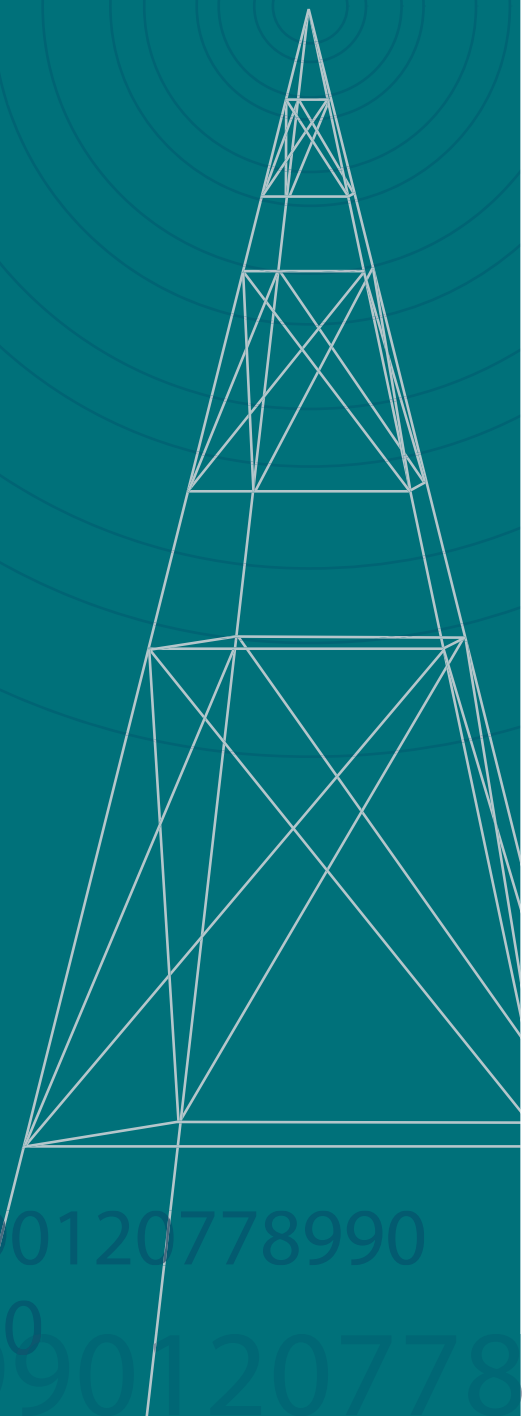


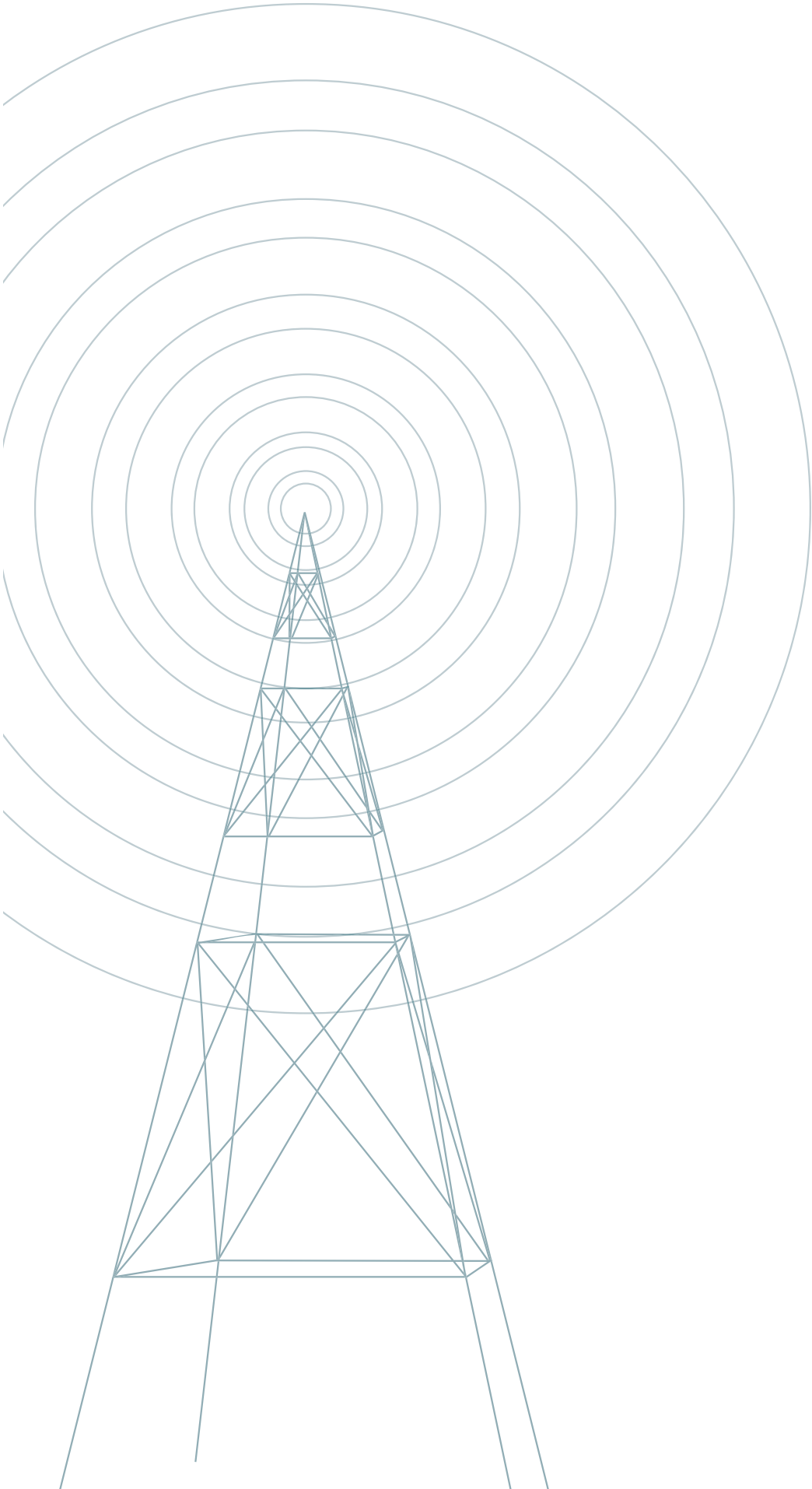


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on Telecommunications Services



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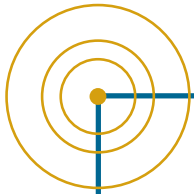


International
Competition
Network

► **Report of the ICN Working Group
on Telecommunications Services**

Presented at the Fifth Annual Conference
Cape Town, South Africa
3 – 5 May, 2006





ICN Working Group on Telecommunications Services

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Executive Summary

Competition is playing an increasingly important role in the development of the telecommunications industry. Technological developments show that mobile, alternative fixed-line (*i.e.* cable), broadband access services, and IP technologies are evolving to become sources of competition to incumbent telecommunications providers. Consumers benefit, in terms of lower prices and enhanced quality, when incumbent operators are subject to market forces. Even when sector-specific regulation is in place, competition authorities have an essential role to play in enforcing competition rules, where they are violated, and in providing valuable advice concerning, and advocating for, the most effective means for initiating and sustaining competition.

This report discusses various issues that are relevant to competition agencies in fulfilling their enforcement and advocacy roles in the telecommunications sector: promoting competition by eliminating switching costs and artificial barriers to entry; termination charges; the accommodation of new technologies; vertical separation; access and interconnection; non-commercial service obligations; and market definition. Some significant points made in the Report include the following:

- Competition may be enhanced by decreasing the cost to consumers of switching between rival products.
- While the sector-specific regulator is most frequently responsible for regulating interconnection and termination prices, in some jurisdictions, effective remedies have also been imposed pursuant to competition legislation.
- Competition in mobile networks would be enhanced by eliminating unnecessary limitations on the number of providers that operate and how spectrum is used.
- In order to fully benefit from the competitive gains that technological innovation has to offer, an appropriate regulatory and competition framework must be in place. Such a framework must be both flexible and able to identify and respond to those areas in which competition may be most vulnerable.
- Vertical separation can often lessen the incumbent's incentive to engage in anti-competitive practices. While the benefits of separation will depend on both the opportunities provided to competitors and the benefits that consumers would receive, the costs associated with mandated separation can be significant.
- Competition is enhanced when an effective access regime is in place.
- Competitive telecommunications markets are compatible with non-commercial service obligations. Competition authorities can help in identifying the least restrictive way to introduce such obligations.
- Some telecommunications markets are challenging to define. Market definition should be based on accepted competition-law principles.

A number of ICN member agencies have had the opportunity to apply their competition legislation to anti-competitive behaviour in the telecommunications sector, including: collusion; mergers; margin squeezing; exclusive dealing; refusal to supply; price discrimination; predatory pricing; tied selling/bundling; spectrum caps; and the effective operation of a regulatory regime. Examples of such cases are provided in Appendix I of the Report.

There are a number of options concerning the allocation of responsibility between the competition authority and the sector-specific regulator. Appendix II of the Report discusses the pros and cons of various approaches. When a sector-specific regulator and a competition authority have overlapping jurisdiction, coordination mechanisms are useful in alleviating jurisdictional frictions and creating cohesive regulation.



Nonetheless, there is no single means in which to apply coordination mechanisms so as to eliminate the risk of friction. When co-ordination mechanisms are not able to resolve problems of overlapping jurisdiction, judicial intervention is sometimes necessary.

Many countries have significant differences in the way in which competition in telecommunications has been introduced. These differences include: the viability of available technologies; overall market structure; and the institutional and legal framework. Information on the state of competition in telecommunications services, focussing on a few representative countries (*i.e.* Jamaica, South Africa, Taiwan, and Turkey), is found in Appendix III of the Report.

Based on the Report of the Working Group on Telecommunications Services, a set of Best Practices were developed with a view to being adopted at the 2006 Annual ICN Conference in Cape Town, South Africa.

1. Introduction

Up until the 1980's, the telecommunications industry, in most jurisdictions, was organized as a regulated monopoly, extending from terminal equipments to voice services. Starting in the mid-1980's, competitive forces stemming from regulatory change,¹ technological innovation, and demand have eroded many of the entry barriers in various segments of the telecommunications market.² The telecommunications sector is now one of the more dynamic and innovative in OECD economies.³ Lower entry barriers have, in turn, allowed for competition to flourish, resulting in increased technological change and innovation, a wider variety of services, and both lower prices and higher quality for consumers. Furthermore, in transforming the telecommunications industry, competition has obviated the justification for many facets of sector-specific regulation. As the need for sector-specific regulation diminishes, competition policy is playing a more important role in the telecommunications sector. Consequently, competition authorities are playing a more important role, both as enforcers of competition law and as advocates for competition in the removal of impediments to the development of fully competitive markets.

This report first discusses the economic characteristics particular to the telecommunications sector, followed by the ways in which technological advances and liberalization are changing these characteristics. The report then identifies how pro-competitive approaches and remedies may be, and have been, applied to issues associated with both infrastructure and service competition in the telecommunications sector. An analysis of different institutional models and co-ordination mechanisms for administering both competition policy and sector-specific regulation within the telecommunications sector is also presented. The report concludes with an appendix containing examples of recent case law concerning anticompetitive activities in the telecommunications sector, as well as a selection of developing country case studies, which highlight many of the issues raised in this report.

2 The Economics of the Telecommunications Industry: An Overview

Telecommunications is a classic example of a network industry, experiencing network effects, economies of scale, economies of scope, and related barriers to entry. It is important to note, however, that many of these related barriers to entry may be artificially created or exacerbated by state-induced constraints (*i.e.* as a regulated monopoly).

Economies of scale can exist on either the supply or the demand side. On the supply side, economies of scale exist where the average costs per unit of output decrease with the increase in the scale or magnitude of the output being produced by a firm.⁴ In telecommunications services for example, it does not cost much, if anything (*i.e.* assuming that the network does not require expansion), for the service provider to connect one more customer to the existing network. On the demand side, economies of scale are often referred to as a “network effect” or “positive externality,” whereby the addition of one more customer to the network increases the aggregate social value of the network beyond the private value gained by the additional customer. In telecommunications markets, network effects commonly serve to preserve the

¹ Regulatory change has included changes to the ownership structure of firms (*e.g.* privatization of government monopolies) and regulatory rules to enable entry of new firms offering telecommunications services.

² OECD, *Regulation, Market Structure And Performance in Telecommunications*, Economics Department Working Papers NO. 237, ECO/WKP(2000)10, (Paris: OECD April 20, 2000), at 5. Online: <[http://www.oilis.oecd.org/olis/2000doc.nsf/4f7adc214b91a685c12569fa005d0ee7/c125685b0057c558c12568bf00410275/\\$FILE/00075794.PDF](http://www.oilis.oecd.org/olis/2000doc.nsf/4f7adc214b91a685c12569fa005d0ee7/c125685b0057c558c12568bf00410275/$FILE/00075794.PDF)> [Hereinafter “OECD ECO/WKP(2000)10”]

³ OECD, *Competition and Regulation Issues in Telecommunications*, DAFFE/COMP(2002)6, (Paris: OECD February 01, 2002), Online: <<http://www.oecd.org/dataoecd/48/39/1834399.pdf>> at 21. [Hereinafter “OECD DAFFE/COMP(2002)6”]

⁴ OECD, *Glossary of Industrial Organisation Economics and Competition Law*, (Paris: OECD), see “Economies of Scale”. Online: <<http://www.oecd.org/dataoecd/8/61/2376087.pdf>> [Hereinafter “OECD Glossary”]



market position of the incumbent network provider, and often give it a “first mover” advantage when markets are opened to competition.⁵ Importantly, in countries in which there is low population density or low demand for a particular service, only a limited number of networks may be able to be sustained, thus adding to the network effect of the dominant service provider.⁶ Interestingly, economies of scale have not been as prevalent in some developing countries where, lacking fixed-line networks, providers have found it more advantageous to build wireless (*i.e.* mobile) networks. The ability to sustain multiple networks, however, usually depends, in part, on both the technology chosen and the population of the particular geographic area.

