits duplication of services and of scarce resources, especially in developing countries.
- Investments in poles and other fixed infrastructure such as Fiber is sunk and irreversible cost.
- Maintaining and upgrading infrastructure comes at a significant cost and reduces the number of players (firms) in the market.
- Infrastructure sharing has great impact on competition. It significantly lowers the cost to entry into the market and makes the market more attractive to new players.
- These new players can enrich the competition while investing effectively in a country. By alleviating pressure of network deployment, sharing allows operators to turn their attention to improved innovation, better customer service and eventually better commercial offerings and healthier competition

Infrastructure Sharing (continued)

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- Telecom providers can share infrastructure in many ways, depending on telecom regulatory and legislation.
- Passive infrastructure sharing is sharing non-electronic infrastructure at cell site.
    - Passive Infrastructure is becoming popular in telecom industry worldwide.
  - Site sharing includes antennas and mast; this may also hold Base transceiver station (BTS), Node B in UMTS context and common equipment such as Antenna system, masts, cables,ducts, filters, power source and shelter.
  - Sharing a mast is called mast sharing.
  - Antenna sharing shares an antenna and all related connections (coupler, feeder cable), in addition to passive radio site elements.
- Active sharing is sharing electronic infrastructure.
- Spectrum-sharing is based on a lease model and is sometimes called 'spectrum trading'. It is where an operator lease a part of its spectrum to another operator on commercial terms.

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Open Access

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- Open Access to Infrastructure Sharing
  - Open Access is about creating competition in all layers of the network allowing a wide variety of physical networks and applications to interact in an open architecture.
  - Allows anyone to connect to anyone in a technology-neutral framework
  - Encouraging innovative and low-cost service delivery
  - Encourages market entry from smaller, local companies by lowering the entry barriers and reducing the likelihood of one entity becoming dominant.
- Requires trust in parties.
  - The service provider needs to feel that the infrastructure provider is going to tackle his/her needs with same degree of attention as if the organization was doing it itself.
  - That pricing and access terms will be transparent and nondiscriminatory.
  - That the Incumbent's transport services will be separate from its access services to build this essential trust.
  - That Governance structures with oversight powers will be set up to monitor the operators

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Sector Specific Regulations

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Sector Specific Regulation

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- Sector-specific regulation addresses specific concerns that arise how the industry is regulated.
- Common law imposed special regulatory obligations on businesses operating in the "public interest" or for the "public convenience and necessity".
- These regulations centered around necessary infrastructure for commerce and daily life such as toll roads, inns, and teamsters and generally involved aspects of "common carriage."
- common-law common carriage responsibility arose from a combination of several factors.
  - What is the "public-facing" nature of the business, i.e., did the business offer service indiscriminately to all members of the public, instead of having special negotiated rates for tradesmen on an individualized basis.

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Sector Specific Regulation

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- Regulation should focus on eliminating those elements that create monopoly, rather than focus on changing behaviors of the firms.
- Rules should clearly delineate permissible from impermissible conduct rather than rely on resolving disputes after they arise.
- New technologies are never a panacea for old problems, and they do not displace the need for regulation or structural remedies.
- Without regulatory action, markets lend themselves to concentration, cartelization, and segmentation.
- Sometimes, there is no substitute for rate regulation or other “natural monopoly” regulation.

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- Competition does not, in and of itself, provide adequate protection for consumers.
- The history of telecommunications in the US shows that while competition has flourished and created new innovations, it has also created new consumer problems that require new regulatory protections.
- The critical nature of the basic services such as Voice or Emergency Services underscores the need to have a sector-specific regulator capable of acting swiftly to address these problems when problems occurs.

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Digital Platforms

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Digital Platforms

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- Digital platforms play a central role in the economy and our everyday lives. Each platform has distinct characteristics, but in recent years specific concerns have grown around their dominance in the marketplace and impact on key parts of daily life.
- First we must define the term "digital platforms"
  - A service accessed via the internet;
  - A service that is two-sided or multisided, with at least one side open to the public and allows members of the public to produce content, buy and sell goods or services, or otherwise interact in ways that enable them to be more than simply passive consumers of goods and services; and,
  - The service enjoys Reed- or Metcalf-type network effects

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What is a Digital Platform?