Supply-side economies of scope exist when it is cheaper for one firm to produce (*i.e.* through joint production) and sell two or more products together, than can a number of individual firms producing each good separately.⁷ In telecommunications, for example, once a network is in place, local calling can be inexpensively combined on a network (*i.e.* “bundled”) with other products and services, such as optional local features, long distance calling, internet services, television, and so on. When consumers value the range of services provided by a single telecommunications carrier, it is known as a demand-side economy of scope.⁸

As various telecommunications technologies converge (*e.g.* voice and data technologies), economies of scope are becoming more prevalent. Interestingly, this process of convergence is also bringing about increased competition. With the introduction of digitalisation, whereby all network traffic (*i.e.* whether voice, data, or video) takes the same digital form, the distinction between voice and data has eroded, allowing services formerly classified as “data” to compete in the provision of “voice” services. Accordingly, formerly different networks (*e.g.* cable television, wireless, and broadband) may have the potential to compete, and in some cases already are competing, against the traditional public switched telephone network (“PSTN”).⁹

Importantly, if legal or regulatory barriers shield economies of scale and scope from competitive forces, market failure may result. Market failure occurs when resources are misallocated or allocated inefficiently (*i.e.* this includes misallocation in both the static and dynamic sense), resulting in lost value, wasted resources, or some other non-optimal outcome. Market failures generally lead to higher prices than would be charged under competitive conditions. This, in turn, leads to restricted output (*i.e.* unless the regulated monopolist can perfectly discriminate among its customers), and ultimately a loss to consumer welfare. Since regulated monopolists are generally immune from competitive pressures, they do not have the signals or incentives to minimize costs, undertake efficient business practices, or engage in innovative technological change. Furthermore, regulators have often proven ineffective in replicating such signals and incentives. Given both the prospects for and the benefits of competition in the telecommunications industry, it is important to avoid regulatory measures that protect incumbent operators from market forces.

⁵ That is, because of the substantial sunk costs involved in traditional fixed-line networks, a new entrant does not have the incentive to duplicate an existing network. Accordingly, incumbent fixed-line networks have a competitive advantage over potential entrants that require large up-front investments.

⁶ In some countries, this is of particular concern in situations whereby mobile service providers are trying to compete with fixed-line providers. See generally: OECD, *Competition Issues in Telecommunications*, Working Party No. 2 on Competition and Regulation, DAFFE/CLP/WP2(2001)3, (Paris: OECD, April 30, 2001). For Official Use [Hereinafter “OECD DAFFE/CLP/WP2(2001)3”]

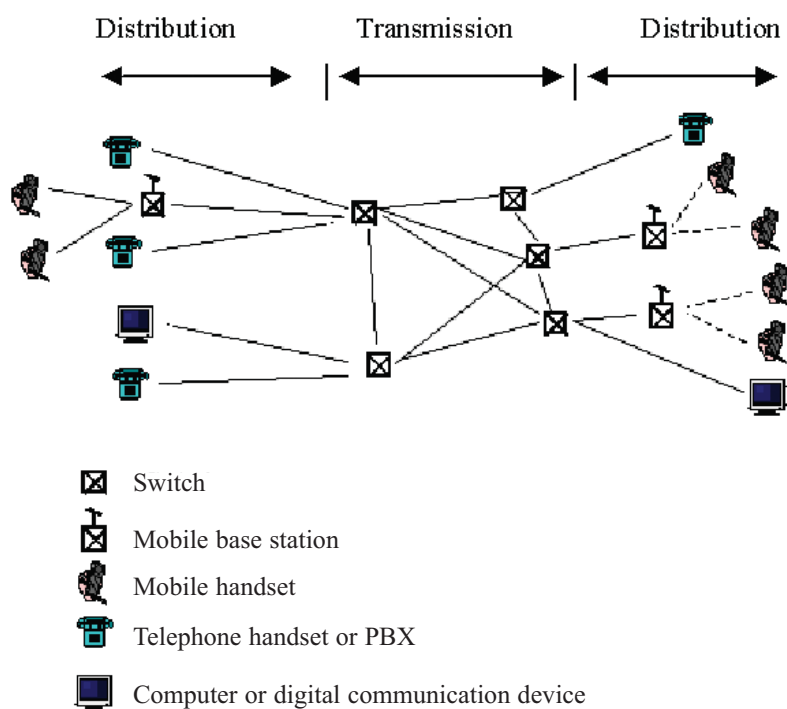
⁷ OECD Glossary, see “Economies of Scope”.

⁸ OECD DAFFE/CLP/WP2(2001)3 at 7.

⁹ In some developing countries, for example, there are more cellular units than customers connected to the landline network. See: CUTS Centre for Competition, Investment & Economic Regulation, “Competition and Sectoral Regulation Interface,” (2003) No. 5/2003, Online: <<http://cuts-international.org/CCIER-5-2003.pdf>> at 2. [Hereinafter “CUTS 2003”]

3 Technological Advances within the Telecommunications Industry

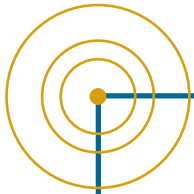
The provision of telecommunications services requires access to both a transmission and a distribution network. “Transmission” infrastructures consist of high-capacity (*i.e.* high-bandwidth) “trunk” circuits that link large switches. The “distribution” infrastructure usually consists of lower bandwidth, higher geographic density links between switches and end users, whether (fixed) wireless or wired. The distribution network is also known as the “last mile” or the “local loop.” For large users it is economically feasible to use high bandwidth optical fiber in the access network. The wireless connection between a mobile handset and the closest base station can also be said to form part of a distribution network. The distinction between transmission and distribution infrastructures can be illustrated in the following stylized diagram:¹⁰



Initially competition started in markets adjacent to telecommunications services, such as terminal equipment, and then developed in services where legal or economic barriers could be more easily overcome, such as long distance service. Competition in the provision of local loop access and services were slower to develop. Now that mobile networks are starting to accommodate voice, data and Internet services (*e.g.* so-called third-generation or “3G”), these networks may, over time, diminish the competitive advantages of fixed-line networks, resulting in network-to-network competition. Nonetheless, if meaningful competition between mobile and fixed-line operators is to take hold, mobile networks will need access to the incumbent’s fixed-line network (access issues are discussed in section 5).

To date, residential infrastructure competition in the wire-line access network has developed only in those few countries where widespread cable TV networks have been available. In most other countries, the copper access network of the former incumbents remains the only network over which end-user access can be provided at reasonable cost. Accordingly, competition continues to be mostly “intramodal” in those countries where new entry is conditional on access to the incumbent network.

¹⁰ This diagram is found in OECD DAFFE/CLP/WP2(2001)3 at 6.



Until recently, optical fibre, requiring significant investment, was considered essential for the provision of broadband services to the final user. Technological progress has strongly reduced these investment requirements. In particular, traditional copper wires can now be easily upgraded by certain DSL technologies that offer bandwidth up to many Mbt/s, especially when the distance between the subscriber and the local switch is not too large. Upgrading the local loop in this way requires the installation of equipment on each end of the cable, which converts digital signals into a format suitable for sending it over a twisted copper pair. Furthermore, bandwidth over twisted copper can be further increased by combining the copper with optical fibre (*i.e.* “VDSL”). By deploying these technological advances, fixed-line incumbents, in many countries, have been able to offer broadband services, thus remaining competitive, and in some cases, acquiring a dominant position in these markets.

In the case of mobile wireless services, although the fixed costs of serving a particular customer are not as significant as in a fully wired network, there are substantial fixed costs associated with the roll out of a network with adequate geographic coverage. Furthermore, the potential for competition in wireless services varies with both demand and population density. That is, while demand and density are sufficiently high in large cities to sustain many competing networks of base stations, the potential for competing networks is lower in low demand/low density areas. In addition, mobile infrastructure competition is limited, in some countries, by constraints on the amount of available spectrum (*i.e.* the frequency bands which are dedicated to specific mobile services, such as GSM or 3G). In some countries, spectrum scarcity originates from artificial allocation and licensing constraints and not from binding physical limitations. Assigning more frequencies, making better use of frequencies, and allowing frequency trading help to minimize such constraints.¹¹

The development of the Wi-MAX standard, which provides broadband wireless connections, could constitute a complement and/or substitute for those broadband access services provided on 3G cellular technologies. Fixed Wi-MAX is a developing technology that has the potential to be an alternative for last mile access. In geographic areas where there are no pre-existing fixed-wire broadband facilities or where such facilities have not yet been upgraded to provide broadband, Wi-MAX may make such services available and potentially compete with traditional fixed-wire facilities for voice and data services.¹² In areas where there are existing broadband providers, the extent to which Wi-MAX will be a competitor for voice and data services depends on both the cost and quality of the services that can be provided, as well as the efficiency of other possible uses of the spectrum. Regulatory issues may involve: the availability of appropriate spectrum; entry barriers associated with obtaining rights to construct these systems; and the extent to which existing regulations impact the ability of these systems to compete and interconnect. Competition issues may involve anticompetitive conduct by incumbent providers, for example, to delay, stop or degrade the quality of these services, or to hoard spectrum. The extent to which this new technology is a substitute for traditional services, if there are mergers of existing providers, is also a potential competition issue.

Competition in the telecommunications industry has been encouraged by the introduction of digitalisation and IP-based network transmission technologies, which allow for the possibility of voice communication (“Voice over IP” or “VOIP”) independent of the traditional PSTN.¹³ IP networks have several characteristics, which are significant in their effects on competition. Most importantly, to be able to access IP services, the customer must have a broadband connection. Such a connection may be available only from the

11 See generally: OECD, *Next Generation Network Development In OECD Countries*, Working Party on Telecommunication and Information Services Policies, DSTI/ICCP/TISP(2004)4/FINAL, (Paris: OECD Jan 18 2005), at 30. Online: <<http://www.oecd.org/dataoecd/58/11/34696726.pdf>> [Hereinafter “OECD DSTI/ICCP/TISP(2004)4/FINAL”]

12 Due to the long-range wireless capabilities of Wi-MAX technology, such networks are a very attractive alternative in developing countries, as they can be expanded into rural and remote areas more easily than more traditional fixed-lines.

13 See generally: OECD DSTI/ICCP/TISP(2004)4/FINAL.

incumbent telephone company rather than a competitor. Since IP “packet-switched” traffic makes sharing network resources more efficient than traditional “circuit-switched” traffic, it allows the same network resources to provide a wider range of services. Furthermore, IP services can offer features that are not available on the PSTN, such as the ability to make and receive calls using the same telephone number from any geographic location at which it is possible to connect to the Internet. Additionally, devices are now available that allow direct connection of a telephone to the IP network wherever there is a broadband or other mode of Internet connection available.¹⁴ Since IP can be used over wireless, satellite, cable, and broadband networks in general, it serves to make all telecommunications networks more competitive in the sense that they can all compete with the same services (*i.e.* voice).¹⁵

IP technology also has the potential to both substantially reduce costs and change business models in the telecommunications industry.¹⁶ This is due to the potential for IP to broaden economies of scope, such that voice will become an integrated component of enhanced applications and services. For example, VOIP is marketed on its functionality and integration with other applications rather than purely on the traditional view of “cost per minute” to the end user.¹⁷ In fact, VOIP has contributed to making such factors as duration and distance immaterial. Accordingly, VOIP will both diminish voice-generated revenues of telecommunications service providers and benefit consumers with lower prices for such services. VOIP also potentially diminishes the revenue of some first-generation mobile networks, since these networks rely almost exclusively on voice services.

These above technological developments show that mobile, alternative fixed-line, broadband access services, and IP technologies are evolving to become sources of competition to incumbent telephone companies. However, while networks continue to evolve, we are likely to see network competition replaced by service competition.¹⁸ Nonetheless, the ownership and control of the underlying infrastructures will still raise issues for competition authorities.

4 From Regulation to Competition in the Telecommunications Sector

Where telecommunications services are protected from competitive entry, jurisdictions may choose to have either a private provider subject to regulatory oversight, or a government-owned provider (*i.e.* public ownership). Public ownership is based on the belief that sectoral objectives are more likely to be achieved through direct public control and ownership of the firm providing the goods and services in question.¹⁹ Government regulation is unnecessary under the public-ownership model, since the government owns and operates the monopoly firm. However, once the industry opened to competition, the “pure” public-ownership model is put into question, as there are insufficient safeguards for new entrants to be treated

¹⁴ There are currently IP telephones available that, from the subscriber's perspective, look and function exactly like a normal phone. The only difference being that it operates on IP technology. Importantly, this removes the constraint of needing a PC to make or receive a call and therefore opens up IP telephony to a broader residential market.

¹⁵ OECD, Trends In IP Technology: Their Impact On The Traditional Telephony Carrier World, Working Party on Telecommunication and Information Services Policies, DSTI/ICCP/TISP(2001)10/FINAL, (Paris: OECD March 20 2002), at 15 – 24. Online: <<http://www.oecd.org/dataoecd/24/5/2076710.pdf>> [Hereinafter “OECD DSTI/ICCP/TISP(2001)10/FINAL”]

¹⁶ See generally: OECD DSTI/ICCP/TISP(2001)10/FINAL.