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- The question of defining "digital platforms" is not simply important for market definitions.
- It also relates to what constitutes appropriate standards of conduct and consumer protection.
- The bulk of regulation designed to promote competition generally applies only to dominant firms.
- Traditionally, we have divided activities into various lines of business and then determined what sort of behaviors harmed consumers, but with digital platforms they potentially perform multiple diverse functions in diverse markets simultaneously. So the traditional way of dividing markets and declaring dominance does not work.

Digital Platforms: Is Regulation the Answer

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- Calls for regulation of search and social media platforms, from both the left and the right, have argued that comprehensive regulation is needed either because of the monopoly power of these companies, or because they constitute "public utilities" and should therefore be regulated like public utilities
- There is a growing public demand for Internet platforms to intervene more aggressively in online content.
- Calls for companies like Google, Apple, YouTube, Facebook, Amazon, Twitter and Microsoft to fight problems ranging from "fake news" to online radicalization seem to make daily headlines all over the world.

Digital Platforms: Is Regulation the Answer

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- Efforts to impose some sort of regulation or taxes on these providers are heard often in the halls of parliaments all over the world
- Experience and economics tell us that digital platforms have a strong, perhaps overwhelming, tendency to concentration. But it also tells us that trying to impose regulations or taxes that do not make sense will cause economic harm to all
- We need to work with all partners in this digital world to create regulation that will work.
  - This might include creating one agency that has ongoing oversight of the sector and also creating a new regulatory toolkit for competition.

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Licenses

Licensing

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- Opening up licenses to many new players is one of the main tools that Regulators have in their Regulatory toolkit
  - Traditionally, the number of licensed voice telephony or broadcasting operators has been limited.
  - Previously, authorization and licensing of service providers was based on the type of service (voice, data, and video) or technology (cellular, fixed telephony, terrestrial broadcasting).
  - However, in a converged setting and as regulators are trying to bring more competition into the market these restrictions and specific licenses become difficult to maintain
  - Further, cellular operators are providing mobile television services
  - Over the Top Services are offering a plethora of different services
  - Other companies, such as Netflix and Amazon are offering shows just for the Internet

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Regulatory Principles for Licenses

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- Regulators are encouraged to consider the following principles when transitioning to and adopting a converged licensing framework:
  - Fostering technology neutrality;
  - Ensuring flexibility to allow the new licensing regime to accommodate future technological and market changes;
  - Simplifying the number of license categories;
  - Reducing administrative burdens and fees on market players;
  - Ensuring transparency with regard to converged licensing responsibilities;
  - Foster close collaboration amongst appropriate entities with regulatory and oversight responsibilities regarding a converged licensing framework; and
  - Refer to international best practices and international regional organizations to help harmonize licensing approaches.

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Classes of Licenses

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- There are seven classes of licenses
  - Individual
  - Class
  - Registrations
  - Notifications
  - Open Entry
  - Social Purpose
  - Experimental

Licensing (continued)

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- Many regulators and policymakers have already modified their licensing regimes from the traditional one-service or technology license to a technology neutral, simplified set of licensing categories, and in some cases, a unified (single) license or market entry procedure for all technologies and services.
- Many countries are combining this simplification with the introduction of flexible licenses that use a technology and service neutral approach to determine the rights and obligations granted by the licenses.
- These update the obligations for Interconnection, numbering, universal service and consumer protection rules to the new environment of convergence
- Along with a new licensing structure, it is also necessary to simplify market entry procedures as well as to simplify the administrative requirements for all telecom operators.
- This involves modifying general authorization to allow more services to be provided

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Conclusion

- Definitions of Competition law and policy and what markets are covered under Competition Law
- Defined a series of Competition law and policy terms
- Various tools that Regulators can draw upon in the Regulator's toolkit to ensure that the market remains open and transparent
- Digital Platforms and how and why traditional competition law may not cover these issue
- Is traditional regulation the answer or do we need some other type of regulation or no regulation at all

Conclusions

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- How to we ensure that access to affordable and available spectrum is available to every community, enabling them to reap the social and economic benefits of ICTs
- Lastly, what tools do policy makers and regulators have at their disposal so that they can meet the Sustainable Development Goal 9C- Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020

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Thanks
Questions, Comments, Suggestions

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