¹⁷ OECD DSTI/ICCP/TISP(2001)10/FINAL at 31.

¹⁸ See generally: OECD DSTI/ICCP/TISP(2004)4/FINAL at 6.

¹⁹ ■ The World Bank, Telecommunications Regulation Handbook (Appendices) (Washington: The World Bank, November 2000), Online:<http://rru.worldbank.org/Documents/Toolkits/telecom_annexes.pdf> at B-5. [Hereinafter “Telecom Handbook Appendices”]

■ Public ownership was also seen as desirable considering the security concerns at stake with respect to a nation's telecommunications infrastructure. See: Geradin D.& Kerf M., Controlling Market Power in Telecommunications: Antitrust vs. Sector specific Regulation (Oxford: Oxford University Press, 2003) at 6.[Hereinafter “Controlling Market Power”]





equitably by the incumbent operator (e.g. with respect to terms and conditions of interconnection and access). Given the inherent conflicts of interest and potentially inefficient economic performance of the public ownership model, many jurisdictions have abandoned it in favour of a government-regulated private ownership monopoly model.²⁰

While some governments remain majority shareholders in their respective incumbent telecommunications firms, it is common for the regulator to be at arm's length from the government, thus mitigating a possible conflict of interest between ownership and regulatory oversight.²¹ Regarding the structure of the regulator, the most that can be said is that, due to different patterns of institutional, economic, and industrial development in each country, there is much diversity.²² While the structure, and thus function, of the regulator is shaped by the political realities in each country, it has also been changing in direct response to liberalization, technological progress, and convergence. The only common characteristic among the various approaches to regulation of the telecommunications sector is that the regulator be independent from those operations that it supervises.²³

A key objective of regulatory oversight is generally to prevent the monopoly firm from charging excessively high prices, including network access prices to competitors, and to ensure that competition is promoted within the industry. Price regulation may be necessary, to varying degrees, until competition is firmly established within the industry. However, the regulation of prices within the telecommunications industry is far from simple,²⁴ and may in fact, distort the price structure away from the reality of underlying costs, thereby encouraging resource misallocation, overcapitalization, and dynamic inefficiency.²⁵ Furthermore, price regulation often succumbs to such systemic problems as: regulatory hazard;²⁶ regulatory paralysis;²⁷ a lack of necessary skill requirements;²⁸ informational asymmetries;²⁹ and regulatory capture.³⁰ Also, price regulation has a tendency to slow down decision-making and to make regulated entities less flexible in

20 ■ OECD, *Telecommunications Regulations: Institutional Structures and Responsibilities*, Working Party on Telecommunications and Information Services Policies, DSTI/ICCP/TSP(99)15/FINAL, (Paris: OECD May 26, 2000), at 7.

Online: <<http://www.oecd.org/dataoecd/39/32/21330624.pdf>> [Hereinafter "OECD DSTI/ICCP/TSP(99)15/FINAL"]

■ Also see: The World Bank, *Telecommunications Regulation Handbook*, (Module 1, Overview of Telecommunications Regulation), (Washington: The World Bank, November 2000), at 3. Online:

<http://rru.worldbank.org/Documents/Toolkits/telecom_mod1.pdf> [Hereinafter "Telecom Handbook Module 1"]

21 OECD DSTI/ICCP/TSP(99)15/FINAL at 7.

22 Generally, regulatory authorities fall into one of four different models: 1) an autonomous or quasi-judicial commission; 2) an independent office outside a government ministry; 3) and independent office inside a government ministry; and 4) a government ministry. For a more in depth discussion, see: Walden I. & Angel J., *Telecommunications Law and Regulation* (Oxford University Press, 2005) at 16-17. [Hereinafter "Walden & Angel"]

23 OECD DSTI/ICCP/TSP(99)15/FINAL at 6. Also see: Telecom Handbook Module 1 at 6.

24 For an in depth discussion on the economics of price regulation in the telecommunications sector, see: The World Bank, *Telecommunications Regulation Handbook, (Module 4, Price Regulation)*, (Washington: The World Bank, November 2000), Online: <http://rru.worldbank.org/Documents/Toolkits/telecom_mod4.pdf>

25 See generally: OECD ECO/WKP(2000)10.

26 An example of regulatory hazard is when the regulator inadvertently distorts markets thus creating more problems.

27 An example of regulatory paralysis is when the regulator causes uncertainty, which in turn deters investment activities. In other cases, too many regulations, or regulations that are too complex, can in fact hamper competition. See generally: ICN, *Competition Advocacy in Regulated Sectors, Subgroup 3: Competition Advocacy Review - Case Studies on Regulated Sectors*, Report to the Fourth ICN Annual Conference, (Bonn, June 2005), at 4. Online: <http://www.internationalcompetitionnetwork.org/bonn/CPI_WG/SG3_Advocacy_in_Regulated_Sectors/Competition_Advocacy_Review.pdf> [Hereinafter "ICN Case Studies on Regulated Sectors"]

28 For example, without employees that have the necessary skill sets, regulation will be less effective.

29 For example, it is almost always the case that the companies being regulated know more about their business than the regulator does.

30 Regulatory capture occurs when the regulator identifies itself too closely with, and serves the interests of, certain industry players over those interests of others. This problem has been argued to be more common among sector-specific regulators. See: OECD, *Relationship Between Regulators and Competition Authorities*, DAFFE/CLP(99)8 (Paris: OECD June 29, 1999), at 10. Online: <<http://www.oecd.org/dataoecd/35/37/1920556.pdf>> [Hereinafter "OECD DAFFE/CLP(99)8"]

responding to new circumstances. More generally, as cost-oriented price regulation can be inefficient, it is often necessary to create financial incentives for incumbent firms to promote cost-saving innovations (e.g. introducing price-cap regulation).

Importantly, the role and scope of regulation has changed with the introduction of competition.³¹ In particular, due to its ability both to provide incentives to respond to new information and to efficiently allocate resources, competition serves to reduce or even eliminate the exercise of monopoly power, with its corresponding market failures and harm to consumers. Accordingly, “the comparative experience of a large set of OECD countries over the 1990’s... provides empirical evidence that liberalisation of entry and the development of effective competition in telecommunications services generally led to higher productivity, lower prices and better quality.”³² Other desirable traits of increased competition in the telecommunications sector include:³³ the avoidance of regulatory capture; lower compliance costs for firms; the alleviation of competitive distortions when firms provide services extending beyond one or more regulated industries; and the attraction of domestic and foreign investment, as well as trade in telecommunications services. Furthermore, provided that there is interconnection between different telecommunications networks, positive network externalities can be preserved.³⁴ Additionally, by allowing for enhanced competition, sector-specific regulation is, in turn, made unnecessary, or in some cases, at least more efficient (*i.e.* since competition reduces the incumbent’s asymmetrical information advantage with respect to real or efficient cost structures).³⁵ Given these desirable traits, the introduction of competition within the telecommunications sector has been the objective of most countries, and has been accelerating.³⁶

While a sufficient degree of competition could well be achieved for all telecommunications services, this has been more challenging to establish in some segments of the industry.³⁷ For example, even after widespread liberalization and the introduction of competition, many incumbents have continued to retain their dominant position and market power for extended periods of time.³⁸ This is particularly the case within the market for the PSTN (*i.e.* local loop) network access, where incumbents may effectively inhibit competition by restricting access to their networks or otherwise imposing prohibitive processes and barriers to entry.³⁹ Therefore, it is generally accepted that there are certain situations in which sector-specific regulation is necessary as a complement to competition law remedies in order to ensure the sustainability of competition. For example, sector-specific regulation is sometimes necessary to ensure

³¹ For a broader discussion pertaining to the substitutability and complementary nature of sector-specific regulation and competition laws, see generally: ICN, *Antitrust Enforcement in Regulated Sectors Working Group, Subgroup 2: Enforcement Experience in Regulated Sectors*, Report to the Third ICN Annual Conference (Seoul, April 2004).
Online: <http://www.internationalcompetitionnetwork.org/seoul/aers_sg2_seoul.pdf>

³² OECD ECO/WKP(2000)10 at 6.

³³ For a more in depth discussion on the advantages of competition in regulated sectors, see generally: OECD DAFFE/CLP(99)8.

³⁴ Controlling Market Power at 8.

³⁵ OECD DAFFE/CLP/WP2(2001)3 at 29.

³⁶ ITU, *Competition Policy in Telecommunications, Background Paper*, Workshop on Competition Policy in Telecommunications, CPT/04, (Geneva: ITU, November 22, 2002), at 5.
Online: <<http://www.itu.int/osg/spu/ni/competition/background/Final%20background%20paper.pdf>>
[Hereinafter “ITU Competition Policy in Telecommunications”]

³⁷ For a survey of best practices on how to measure and gauge competition in telecommunications markets, see OECD, *Indicators For The Assessment Of Telecommunications Competition*, Working Party on Telecommunications and Information Services Policies, DSTI/ICCP/TISP(2001)6/FINAL, (Paris: OECD Jan 17, 2003).
Online: <<http://www.oecd.org/dataoecd/4/22/2496809.pdf>>

³⁸ See generally: OECD DAFFE/COMP(2002)6.

³⁹ For a broader discussion on issues of access within the telecommunications sector, see generally: OECD DAFFE/CLP/WP2(2001)3.





interconnection of rival networks and access to essential facilities and services.⁴⁰ To this end, the regulation of interconnection and access commonly entails: managing interconnection rights, setting terms and conditions for network access; licensing;⁴¹ and ensuring mechanisms for dispute resolution.⁴² However, sector-specific regulation should not be imposed when market forces and competition law remedies are sufficient to address the problem at hand. Additionally, even when sector-specific regulation is in place, competition authorities have an essential role to play not only in enforcing competition rules, where they are violated, but also providing valuable advice concerning, and advocating for, the most effective means for initiating and sustaining competition in the sector.

5 Impediments to Competition: Possible Approaches and Remedies

Competition is inhibited through abuses of market power⁴³ and other anti-competitive activities. In the telecommunications sector, some jurisdictions deem such activities to include: predatory pricing; margin squeezing;⁴⁴ discriminatory pricing; control over and refusing to share information regarding network standards and development; and anticompetitive litigation. This list, by no means exhaustive, represents the most frequently alleged anti-competitive practices related to abuse of dominance in the telecommunications industry.⁴⁵ Other activities, depending on their context, may also be anticompetitive, including: vertical agreements;⁴⁶ product bundling (*i.e.* tied sales); exclusive dealing arrangements; cross-subsidization;⁴⁷ control over and refusal to allow access to essential facilities or intellectual property;⁴⁸ and

⁴⁰ For a broader discussion on issues of access within the telecommunications sector, see generally: OECD DAF/COMP/GF(2005)3.

⁴¹ For an overview of licensing issues and applications in the telecommunications sector, see: The World Bank, *Telecommunications Regulation Handbook, (Module 2, Licensing Telecommunications Services)*, (Washington: The World Bank, November 2000). Online: <http://rru.worldbank.org/Documents/Toolkits/telecom_mod2.pdf>

⁴² For a more in depth discussion of sector-specific regulation in telecommunications, see generally: Telecom Handbook Module 1.

⁴³ For a more thorough discussion on abuse of market power in general, see generally: OECD, **Abuse of Dominance in Regulated Sectors** (Background Note By the Secretariat, Session III), Global Forum on Competition, DAF/COMP/GF(2005)3, (Paris: OECD, February 4, 2005). Online: <<http://www.oecd.org/dataoecd/40/28/34407942.pdf>> [Hereinafter “OECD DAF/COMP/GF(2005)3”]

⁴⁴ ■ Margin squeezing occurs when a vertically integrated supplier raises the wholesale price relative to the retail price, thus squeezing the profit margin between the wholesale and retail price available to an un-integrated firm with which it competes. Squeezing can also occur when the wholesale price remains the same but the vertically integrated supplier lowers the retail price, compelling the un-integrated competitor to follow suit. The effect of squeezing would be to impede or prevent the competitor’s entry into, or expansion in, a relevant market.

■ For a more detailed discussion on vertical margin squeezing, see: The World Bank, *Telecommunications Regulation Handbook, (Module 5, Competition Policy)*, (Washington: The World Bank, November 2000), at 24. Online: <http://rru.worldbank.org/Documents/Toolkits/telecom_mod5.pdf> [Hereinafter “Telecom Handbook Module 5”]

⁴⁵ For a more detailed discussion on anticompetitive activities within the telecommunications sector, see generally: Telecom Handbook Module 5. Also see generally: OECD DAF/COMP/GF(2005)3.

⁴⁶ Barriers to entry imposed by various forms of vertical integration by the incumbent and its different subsidiaries are a common problem that impedes competition. Vertical integration is often a direct consequence of economies of scale, whereby the incumbent tries to expand the natural boundaries of its economy of scale through vertical relationships. If a monopoly results from economies of scale, vertical separation (*i.e.* separating the monopoly from potentially competitive, yet vertically related activities) is sometimes an effective way to allow for competition to progress.

⁴⁷ Cross-subsidization may be a problem if it allows for a telecommunications provider to gain market share by pricing one or several of its services, which are subsidized by the revenues generated by other services, at below cost. This practice has traditionally taken the form of pricing long-distance services higher than local calls, or pricing voice services higher than data transmission. For a further discussion on cross-subsidization, see: Telecom Handbook Module 5 at 17 – 24.

⁴⁸ For a more in depth discussion on the economics of essential facilities in the telecommunications market, see: Telecom Handbook Module 5 at 13. It should be noted that not all jurisdictions have accepted the notion of essential facilities.

monopoly leveraging.⁴⁹ This section focuses on possible approaches and remedies to alleviate such problems associated with market power, as well as ways in which competition can be facilitated within the telecommunications industry. In particular, issues associated with: switching costs; termination charges; artificial barriers to entry; and the accommodation of new technologies will be discussed. In addition, this section also discusses: how competition can be facilitated through vertical (*i.e.* structural) separation; the issues associated with access and interconnection; and competition issues related to non-commercial service obligations. As the assessment of anti-competitive activity relies on market definition, this topic will also be discussed in this section. The next section will explore recent experiences, of various jurisdictions, in competition enforcement in the telecommunications sector.

5.1 Reducing Search and Switching Costs

Often, competition-oriented reform focuses on improving the supply-side element of rivalry between firms, while paying little attention to the beneficial role of demand-oriented policy interventions. Yet, such demand-oriented policy interventions can play a beneficial role. For example, in certain telecommunications markets, competition is not a level playing field in that new entrants face a transaction cost asymmetry with respect to the incumbent operator: while the incumbent needs only to retain its customers, new entrants must convince potential customers to switch providers. To this end, reductions in both customer search and switching costs can improve the quality of information available on the demand side and make the process of consumer choice more efficient. In short, increasing both the ability and likelihood of consumers to switch between rival products can enhance competition.

Ensuring information to consumers is often insufficient, in and of itself, and a more pro-active approach may be needed to help improve demand-side flexibility. Two ways in which demand-side flexibility can be improved in telecommunications markets include:⁵⁰ making customers more portable (*e.g.* alternative access and/or number portability); and making the products of competitors more attractive (*e.g.* introducing carrier selection). Mandating number portability reduces the cost of switching between service providers, which in turn, strongly reduces the market power of firms. Carrier selection, whereby consumers maintain their contract with the incumbent operator, but may select an alternative carrier, facilitates entry by reducing the need for an upfront commitment by consumers, and encourages the unbundling of telecommunications services.

5.2 Issues Associated with Termination Charges

One of the most contentious issues for new telecommunications network providers is that of access to existing networks for call termination.⁵¹ For example, once a customer is locked in to a particular network, the network has a *de facto* monopoly over the customer and can exploit those calls that the customer receives by charging a high termination price.⁵² The monopoly over call termination also persists when there is competition among different service providers. In particular, fixed to mobile termination charges have remained high despite increasing competition in mobile services.⁵³ Termination charges are thus subject to sector-specific regulation in many countries.

⁴⁹ Monopoly leveraging is whereby a firm with market power uses dominance in one market to extend its dominance in another. Monopoly leveraging is not necessarily anti-competitive, as it depends on both the nature of the relevant market and the facts at hand.

⁵⁰ Ennis E., Heimler A., "Promoting Competition on the Demand Side," (2004), SSRN Working Paper.

⁵¹ See generally: OECD DAFPE/CLP/WP2(2001)3. Also see: OECD DAFPE/COMP(2002)6 at 11, 30 – 33.

⁵² OECD DAFPE/CLP/WP2(2001)3 at 7.

⁵³ OECD DAFPE/CLP/WP2(2001)3 at 3.





The predominant view regarding termination charges is that intervention is needed to directly regulate interconnection and termination prices.⁵⁴ However, there are difficulties in both defining these prices and identifying relevant input costs. One method employed by sector-specific regulators to identifying input costs is to employ the theoretical cost of a “normally efficient operator.” An alternative approach has been to adopt either a “calling party pays” or a “receiving party pays” approach, with each having their own unique advantages and disadvantages.⁵⁵ On the other hand, in some jurisdictions, competition law can be used to seek lower termination rates.⁵⁶ In such jurisdictions, firms would have the possibility to set their prices, as long as such prices are not “excessive.”

5.3 Eliminating Artificial Barriers to Entry

Competition in mobile networks depends on both the number of mobile service providers that are allowed to operate and on spectrum allocation limitations for new and existing providers. In order to increase competition between mobile telephone companies, some studies have concluded that market outcomes appear to be most favorable to consumers in countries with several wireless providers in the marketplace.⁵⁷ On the other hand, in some jurisdictions, there are artificial barriers to entry in the sense that regulatory limitations are imposed on the ability of new and existing mobile service providers to acquire new blocks of spectrum.⁵⁸

5.4 Accommodating New Technologies

In order to fully benefit from the competitive gains that technological innovation has to offer, an appropriate competitive framework must be in place. In particular, the oversight of inter-network competition should be as flexible as possible to allow for the exploitation of all existing economies of scope that a new technology has to offer. One way in which policy-makers have allowed for the exploitation of all possible economies of scope is by adopting a “technology neutral” framework that does not: favour one technology over another; create artificial entry barriers for new technologies; or deter convergence in telecommunications services.

For a competitive framework to be effective, however, it must not only be flexible, but also must be able to identify and respond to those areas in which competition may be most vulnerable. With respect to IP technology, for example, given that such technology must operate over existing networks, there are various competition concerns that must be addressed when such networks are incumbent-owned. In particular, these concerns are related to: “network capabilities,” or the extent to which dominant firms should be able to limit access to infrastructure capabilities;⁵⁹ “elementary services,” or the extent to which dominant

⁵⁴ OECD DAFFE/COMP(2002)6 at 9 – 10.

⁵⁵ OECD, *Cellular Mobile Pricing Structures And Trends*, Working Party on Telecommunication and Information Services Policies, DSTI/ICCP/TISP(99)11/FINAL, (Paris: OECD May 16 2000), at 35-43. Online: <<http://www.oecd.org/dataoecd/54/42/2538118.pdf>> [Hereinafter “OECD DSTI/ICCP/TISP(99)11/FINAL”]

⁵⁶ In other jurisdictions however, antitrust law cannot be applied, as it would not be an abuse of dominant position for a firm to charge high prices absent evidence it was engaging in anticompetitive behaviour.

⁵⁷ OECD DSTI/ICCP/TISP(99)11/FINAL at 6.

⁵⁸ In the absence of limits on the ability of existing providers to acquire spectrum in areas where they currently operate, the expected profits from spectrum acquisition are higher for incumbents than for potential new providers, thus helping to maintain incumbent market power. On the other hand, before deciding whether to constrain the ability of incumbents to purchase additional spectrum, regulators should carefully consider whether such incumbents face hard capacity constraints in their ability to expand their network, as such constraints have been known to occur. In such cases, technical solutions are necessary. In general, caps on incumbent spectrum acquisition are most valuable when there are a small number of effective competitors and existing competitors have stable and high levels of profit.

⁵⁹ Examples include: Network Address Translators and firewalls, routing tables, quality of service capabilities and interconnection, network coverage, and termination capabilities. See: OECD DSTI/ICCP/TISP(2004)4/FINAL at 26.

firms should be able to limit a competitor's ability to create certain types of services;⁶⁰ “user access capabilities,” or the extent to which dominant firms should be able to limit or restrain access to certain service providers;⁶¹ and finally, “individual user information,” or the extent to which certain firms should be able to decide who can construct services based on the respective user information.⁶²

5.5 Vertical Separation

In many telecommunications markets, the incumbent is vertically integrated. One concern raised by vertical integration is that the incumbent may be able to leverage its monopoly power in its regulated business to its unregulated business, thereby restricting competition in what otherwise would be a competitive market. Vertical integration can raise problems of both exclusion and leveraging by monopolists.⁶³ Exclusion includes discriminatory practices such as refusal to supply access or quality of access. Leveraging includes such practices as tied selling, exclusive dealing, bundling, and predatory pricing.

Since these practices take many forms, competition authorities and sector-specific regulators face various challenges in both identifying and addressing them. As a consequence, vertical (*i.e.* structural) separation is often proposed in order to eliminate the incumbent's incentive to engage in anti-competitive practices. Vertical separation can take two forms: “weak” or “strong”. Weak forms of separation include accounting, functional (*i.e.* separating into different divisions within the same firm, and under different management), and corporate separation (*i.e.* separating different services into different corporate entities within the same parent company).⁶⁴ While neither accounting nor corporate separation eliminates the firm's incentive to discriminate against competitors, these methods serve to make any such discrimination more difficult to accomplish in practice. Functional separation, which is achieved by making sure that decisions on access terms are neutral with respect to whether the entity requiring access is a competitor or an internal division of the integrated company, is more flexible, less intrusive, and less costly for firms to implement.

When weak forms of separation do not suffice, something more may be required. Strong forms of separation include three main varieties.⁶⁵ First, there is ownership separation. One model of ownership separation entails the transfer of facilities or services to a new company, which would then provide these facilities or services to all service providers at a non-discriminatory, regulated price. This approach could be expanded to include the entire access network if desirable. Second, the incumbent's assets could be separated and put under the control of an independent entity, which would then provide service to all retail companies. Essentially, this approach separates the control of operations, but does not go so far as ownership separation.

⁶⁰ Examples include: call set-up capabilities, proprietary standards, nonproprietary standards, interoperability, and application programming interfaces.) See: OECD DSTI/ICCP/TISP(2004)4/FINAL at 26.

⁶¹ Examples include: unnecessary software and service bundles, walled gardens, tunneling, filter mechanisms and digital rights, end-user devices, and content. See: OECD DSTI/ICCP/TISP(2004)4/FINAL at 26.

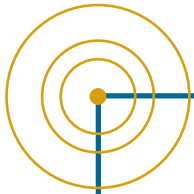
⁶² Examples include: authentication, single logon and profile management, customer billing information, access to customer information systems, resolution of names and numbers through customer identity systems, functions for determining location. OECD DSTI/ICCP/TISP(2004)4/FINAL at 26.

⁶³ ITU Competition Policy in Telecommunications at 30.

⁶⁴ OECD, *Structural Separation in Regulated Industries*, Report by the Secretariat, DAFFE/CLP(2001)11, (Paris: OECD April 10 2001), For Official Use, at 13. [Hereinafter “OECD DAFFE/CLP(2001)11”]

⁶⁵ ■ OECD, *The Benefits and Costs of Structural Separation of the Local Loop*, Working Party on Telecommunication and Information Services Policies, DSTI/ICCP/TISP(2002)13/FINAL, (Paris: OECD, Nov 3 2003).
Online: <<http://www.oecd.org/dataoecd/39/63/18518340.pdf>> at 5. [Hereinafter “OECD DSTI/ICCP/TISP(2002)13/FINAL”]
■ For a detailed discussion of these approaches, see OECD DAFFE/CLP(2001)11 at 6-15.
A fourth, yet less common option, is separation of the non-competitive component into reciprocal parts, which relies on network effects to offset the incentive to deny interconnection. This approach entails imposing legal constraints, which prevent one network from taking over the customers of another so that interconnection, and thus greater network effects, is an optimal outcome of negotiations. In other words, such legal constraints make interconnection to be in the mutual interests of both firms. In this context, reciprocal access will be agreed upon without the need for regulatory intervention. See: OECD DAFFE/CLP(2001)11 at 10-11.





Third, is the “club approach,” whereby each service provider has an ownership share in the incumbent’s assets.⁶⁶

Each of these approaches to vertical separation has its own unique advantages and disadvantages.⁶⁷ Ultimately, the appropriate form of separation depends on both country and context-specific factors including legal and political realities.⁶⁸ Common advantages of structural separation include:⁶⁹ bringing the incumbent’s incentives into alignment with those of a non-integrated carrier, thereby guaranteeing non-discriminatory access to the incumbent’s network; promoting innovation and efficiency in the competitive activities; creating a level playing field; allowing the management of the structurally separated incumbent to focus on the wholesale portion of its business, without the need for considering the impact of its policies on the retail division; reducing the need for regulation (*i.e.* particularly access regulation) so that the regulator doesn’t always have to “catch up” to the behavior of the integrated incumbent;⁷⁰ allowing regulators to focus on the wholesale network in isolation; being simpler than behavioral remedy alternatives; eliminating cross-subsidization; and promoting efficiencies. The degree to which many of these advantages may be realized is positively correlated with the degree of vertical separation undertaken.

At the same time, however, there are disadvantages and costs associated with vertical separation: it may disallow the exploitation of economies of scope, which would normally exist in an integrated operation;⁷¹ it may also increase transaction costs for consumers; it may reduce system reliability; incumbents, due to their vast resources and experience, are sometimes the drivers of innovation, which may be lost;⁷² vertical separation may be politically difficult and economically costly;⁷³ there are significant up-front costs; and vertical separation does not address the demand-side concern that new entrants must lure customers away from the incumbent.⁷⁴ Furthermore, many nations have been reluctant to compel a change in the organizational structure of their incumbents in the belief that corporate size and the ability to provide a full range of services is a comparative advantage in the global economy.⁷⁵ As with the advantages of vertical separation, the degree to which many of these disadvantages may be realized is positively correlated with the degree of separation undertaken.

In summary, while the benefits of separation will depend on both the opportunities provided to competitors and the benefits that consumers would receive, the costs should be carefully considered.⁷⁶ The decision to pursue vertical separation, and how to do so, largely depends on both how technology is currently affecting competition and how technology is likely to encourage competition going forward.

⁶⁶ Competition authorities should be cautious against club ownership, as it could lead to an industry-wide cartel whereby the club might try to restrict access by future entrants.

⁶⁷ For a detailed discussion of these advantages and disadvantages, see OECD DAFFE/CLP(2001)11 at 6-15. Also see generally: OECD DSTI/ICCP/TISP(2002)13/FINAL

⁶⁸ OECD DAFFE/CLP(2001)11 at 23-24.

⁶⁹ OECD DSTI/ICCP/TISP(2002)13/FINAL at 5. Also see generally: OECD, *Restructuring Public Utilities For Competition*, (Paris: OECD 2001). Online: <<http://www.oecd.org/dataoecd/6/60/19635977.pdf> >

⁷⁰ OECD DSTI/ICCP/TISP(2002)13/FINAL at 8.

⁷¹ OECD DSTI/ICCP/TISP(2002)13/FINAL at 27. Also see: Crandall, R. and Sidak, J. Gregory, "Is Structural Separation of Incumbent Local Exchange Carriers Necessary for Competition?" (2002) Vol. 19. No. 2., *Yale Journal of Regulation*

⁷² ITU Competition Policy in Telecommunications at 15, citing Jens Arnbak, *Regulation for next generation technologies and markets*, Telecommunications Policy Online, volume 2, no. 6/7 (July/August 2000)

⁷³ ITU Competition Policy in Telecommunications at 15.

⁷⁴ OECD DSTI/ICCP/TISP(2002)13/FINAL at 25.

⁷⁵ ITU Competition Policy in Telecommunications at 15.

⁷⁶ OECD, *Draft Report to Council on Experiences with Structural Separation*, Working Party No. 2 on Competition and Regulation, DAF/COMP/WP2(2005)1/REV1, (Paris: OECD, August 2, 2005), For Official Use, at 20.

5.6 Access and Interconnection Issues

Difficulties in achieving access and interconnection have been ranked by many countries as the single most important impediment to advancing competition within the telecommunications sector.⁷⁷ Few countries have attempted to rely exclusively on a competition law approach to resolving interconnection and access issues. Such an approach would generally entail letting companies privately negotiate terms and conditions, and intervening (*e.g.* generally through the use of either “refusal to deal” remedies or the “essential facility doctrine”)⁷⁸ only when such negotiations fail.⁷⁹ Accordingly, access and interconnection issues are still largely under the ambit of sector-specific regulation.⁸⁰ Nonetheless, as the implementation of an access regime is a prerequisite and decisive factor in establishing competition, it is of interest to competition authorities that such access regimes are effective. This report will not examine the best practices for resolving access issues,⁸¹ but will instead focus on those aspects of an access regime most relevant to competition authorities.

Access issues can be divided into three categories: framework and procedural;⁸² commercial;⁸³ and, technical and operational.⁸⁴ Approaches to resolving issues in such areas include interconnection and unbundling. Interconnection is the physical connection of separate telecommunications networks, whereas unbundling refers to the provision of telecommunications components on a stand-alone basis, thereby allowing carriers access to each component without obligating them to buy other components.⁸⁵ Access pricing involves the setting of prices for interconnection or access to unbundled components.

Achieving effective interconnection is not an easy endeavor, as the incumbent can often discriminate among certain competitors to serve anti-competitive ends. For this reason, a central objective of most interconnection policies is the principle of non-discrimination.⁸⁶ Unfortunately, however, since interconnection agreements are often not identical, and differing firms have differing interconnection needs, discrimination is not always easy to identify. One approach to eliminate, reduce, or at least assist in the identification of discriminatory practices, is to implement structural or accounting separation, and if required, divestitures⁸⁷ (as discussed in section 5.5). Another approach is to utilize “imputation” tests

⁷⁷ The World Bank, *Telecommunications Regulation Handbook, (Module 3, Interconnection)*, (Washington: The World Bank, November 2000), at 2. Online: <http://rru.worldbank.org/Documents/Toolkits/telecom_mod3.pdf> [Hereinafter “Telecom Handbook Module 3”]

⁷⁸ ■ Note that the essential facilities doctrine is not recognized in all jurisdictions. In addition, refusal to deal may be recognized differently in each jurisdiction, as being either *per se* or case-by-case.

■ While there are many variations on what denotes an essential facility, it can generally be defined as one which has the following characteristics: it is supplied on a monopoly basis or subject to some degree of monopoly control; is required by competitors in order to compete; and cannot be practically duplicated. This definition has been taken from: Telecom Handbook Module 5 at 13.

⁷⁹ ITU Competition Policy in Telecommunications at 17.

⁸⁰ ITU Competition Policy in Telecommunications at 20.

⁸¹ For a summary of widely held interconnection principles, see Telecom Handbook Module 3 at 9.

⁸² Framework and Procedural issues include: adequacy of regulatory guidance for interconnection negotiations; availability of interconnection for various types of services; interconnections terms; independent and timely dispute resolution; non-discriminatory access; access to PSTN network specifications (including planned network changes); and treatment of universal service charges. See Telecom Handbook Module 3 at 4.

⁸³ Commercial issues include: the level and structure of interconnection charges and the basis for calculation; unbundling of interconnection charges for different network component and services; resale of network facilities and services; payment for network modifications to facilitate interconnection; and confidential treatment of competitive and customer information. See Telecom Handbook Module 3 at 4.

⁸⁴ Operational and technical issues include: network standards and technical compatibility; location of points of interconnection; access to system details; access to unbundled components including local loops; ease of consumer access to competitive networks; number portability; collocation and infrastructure sharing; and quality of interconnection. See: Telecom Handbook Module 3 at 4.

⁸⁵ Telecom Handbook Appendices at C-14.

⁸⁶ For a broader discussion on the principle of non-discrimination, see: Telecom Handbook Module 3 at 8.

⁸⁷ Telecom Handbook Module 3 at 8.





whereby the incumbent must ensure that its access rates are not anti-competitive (*i.e.* exclusionary).⁸⁸ While there are numerous other established interconnection principles,⁸⁹ many are only incidentally related to competition policy.

Local loop unbundling can generally be broken down into three forms, differentiated by the degree to which the various elements of the local loop are unbundled: full unbundling (*i.e.* access to raw copper); line sharing or shared access; and bit-stream access unbundling (*i.e.* wholesale data spectrum access). Bit-stream access unbundling is a method by which duplication of the local loop can be avoided, but limits possible differentiation of ADSL service provided in competition with the incumbent.⁹⁰ Within these three areas, some steps have been found to be more effective than others.⁹¹ Possible advantages to local loop unbundling include:⁹² reducing barriers to entry, thus accelerating competition; encouraging innovation and upgrading, since new entrants can combine new technologies with components of existing networks; avoiding unnecessary duplication of network components, which in turn eliminates the need for public disruptions due to construction; facilitating access to rights of way by new entrants; and providing new sources of revenue to the incumbent. Possible disadvantages include:⁹³ reducing the incentives, for both the incumbent and competitors, to construct new and innovative network facilities;⁹⁴ and requiring regulatory intervention and technical co-ordination. It has generally been found that the advantages of unbundling outweigh the disadvantages.

A critical access issue is that of pricing: what price should the entrant pay for access to another provider's network? There are essentially two main access price theories that address this question.⁹⁵ The first advocates that local loops should be priced based on the cost of the unbundled component. The other states that the access price should be based on the retail price of the incumbent service, minus a discount.⁹⁶ While the cost-based approach gives the right incentives for constructing duplicate networks, if retail prices themselves are not directly linked to the underlying costs, this approach provides no guarantee that local loop competition will in fact develop throughout the network.⁹⁷ Similarly, the perceived benefit of retail-minus access prices is that they allow for competition to develop throughout the network. However, if the incumbent's retail charges are not directly related to the underlying costs, then the retail-minus approach encourages inefficient network duplication in low-cost areas (*i.e.* where the incumbent's charges are above cost).⁹⁸ Accordingly, no one theory of access pricing principles is likely to achieve all required objectives,

⁸⁸ For example, one commonly used imputation test is whereby the incumbent must charge the same amount it theoretically costs to provide the service to itself, plus an extra charge to cover its additional costs of providing the interconnection service to others.

⁸⁹ For a Summary of Widely Accepted Interconnection Principles, see Telecom Handbook Module 3 at 8-9.

⁹⁰ Bit stream access means interconnection to the incumbent's data network, which manages the transfer of data, therefore allowing the entrant to control the quality of the service it provides to its customers.

⁹¹ For a broader discussion on local loop unbundling, see generally: OECD, *Developments In Local Loop Unbundling*, DSTI/ICCP/TISP(2002)5/FINAL (Paris: OECD Sept 10 2003). Online: <<http://www.oecd.org/dataoecd/25/24/6869228.pdf>>

⁹² Telecom Handbook Module 3 at 41 and 47. Also, see generally: OECD DAFFE/CLP/WP2(2001)3.

⁹³ Telecom Handbook Module 3 at 41 and 47.

⁹⁴ This disadvantage is particular to bit-stream access unbundling.

⁹⁵ ■ For a detailed study on access pricing in telecommunications, see: OECD, *Access Pricing in Telecommunications*, (Paris: OECD 2004) ISBN 92-64-10592-1. Online: <<http://www.oecd.org/dataoecd/26/6/27767944.pdf>>

[Hereinafter "Access Pricing in Telecommunications"]

■ Also see: OECD DAFFE/CLP/WP2(2001)3 at 3, 8-9.

⁹⁶ OECD DAFFE/CLP/WP2(2001)3 at 3.

⁹⁷ OECD DAFFE/CLP/WP2(2001)3 at 4.

⁹⁸ OECD DAFFE/CLP/WP2(2001)3 at 4.

and other mechanisms are usually needed.⁹⁹ As far as sector-specific regulation is concerned, it appears that cost-based measures are used in the majority of countries, with retail minus being used in the minority.¹⁰⁰ At the same time, competition laws generally prohibit margin squeezing. Irrespective of the access price mechanism used, measuring costs for telecommunications services in a dynamic environment is a challenging endeavor and has raised considerable theoretical debate¹⁰¹ (e.g. marginal costs are hard to measure, and costs are trending downward with technological change).

5.7 Competition Issues Related to Non-commercial Service Obligations

In many jurisdictions, sector-specific regulators impose non-commercial service obligations in order to provide telecommunications services of a defined minimum quality and at a reasonable price for a defined class of users. The premise is that without such obligations, the service would either not be provided or it would be provided at a higher price. Non-commercial service obligations have traditionally covered voice services, including the provision of public wire-line phone services, and access to emergency and directory information services. More recently, many countries are considering whether or not broadband services should be part of non-commercial service obligations.

There are a variety of approaches in which countries have implemented non-commercial service obligations. Accordingly, such approaches may vary with respect to: the selection of the services and classes of users to include; the extent of the subsidy allowed; the types of providers eligible for the subsidy; and the appropriate method in which to fund the subsidy. Competitive telecommunications markets are generally compatible with non-commercial service obligations.¹⁰²

Incumbent firms frequently cite non-commercial service obligations to support the argument that an enterprise should receive a government-protected monopoly. The general argument is that, without entry restrictions competitors would “cream-skin” the profitable services and bankrupt the incumbent by leaving it with the unprofitable services. Incumbent enterprises often argue that they should be protected from entry in order to allow them to continue to serve the protected class of consumers at below cost prices. To the extent that providers of non-commercial service obligations argue that costs are burdensome or place them at a disadvantage, such cost claims should be carefully examined. That is, while a non-commercial service obligation may be a cost to the incumbent, it may not be as costly for new entrants that may be utilizing a different technology. Furthermore, in regulatory proceedings that consider compensation for the costs of such obligations, one of the issues facing regulators is the determination of an appropriate level of compensation that matches the costs.

While competition authorities do not themselves impose non-commercial service obligations, an issue for them to consider is whether the implementation of such obligations impacts the development of a

⁹⁹ ■ It has been suggested that the conflicts in objectives between these two above approaches could be eliminated through the use of other tools, such as a universal service funding mechanism, which essentially taxes local service loop providers in low-cost areas and subsidizes local loop providers in high cost areas. Such a mechanism would allow access prices to remain at cost, but would use taxes or subsidies on final products to ensure a level playing field for competition in the final market. See: OECD DAFFE/CLP/WP2(2001)3 at 4 and 9. Also see: OECD DAFFE/COMP(2002)6 at 27-28.

■ For general principles with respect to regulating access prices of a monopoly, see: OECD, *Access Pricing: Theory And Application To Telecommunications*, Background Note by Secretariat, DAFFE/CLP/WP2(2001)5, (Paris: OECD Sept 25 2001). For Official Use, at 11-19. [Hereinafter “OECD DAFFE/CLP/WP2(2001)5”]

¹⁰⁰ OECD Access Pricing in Telecommunications at 13.

¹⁰¹ See generally: OECD DAFFE/CLP/WP2(2001)5.

¹⁰² For an example of how competition goals and social policy goals such as universal service can be reconciled, see: OECD, *Roundtable On Bringing Competition Into Regulated Sectors* (Background Note By the Secretariat, Session I), Global Forum on Competition, DAF/COMP/GF(2005)1, (Paris: OECD, January 25, 2005), at 11. Online: <<http://www.oecd.org/dataoecd/11/24/34339715.pdf>> [Hereinafter “OECD DAF/COMP/GF(2005)1”]





competitive marketplace. In particular, although the implementation of non-commercial service obligations raises social issues (e.g. whether telecommunication services should be made available to different classes of customers on the same terms and conditions), the focus for competition authorities, in the context of competition advocacy, will be whether the respective obligation distorts or limits competition. Accordingly, competition advocacy efforts should focus on ensuring that the respective non-commercial service obligations do not favor one competitor over another, or create unnecessary barriers to entry. For example, if the group of eligible providers who can receive subsidies are limited to those employing wire-line technologies, wireless providers, who could serve remote areas efficiently, may choose not to enter because the subsidy provided to the wire-line carrier makes it difficult to compete successfully.

5.8. Relevant Market Definition

For the purposes of both sector-specific regulation and competition law enforcement, the delineation of market definition, in some jurisdictions, is the essential first step from which all other steps follow.¹⁰³

Many sector-specific regulators have traditionally relied upon a service classification approach to market definition.¹⁰⁴ However, when compared with competition law principles, such an approach is relatively inflexible and does not take into account certain factors such as firms with major market shares or control of essential facilities.¹⁰⁵ Considering that one of the objectives of sector-specific regulation is to move telecommunications markets into competition, there is an argument for sector-specific regulators to employ a more flexible, competition-based analysis to market definition.

Many competition authorities traditionally approach relevant market definition by defining both the relevant product market and the relevant geographic market. Both are defined according to demand and supply-side substitutability analysis, which incorporates, what is commonly referred to, as the “hypothetical monopolist test.”¹⁰⁶ The idea is to identify the smallest group of products and smallest geographic area in relation to which sellers, if acting as a single firm (i.e. a “hypothetical monopolist”) would impose and sustain a significant and non-transitory price increase above levels that likely would exist otherwise.¹⁰⁷ Within telecommunications, such an approach would essentially look at how substitutable different telecommunications products and services are within both the relevant product and geographic markets.

Nonetheless, some telecommunications product markets are challenging to define. For example, not only may the range and permutations of some telecommunications services be extremely broad, but also consumer demand for some services varies widely.¹⁰⁸ As well, the full convergence that technologies such as IP will bring to telecommunications and broadcasting may potentially alter market definition boundaries even further.¹⁰⁹ Similar to product markets, geographic markets are sometimes challenging to define, as some telecommunications technologies blur or broaden geographic markets.¹¹⁰ Overall, each telecommunications product and service will have its own unique concerns with respect to market definition.¹¹¹

¹⁰³ In some jurisdictions the relevant market may be pre-determined by the relevant government authority.

¹⁰⁴ ITU Competition Policy in Telecommunications at 19.

¹⁰⁵ ITU Competition Policy in Telecommunications at 19. Note that not all jurisdictions recognize an essential facilities doctrine.

¹⁰⁶ For an overview of general market definition principles, see: International Competition Network, *ICN Report on Merger Guidelines – Chapter 2- Market Definition* (Washington: ICN, April, 2004) at 3. Online: <http://www.internationalcompetitionnetwork.org/merida_speech2.pdf>

¹⁰⁷ Usually a 5% increase for a period of one year is considered to be both significant and non-transitory.

¹⁰⁸ ITU Competition Policy in Telecommunications at 12.

¹⁰⁹ OECD DSTI/ICCP/TISP(2004)4/FINAL at 26.

¹¹⁰ Garzaniti L., *Telecommunications, Broadcasting and the Internet*, EU Competition Law and Regulation 2nd ed., (London: Sweet and Maxwell Ltd., 2003) at 276-279. [Hereinafter “Garzaniti”]

¹¹¹ For a broad overview of some of these concerns, see Garzaniti at 272-276.

Within the framework of demand and supply-side substitutability analysis, there are a variety of approaches that have been utilized to define product and service markets in telecommunications. Regarding those telecommunications markets that are more technology-driven, one approach is to look at marketing strategies of firms and how such firms define their own products and services. While this approach may be helpful, it is often the case that consumers will have individual perspectives on evaluating the respective products and services.¹¹² Another approach has been to classify telecommunications markets as point-to-point services (*i.e.* according to where the service in question originates from and terminates, provided that this is in fact how such services are purchased and used), and then further classify these services into those regions that have similar market and regulatory conditions.¹¹³ As most costumers purchase services rather than technology, “technical neutrality” among services has been another important emerging principle when defining telecommunications product markets.¹¹⁴ Overall, defining telecommunications markets is largely case specific, depending on both the particular facts and competition concerns at hand.¹¹⁵

6 The Promotion and Maintenance of Competition: Experiences in the Application of Competition Law Enforcement

The movement towards greater liberalization and increased competition in telecommunications networks and services has provided competition authorities with the opportunity to apply competition legislation, enforcement, and remedies to anti-competitive behaviour. This section provides a sampling of examples from various jurisdictions, in which competition legislation has been applied through enforcement actions in the telecommunications sector within the past three years. Details of each case, relating to the facts and resolution of each matter, are described more fully in Appendix I.

Collusive Behaviour

France has had a case in which the only three mobile telephone operators were found to have engaged in collusive behaviour by entering into an anticompetitive pricing and market allocation agreement and exchanging strategic customer information.¹¹⁶

Korea has had a case in which two local telephone companies were fined for having fixed prices in the local call market.¹¹⁷

Effective Operation of a Regulatory Regime

Mexico has had a case in which the dominant telecommunications firm successfully challenged before the courts the authority of the competition authority to declare the firm dominant in five telecommunications markets. According to the telecommunications law, absent such declaration by the competition authority, the regulator does not have the power to impose additional regulations on the firm. The competition authority reinstalled the declaration and is continuing to address the alleged anti-competitive conduct by this firm. The declaration is under the Court’s review again.¹¹⁸

¹¹² R. Hewitt Pate, Assistant Attorney General, Antitrust Division, U.S. Department Of Justice, “Competition and the End of Geography” (Presentation at the Progress and Freedom Foundation, Aspen, Colorado, August 23, 2004) at 5.
Online: <<http://www.usdoj.gov/atr/public/speeches/205153.htm>>

¹¹³ ITU Competition Policy in Telecommunications at 12.

¹¹⁴ OECD DSTI/ICCP/TISP(2004)4/FINAL at 26.

¹¹⁵ Garzaniti at 274. Also see: Garzaniti appendices 1-3 for market definition decisions with respect to telecommunications in the EU.

¹¹⁶ France (Mobile Telephony – Market Sharing Cartel).

¹¹⁷ Korea (Cartel in Local Call Market).

¹¹⁸ Mexico (Declaratory statement to Telmex as an agent with substantial power on five relevant markets).





Exclusive Dealing

France and Italy have had cases in which their respective dominant telecommunications firms allegedly engaged in exclusive dealing designed to limit the ability of competitors to compete in the mobile telephony and business markets.¹¹⁹

Margin Squeezing

Hungary, Italy, Japan, and Turkey have had cases in which their respective dominant telecommunications firms allegedly engaged in anticompetitive margin squeezing designed to limit the ability of competitors to compete.¹²⁰

The EU Commission fined an incumbent operator for charging excessive prices to its competitors for access to unbundled loops, which, in turn, left no margin to provide retail services.¹²¹

New Zealand has a case currently before the courts in which it is alleged that the dominant telecommunications firm priced its wholesale high-speed data transmission services above the retail price at which it sells these services to consumers for the purpose of preventing or deterring competitive conduct by competitors.¹²²

Mergers

The United States has had two cases in which proposed mergers between local telecommunications networks were likely to bring about a substantial lessening of competition in private networks for voice and data services.¹²³ The United States has had one case in which a proposed merger between mobile wireless providers was found to likely bring about a substantial lessening of competition in mobile wireless voice and data services.¹²⁴ The United States has also had one case in which a proposed merger between satellite television providers was likely to bring about a substantial lessening of competition in the delivery of multi-channel video programming distribution services.¹²⁵

Canada has had a case in which it was found that a proposed merger between mobile wireless providers was unlikely to bring about a substantial lessening of competition in mobile wireless voice and data services.¹²⁶

Predatory pricing

The EU Commission fined a subsidiary of an incumbent operator for applying predatory prices to exclude competition in the ADSL market.¹²⁷

Price Discrimination

France has had a case in which the dominant telecommunications firm allegedly engaged in price discrimina-

¹¹⁹ France (Mobile Telephony – Exclusionary Practices); Italy (Abusive Practices by Telecom Italia).

¹²⁰ Hungary (Magyar Telecom – Vj-100/2002); Italy (Abusive Practices by Telecom Italia); Japan (NTT East); Turkey (ISP case); Turkey (UMTH).

¹²¹ EU (Decision of the European Commission, Case COMP/37.451, 37.578, 37.579 – Deutsche Telecom AG (DTAG), May 21, 2003).

¹²² New Zealand (Commerce Commission v. Telecom Corporation of New Zealand Limited & Telecom New Zealand Limited CIV-2004-404-1333).

¹²³ United States (United States v. Verizon Communications Inc., and MCI, Inc. and United States v. SBC Communications Inc. and AT&T Corp.).

¹²⁴ United States (United States et al. v. Cingular Wireless Corporation, SBC Communications Inc., BellSouth Corporation and AT&T Wireless Services, Inc.).

¹²⁵ United States (United States v. EchoStar Communications Corp., Hughes Electronic Corp., General Motors Corp., and DirecTV Enterprises Inc.).

¹²⁶ Canada (Canadian Competition Bureau – Mobile Wireless Merger).

¹²⁷ EU (Decision of the European Commission, Case COMP/38.233 – Wanadoo Interactive, July 16, 2003).

tion by setting higher prices for off-net calls compared to its on-net calls.¹²⁸

Hungary has had a case in which the dominant telecommunications firm engaged in price discrimination by charging higher prices to competitors for access to special toll free and local rate numbers.¹²⁹

Raising Rivals Costs

New Zealand has a case currently before the courts in which it is alleged that the dominant telecommunications firm unilaterally imposed a new access and fee structure directed at competitive Internet Service Providers with the purpose of preventing or deterring competitive conduct by these competitors.¹³⁰

Refusal to Supply

France and Turkey have had cases in which their respective dominant telecommunications firms allegedly engaged in refusals to supply potential competitors with access to wholesale broadband Internet and network infrastructures needed to supply national mobile roaming services.¹³¹

Hungary has had a case in which the dominant cable firm was fined for refusing to provide Internet services on the cable network.¹³²

Spectrum Caps

Mexico has had a case in which telecommunications firms challenged the authority of the competition agency to limit the amount of spectrum that an individual firm may acquire in a spectrum auction. The Court's decision on this matter is pending.¹³³

Tied Selling/Bundling

France has had a case in which the dominant telecommunications firm allegedly engaged in tied selling/bundling in the ADSL television market by joining the sale of its local service with its transmission of video signals service.¹³⁴

7 Roles of the Competition Authority and Sector-Specific Regulator in Promoting and Maintaining Competition

A fundamental issue that arises, as telecommunications markets comprised of a single regulated monopoly give way to competition, concerns the appropriate role for the sector-specific regulator both in terms of facilitating competition and ensuring competition, once established. As the basic direction of change within the telecommunications sector is similar in most countries (*i.e.* towards liberalization), the principles of effective sector-specific regulation in the telecommunications industry have been converging internationally. Nonetheless, the application of these principles is, to differing degrees, dependent on the underlying

¹²⁸ France (Mobile Telephony – Exclusionary Practices).

¹²⁹ Hungary (Magyar Telecom – Vj-66/2004).

¹³⁰ New Zealand (Commerce Commission v. Telecom Corporation of New Zealand Limited & Telecom New Zealand Limited CP No. 148/00).

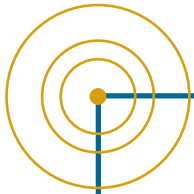
¹³¹ France (Refusal to Give Access to the Wholesale Broadband Internet Market); Turkey (Roaming Case).

¹³² Hungary (UPC-Vj39/2002).

¹³³ Mexico (Auction to allocate radio-electric spectrum for broadband Personal Communications Services (PCS) at the 1.9 Ghz band.).

¹³⁴ France (TV on ADSL – Interim Measures).





economic and legal circumstances of each nation.¹³⁵ Such principles generally include:¹³⁶ introducing competition;¹³⁷ minimizing regulatory intervention after competition is established; converging toward global regulatory standards or “best practices;” regulating by principle (*i.e.* to avoid delay and uncertainty); and establishing operational efficiencies.

Similarly, as the telecommunications sector embraces competition, a parallel issue, of determining the appropriate role for the relevant competition authority, arises.¹³⁸ The prevailing wisdom and current trend is that, as the telecommunications sector gives way to greater competition, the competition authority and the application of competition laws and principles should have an enhanced role.¹³⁹ This enhanced role for competition authorities, while primarily to protect and maintain competition (*e.g.* through appropriate enforcement actions),¹⁴⁰ also extends into the realm of initiating and promoting competition by implementing pro-competitive policies,¹⁴¹ through competition advocacy,¹⁴² and by providing valuable advice regarding the enforcement of sector-specific regulation in the telecommunications industry.¹⁴³ Some of the most notable examples of providing advice to the sector-specific regulator include playing a significant role in defining relevant telecommunications markets and determining when sufficient competition exists in the market, as a prerequisite to regulatory forbearance.¹⁴⁴

A greater role for the competition authority and the application of competition laws has generally been justified as a direct result of two distinct developments:¹⁴⁵ first, the trend toward abolishing exemptions to the application of general competition rules to the telecommunications sector; and second, the power or mandate of telecommunications regulators to forbear when sufficient competition exists.

Before examining the reasons and related advantages/disadvantages behind allocating certain oversight responsibilities to either the sector-specific regulator or the competition authority, it is first necessary to understand some of the important similarities and differences in both their objectives and approaches.¹⁴⁶

¹³⁵ For a detailed empirical analysis of the factors that tend to emphasise one form of regulatory emphasis over another (*i.e.* with respect to the telecommunications-specific regulator versus the competition authority), see generally: Castro R., “Explaining Institutional Arrangements in Telecommunications Regulation: An Empirical Analysis,” (October 2004). Online: <<http://ssrn.com/abstract=612581>>

¹³⁶ See :Telecom Handbook Module 1 at 21–26.

¹³⁷ For a detailed discussion on introducing competition into regulated industries (*i.e.* network infrastructure industries), see: OECD DAF/CLP(99)8 at 19-20.

¹³⁸ For an analysis and breakdown of the division of oversight responsibilities in the telecommunications sectors of various countries, see: OECD DSTI/ICCP/TSP(99)15/FINAL, starting at 23.

¹³⁹ ■ “Competition authorities have been given an enhanced role in the communication sector as competition has developed.” See: OECD DSTI/ICCP/TSP(99)15/FINAL at 6.

■ In fact, in all OECD countries, generic competition laws and remedies apply to the telecommunications sector. See: OECD DAF/COMP(2002)6 at 8.

¹⁴⁰ For a detailed discussion of the role of competition authorities and competition laws in regulated industries, see generally: OECD DAF/CLP(99)8 at 19-20.

¹⁴¹ For an overview of policies utilized in order to promote competition in regulated sectors, see generally: OECD DAF/COMP/GF(2005)1.

¹⁴² For a broader discussion on competition advocacy in regulated sectors, see generally: ICN Case Studies on Regulated Sectors. Also see: OECD DAF/CLP(99)8 at 7.

¹⁴³ ICN, *Antitrust Enforcement in Regulated Sectors Working Group, Subgroup 2: Interrelations between antitrust and regulatory authorities*, Report to the Fourth ICN Annual Conference (Bonn, June 2005), at 5. Online: <http://www.internationalcompetitionnetwork.org/bonn/AERS_WG/SG2_Interrelations/Interrelations_Between_Antitrust_and_Regulation.pdf> [Hereinafter “ICN AERS 2005”], citing OECD, *The Relationship Between Competition Authorities And Sectoral Regulators* (Background Note By the Secretariat, Session II), Global Forum on Competition, DAF/COMP/GF(2005)2, (Paris: OECD, February 2, 2005).

Online: <[http://www.oecd.org/olis/2005doc.nsf/0/30ba5041a9d33f2ec1256f9c0053b0e4/\\$FILE/JT00177871.PDF](http://www.oecd.org/olis/2005doc.nsf/0/30ba5041a9d33f2ec1256f9c0053b0e4/$FILE/JT00177871.PDF)>

[Hereinafter “OECD DAF/COMP/GF(2005)2”]

¹⁴⁴ OECD DAF/COMP/GF(2005)2 at 6.

¹⁴⁵ OECD DSTI/ICCP/TSP(99)15/FINAL at 9.

¹⁴⁶ For a broader discussion on the similarities and differences in approach between the telecommunications-specific regulator and the competition authority, see generally: Telecom Handbook Module 5. Also see generally: ITU Competition Policy in Telecommunications.

7.1 Differences and Similarities in Objectives

The objectives behind sector-specific regulation in the telecommunications sector of liberalized economies may encompass some of the following:¹⁴⁷ setting prices on a case-by-case basis (*e.g.* access and inter-connection charges) and accompanying commitments regarding supply and quality of service; ensuring that various public service obligations (*e.g.* universal service obligations being among the most important)¹⁴⁸ are being met; preventing abuses of market power by incumbents; promoting and preserving competition; stimulating investment; promoting public confidence; protecting consumer rights, including privacy rights; and, promoting increased connectivity. While the policy objectives of sector-specific regulation are relatively diverse, the objectives of competition policy are more focused: to protect and maintain competition, rather than competitors, so as to promote market efficiency and thus maximize consumer welfare.

The objectives of sector-specific regulation and competition policy within the telecommunications sector are sometimes perceived to be at odds, particularly when it comes to certain social policy versus competition objectives.¹⁴⁹ Nonetheless, both sector-specific regulation and competition policy also share many important complementarities and similarities in their objectives.¹⁵⁰ For example, in some countries, both competition authorities and sector-specific regulators commonly share the objectives of ensuring access to essential facilities and the reduction of barriers to entry.¹⁵¹ Importantly, however, even within these areas of similar and complementary objectives, telecommunications regulators and competition authorities differ in their approaches. That is, “the emphasis of competition law is on what undertakings should not do, whereas regulation does the reverse and tells market agents what to do.”¹⁵²

Whether a nation, in its pursuit of greater competition, chooses to put more emphasis on general competition rules over sector-specific rules, or on one institution over the other to enforce such rules, depends on a myriad of factors. Such factors generally include:¹⁵³ the types of incentives needed (*i.e.* which is largely dependant upon the level of competition in the market); the costs involved for all parties, including the respective overseeing institutions; efficient resource allocation (*i.e.* both within the economy and between the different overseeing institutions); the various time horizons; the risks of market distortion; the level and type of specialized expertise needed; the degree of institutional competence needed to realize the respective rules; the degree of flexibility desired; the degree of specificity desired (*i.e.* ability to tailor rules to specific circumstances); the degree of certainty desired; the promotion of regulatory coherence and minimization of problems associated with overlapping jurisdiction; the ability for the institution implementing the respective rules to act independently; the ability of the institution implementing the respective rules to avoid regulatory capture; and, the level of institutional accountability desired.

Ranking these above factors will depend largely on where the telecommunications sector is positioned along the migration spectrum from regulation to competition, as well as the particular social and economic needs of the marketplace. However, there are generally three identifiable task-based categories to consider when determining how to allocate oversight responsibility between the competition authority and the sector-specific regulator in the telecommunications sector: first, are tasks more oriented toward “technical”

¹⁴⁷ Some of these examples are found in: Controlling Market Power at 12 - 13. Also see: Telecom Handbook Module 1 at 2.

¹⁴⁸ For a more in depth examination of universal service issues, see: The World Bank, *Telecommunications Regulation Handbook*, (Module 6, Universal Service), (Washington: The World Bank, November 2000).
Online: <http://rru.worldbank.org/Documents/Toolkits/telecom_mod6.pdf>

¹⁴⁹ OECD DAF/COMP/GF(2005)2 at 2.

¹⁵⁰ For a broader discussion concerning the complementarities and similarities in their objectives. See: ICN AERS 2005 at 7-8.

¹⁵¹ OECD DAF/COMP/GF(2005)2 at 2.

¹⁵² ICN AERS 2005 at 7, citing CUTS 2003.

¹⁵³ For a broader discussion on the factors to consider when allocating responsibility to either the sector-specific regulator or to the competition authority, see generally: OECD DAFFE/CLP(99)8. Also see generally: Controlling Market Power.





regulation; second, are tasks more oriented toward “economic” regulation; and third, are tasks more oriented toward competition protection or the enforcement of competition remedies.¹⁵⁴ These categories are not mutually exclusive, and their boundaries are not fixed. Accordingly, certain tasks may be carried out by more than one institution or accomplished by more than one type of instrument or remedy. In particular, as competition evolves and competition authorities gain more experience, many aspects of both technical and economic regulation, not previously overseen by competition authorities, may naturally begin to fall within the ambit of competition policy.

Technical regulation generally includes technical aspects of network access and interconnection, as well as privacy, safety, reliability (*i.e.* quality of service), and environmental protection concerns.¹⁵⁵ In some jurisdictions, this also includes the assignment of spectrum frequencies and the management of spectrum auctions. Technical regulation is usually highly detailed, data intensive, complex, and requires an intimate understanding of the industry. Economic regulation speaks to the economic principles that relate to the regulation of network industries in general. This commonly includes adopting cost-based measures to control monopoly pricing,¹⁵⁶ as well as resolving licensing, rights-of-way, and non-technical interconnection issues such as non-discriminatory access to necessary inputs. It is important to note one other significant form of economic regulation, which is often overlooked: “social regulation,” which includes dealing with issues of universal service and privacy concerns. Interconnection issues are sometimes referred to as being in their own category, namely “access regulation.” Competition rules include provisions aimed at meant for controlling market power, anti-competitive conduct, and mergers.

The following two sub-sections will examine some of the important considerations with respect to the application of both sector-specific regulation and competition policy within the telecommunications sector. This discussion will include a description of the general advantages and disadvantages of these approaches with respect to the above-referenced factors in mind.

7.2 The Application of Sector-Specific Regulation

Sector-specific regulation in telecommunications generally takes the form of proportionate “asymmetrical regulation,” whereby the bulk of regulatory burdens are imposed on incumbent operators.¹⁵⁷ Such regulatory burdens tend to be *ex ante* in nature,¹⁵⁸ which is often an effective way to promote competition in sectors in which it does not currently exist or is not yet sustainable. Sector-specific rules are usually very precise, highly detailed, and ongoing (*i.e.* behavioural). As the precise nature of sector-specific rules aims to allow for market certainty, a high level of industry expertise and competence is required. It is generally the case, however, that highly detailed sector-specific rules are costly to enforce. It might also be the case that the specificity of sector-specific rules will entail market rigidity in some circumstances. Furthermore, as initial efforts to promote competition traditionally are accomplished through sector-specific regulation, mistakes can have costly long-term consequences. Due to these characteristics, sector-specific regulation

¹⁵⁴ OECD DAFFE/CLP(99)8 at 8.

¹⁵⁵ OECD DAFFE/CLP(99)8 at 8. Also see: OECD DAF/COMP/GF(2005)2 at 4.

¹⁵⁶ OECD DAFFE/CLP(99)8 at 8.

¹⁵⁷ ITU Competition Policy in Telecommunications at 18.

Note that this “asymmetrical” approach has been largely adopted as a result of the WTO Regulatory Reference Paper to the GATS 4th Protocol. Nonetheless, some critics have called for “symmetric” regulation in those segments of the telecommunications market that have been sufficiently altered due to convergence. See: OECD DAFFE/CLP(99)8 at 32.

¹⁵⁸ While the majority of sector-specific regulation tends to be *ex ante*, as opposed to *ex post* in nature, there are several exceptions. For example, telecommunications regulators may be empowered to respond to complaints or launch investigations where there appears to have been a contravention of the regulatory framework. Another example includes situations where a regulator might disallow some investments, *ex post*, under rate of return regulation. See: Controlling Market Power at 17.

is particularly adept, in some circumstances, at technical regulation.¹⁵⁹ Furthermore, sector-specific regulation, as compared to competition policy, is traditionally considered to be better suited to address certain social policy objectives, such as universal service, affordable service, and privacy considerations.

7.3 The Application of Competition Policy and Remedies

There are several types of competition rules that serve to facilitate competition objectives.¹⁶⁰ In particular, there are competition rules that: prohibit collusion or anti-competitive agreements between firms; prohibit firms from abusing their market power; and, prohibit certain activities or agreements, such as mergers, that otherwise would lead to a substantial lessening of competition in relevant markets. It is generally accepted that the greater the extent of market liberalization, the greater the need for rules that will protect and maintain competition.

With the exception of mergers, these types of competition rules are generally implemented by employing *ex post* remedies, which are invoked only after a breach of the rules has been determined. The main advantage of such remedies is that they are less intrusive and more flexible when compared to *ex-ante* sector-specific regulation. As well, given that competition remedies are applied after the fact, they are less prone to some of the costs associated with sector-specific regulatory mistakes.¹⁶¹ One further advantage of competition rules is that, because they are normally applied in a similar fashion throughout all sectors of the economy, there is a decreased risk of market distortion when compared to the application of sector-specific regulation. Disadvantages of competition rules and their enforcement may include: the potential for costly and time-consuming litigation; the possibility that the respective adjudication mechanism may not be competent in competition law matters; and the potential for different courts to rule differently on the same sets of facts. Furthermore, competition law remedies sometimes take longer to implement when compared to some sector-specific regulations.¹⁶²

Due to their *ex post* nature, competition rules may be insufficient regarding certain aspects of technical regulation, such as the identification of specific access points to be provided to technically complex network configurations. As well, competition rules alone are sometimes insufficient at solving time-sensitive issues raised by interconnection, number portability, carrier pre-selection, resale, and local-loop unbundling.¹⁶³ Interestingly, for reasons of efficiency, consistency, transparency, and international co-operation, a study by the International Competition Policy Advisory Committee (ICPAC) recommended that merger reviews in the telecommunications sector be placed solely within the jurisdiction of competition authorities and removed from sector-specific regulation.¹⁶⁴

While competition rules and remedies will be more effective and efficient than sector-specific regulation at achieving certain objectives, the reverse also holds true, in that sector-specific regulation will be more effective and efficient with respect to other objectives. Importantly, however, there are situations to which both sets of rules may be applied as either substitutes or complements. While this is generally the case regarding issues pertaining to the abuse of market power by incumbents, it is particularly the case

¹⁵⁹ OECD DAF/CLP(99)8 at 33. Also see: OECD DAF/COMP/GF(2005)2 at 4-5.

¹⁶⁰ ITU Competition Policy in Telecommunications at 10.

¹⁶¹ Geradin D. & O'Donoghue R., "The Concurrent Application of Competition Law and Regulation: The Case of Margin Squeeze Abuses in the Telecommunications Sector," (2005), The Global Competition Law Centre Working Paper Series, Global Competition Law Centre, at 56. Online: <<http://gcllc.coleurop.be/documents/GCLC%20WP%2004-05.pdf>> [Hereinafter "The Concurrent Application"]

¹⁶² OECD DAF/COMP/GF(2005)2 at 5. As well, competition law remedies usually require a standard of proof being met before they are imposed.

¹⁶³ See generally: Controlling Market Power at 337-8.

¹⁶⁴ International Competition Policy and Advisory Committee, *Final Report to the Attorney General and Assistant Attorney General For Antitrust* (U.S. Department of Justice, Antitrust Division, 2000) at 145-154. Online: <<http://www.usdoj.gov/atr/icpac/finalreport.htm>>





regarding certain areas of economic regulation such as: interconnection, network access, and incumbent pricing.¹⁶⁵ Even within areas often managed by sector-specific regulation (*e.g.* such as access to essential facilities), competition issues, and thus the opportunity for using competition rules, commonly arise.¹⁶⁶ Finally, and in a more indirect way, given that the sector-specific regulator often is responsible for defining “entry conditions,” its actions and decisions directly affect the nature and state of competition after entry has taken place.¹⁶⁷ Consequently, sector-specific regulatory decisions help to establish the basic market conditions to which the competition authority applies general competition law.¹⁶⁸

8 Different Models of Allocating Oversight Responsibilities

Efficient and effective allocation of responsibility between competition authorities and sector-specific regulators is required in order to promote and maintain competition. Such allocation, however, demands careful consideration of the relative expertise and advantages that each agency brings to enforcement.¹⁶⁹ There appear to be three general institutional approaches to allocating oversight responsibilities with respect to the telecommunications sector: 1) vesting full sectoral oversight in the competition authority (*i.e.* applying competition rules to all competition and regulatory issues); 2) vesting the enforcement of competition rules within the sector-specific regulator; and 3) maintaining a functionally separate sector-specific regulator and competition authority. A more thorough analysis, including the advantages and disadvantages associated with these different approaches is discussed in Appendix II.

These three models represent distinct forms, and the regimes of many nations may not fit neatly into these categories. Most notably, there may be circumstances in which it might be efficient for individual jurisdictions to allocate certain functions to the sector-specific regulator and others to the competition authority. This is consistent with the considerations, identified above, that technical and economic regulation, as well as the application of competition remedies, are not mutually exclusive spheres. Furthermore, the boundaries of these spheres are continually in flux, depending on the competitive changes that evolve in the marketplace. Nonetheless, these three models can be instructive in reviewing the allocation of responsibilities.

It is important to realize that there is no optimal approach to the allocation of responsibilities and each of these models and related institutional arrangements vary from country to country, and even across industries within the same country.¹⁷⁰ The conditions that give rise to such institutional arrangements are a consequence of both the economic circumstances (*e.g.* including current levels of competition) and pre-existing legal framework within the respective country.¹⁷¹ Interestingly, commentators note that there is no country in which the division of labour between competition authorities and telecommunications regulators can be regarded as settled.¹⁷² To this end, when determining the characteristics and complexities associated with allocating responsibility between the sector-specific regulator and the competition authority, a practical approach, which recognizes the need for flexibility as change evolves, appears to be more relevant than a theoretical one. Nonetheless, some important general observations can be made about these different approaches (See Appendix II).

¹⁶⁵ ICN, Antitrust Enforcement in Regulated Sectors Working Group, Subgroup 3: Interrelations between antitrust and regulatory authorities, Report to the Third ICN Annual Conference (Seoul, April 2004), at 5. Online:

http://www.internationalcompetitionnetwork.org/seoul/aers_sg3_seoul.pdf [Hereinafter “ICN AERS Subgroup 3, 2004”]

¹⁶⁶ OECD DAFFE/COMP(2002)6 at 8-9. Also see generally: OECD DAFFE/CLP(99)8 at 8.

¹⁶⁷ ICN AERS Subgroup 3, 2004 at 5.

¹⁶⁸ CUTS 2003 at 3.

¹⁶⁹ For a broader discussion on the factors to consider when allocating responsibility to either the sector-specific regulator or the competition authority, see generally: OECD DAFFE/CLP(99)8.

¹⁷⁰ ICN AERS Subgroup 3, 2004 at 6. Also see: ICN AERS 2005 at 6.

¹⁷² ICN AERS Subgroup 3, 2004 at 4.

8.1 Problems Associated With Overlapping Jurisdiction

While the three models for allocating oversight responsibilities in the telecommunications sector each contain their own unique sets of advantages and disadvantages, one important factor, which deserves further elaboration, is that of jurisdictional overlap. To a certain extent, some degree of jurisdictional overlap between the competition authority and the sector-specific regulator is unavoidable. Reasons why include: the often-converging objectives of both agencies; that both sector-specific and competition rules can be applied to the same matter in certain circumstances; and that both agencies may be competent in dealing with the same matter. While problems resulting from overlapping jurisdiction are the exception rather than the norm, it is nonetheless important to be aware of such problems so as to either alleviate or avoid their occurrence.

Overlapping jurisdiction, if not managed, may lead to inefficiencies, which may destabilize and inhibit competition. In turn, a lack of competition may have further and more subtle negative consequences including: a perceived lack of investment; a potential reduction in innovation; and a reduction in overall trade. In particular, the problems associated with overlapping jurisdiction may include: inter-agency power battles; regulatory duplication; inefficient use of resources and increased costs; additional requirements and complexities due to both multiple and different standards of review being imposed on firms; potential delay in closing the transaction; potential lack of transparency; the risk of inconsistent results when complying with the requirements of both authorities; the risk of regulatory “gaming” by market participants; and overall uncertainty in the market. Overlapping jurisdiction has been noted as particularly problematic in matters such as margin squeezes whereby both the sector-specific regulator and competition authority commonly apply different imputations and tests.¹⁷³

When determining which model of allocating oversight responsibilities within the telecommunications sector should be adopted, it is important that various approaches for diminishing jurisdictional overlap be fully considered. There are basically three main strategies that may be employed for alleviating or avoiding situations of jurisdictional overlap.¹⁷⁴ The first approach is to give full power to supervise regulatory and competition issues in the telecommunications sector to the competition authority. In other words, this approach essentially eliminates any possibility of jurisdictional overlap by allocating all aspects of telecommunications oversight to a single agency. The second approach is to give the sector-specific regulator primary authority to apply general competition law remedies and principles in the telecommunications sector. Unless the sector-specific regulator is given exclusive authority over addressing competition concerns and applying competition principles and remedies to the sector, however, it is questionable whether the issue of jurisdictional overlap can be entirely resolved through this approach. Finally, the third approach, which is by far the most common, is to establish co-ordination mechanisms.

8.1.1 Co-ordination Mechanisms

When the telecommunication regulator and the competition authority are functionally separate, but have concurrent jurisdiction, the most common approach for resolving problems associated with overlap is to establish co-ordination mechanisms. The main objective of such mechanisms is either to avoid or resolve potential jurisdictional disputes at the outset. While such co-ordination mechanisms are common

¹⁷³ The Concurrent Application at 52.

¹⁷⁴ OECD DSTI/ICCP/TSP(99)15/FINAL at 22. For further information on how these institutional arrangements manifest themselves in developing countries, see generally, CUTS 2003.





throughout various nations, there is no one type or form that these mechanisms commonly take. Thus, while the objective and function of such mechanisms might be the same, their form is largely a result of the respective legal framework of the nation in question.¹⁷⁵ Nonetheless, the more ongoing such co-ordinated relationships are, the more effective they will generally tend to be.¹⁷⁶

The main advantages of co-ordination mechanisms generally include: allowing for a full range of both competition and sector-specific rules to be utilized; allowing for specialization and its inherent efficiencies to prevail in the respective areas that each agency is assigned; and regulatory coherence with respect to both promoting and maintaining competition.¹⁷⁷ Another important benefit is that properly designed co-ordination mechanisms may ensure that the sector-specific regulator takes proper account of the ways in which the adoption and enforcement of technical standards and other forms of sector-specific regulation may be used to distort or restrict competition.¹⁷⁸ In particular, co-ordination mechanisms can help ensure that sector-specific regulation is pro-competitive.¹⁷⁹ On the other hand, if co-ordination mechanisms are either poorly designed or unclear in their application, these advantages may be lost, instead resulting in costly disadvantages.¹⁸⁰

In general, co-ordination mechanisms can be classified into three groups on the basis of their formality:¹⁸¹ informal and soft techniques of co-operation; delimitation of jurisdiction; and organized co-operation. The elements and characteristics pertaining to each of these groups are discussed in turn.

Informal and soft techniques of co-operation generally entail practices such as informal dialogue in order to exchange information, and/or the exchange of both staff and officials on a regular basis.¹⁸² Specific examples of information exchanges include: informal contacts and exchange of views; appointment of contact persons within each agency; appointment of industry experts; regular or ad-hoc meetings to consider pending matters; and the creation of joint working groups or inter-agency task forces. Specific examples of exchanges of staff and officials include: allowing staff at each agency to work at the other; providing educational co-operation and vocational training by the other authority; and, having an institutional cross-exchange of officials.

Delimitation of jurisdiction mechanisms include: having the competition authority abstain from the sector specific regulator's jurisdiction in certain circumstances; having written delimitation of, or co-operation and co-ordination provisions on matters of jurisdiction; and allowing the federal law to prevail over provincial or state laws and regulations.¹⁸³ Specific examples of abstention include: having a *de facto* assignment of lead jurisdiction as a way to mitigate overlap; requiring the sector-specific regulator to refrain from exercising authority where sufficient competition exists; and opting not to apply competition law whenever behaviour is explicitly authorized in sector-specific legislation. Specific examples of written delimitation of jurisdiction, co-operation, and co-ordination include: having a clear statutory delineation

¹⁷⁵ For a broader discussion on the various legal frameworks and their effect on the approaches to overlapping jurisdiction between the competition authority and sector-specific regulators, see generally: ICN, *Antitrust Enforcement in Regulated Sectors Working Group, Subgroup 1: Limits and Constraints Facing Antitrust Authorities Intervening in Regulated Sectors*, Report to the Third ICN Annual Conference, (Seoul, April 2004), Online: <http://www.internationalcompetitionnetwork.org/seoul/aers_sg1_seoul.pdf> [Hereinafter "ICN AERS Subgroup 1, 2004"]

¹⁷⁶ ICN AERS 2005 at 11.

¹⁷⁷ OECD DAFFE/CLP(99)8 at 10.

¹⁷⁸ See generally: OECD DAF/COMP/GF(2005)2.

¹⁷⁹ Such disadvantages include: inconsistencies, legal uncertainty, duplicative administrative burdens on the private sector, which ultimately impacts the consumer; useless litigation thereby further increasing administrative costs for firms; duplication of knowledge between the telecommunications regulator and the competition authority; and vital information being kept from the other agency. See: ICN AERS 2005 at 9.

¹⁸¹ See generally: ICN AERS Subgroup 3, 2004. For a similar overview, also see: OECD DAF/COMP/GF(2005)2.

¹⁸² ICN AERS Subgroup 3, 2004 at 6.

¹⁸³ ICN AERS Subgroup 3, 2004 at 6-7.

of the tasks that are to be performed exclusively by the industry regulator and the competition authority; applying a continuum of principles for assigning and co-ordinating the respective agencies' roles and responsibilities; providing joint guidelines on co-operation; and providing joint statements, agreements, or memoranda.

Finally, organized co-operation mechanisms may be utilized. These are generally comprised of such privileges as: a statutory right for the competition authority to make submissions, participate in hearings, and ask for optional referrals;¹⁸⁴ allowing for joint proceedings in certain instances, to make use of complementary expertise;¹⁸⁵ having mandatory agreements, consultations and referrals; delineating strict time frames for any such consultations;¹⁸⁶ and allowing for appeal proceedings when there are disputes.¹⁸⁷ Specific examples of rights to make submissions or participate in hearings include: providing the competition authority with a right to make submissions or provide industry regulators with comments or expert reports; allowing for intervention in regulatory hearings, as a possible alternative to investigations; and allowing for general opinions and referrals. Specific examples of mandatory agreements, consultations, and referrals include: having mandatory reports provided by the competition authority to the regulator; having mandatory notification of investigations that are within the jurisdiction of the other agency; obligating the regulator to utilize the competition authority's market definition decisions and conclusions about market dominance; and having mandatory consultation or referrals.

While the above co-ordination mechanisms are all useful in alleviating jurisdictional frictions and creating cohesive regulation, there is no particular formula in which to apply them. That is, various nations apply these techniques in various ways and combinations: sometimes as substitutes and sometimes as complements. What is important is that these techniques are applied flexibly in order to respond to, develop, and change in accordance with, new economic circumstances.¹⁸⁸ When co-ordination mechanisms are incapable of resolving problems of overlapping jurisdiction, judicial intervention is sometimes necessary.

8.1.2 Judicial Recourse

When sector-specific rules and competition laws apply to the same conduct and all institutional co-ordination and co-operation mechanisms have been exhausted, legal recourse to the courts may result. While the case law pertaining to jurisdictional overlap between sector-specific regulators and competition authorities in the telecommunications sector is limited, there are nonetheless many such cases in other regulated sectors. To this end, it is useful to outline some of the basic legal principles that have been established in these other sectors.

The case law of most jurisdictions appears to confirm that autonomous behaviour by firms is, in principle, fully subject to competition law.¹⁸⁹ The general exception to this is that, in some jurisdictions, a firm must obtain an exemption directly and explicitly from the legislature.¹⁹⁰ Thus, the case law of such jurisdictions demonstrates the court's readiness to apply competition laws to cases in which regulatory measures implicitly facilitate or encourage anticompetitive conduct, yet do not explicitly exempt such conduct.¹⁹¹

¹⁸⁴ For a broader discussion on competition advocacy in regulated sectors, see generally: ICN Case Studies on Regulated Sectors.

In particular, see the cases of Mexico and Portugal with respect to advocacy efforts within their respective telecommunications sectors.

¹⁸⁵ ICN AERS Subgroup 3, 2004 at 8.

¹⁸⁶ ICN AERS Subgroup 3, 2004 at 8.

¹⁸⁷ ■ ICN AERS Subgroup 3, 2004 at 8.

■ In particular, when there is concurrent jurisdiction, regulatory consistency is enhanced when appeal routes for competition decisions converge. See: OECD DAF/COMP/GF(2005)2 at 10.

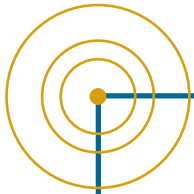
¹⁸⁸ ICN AERS Subgroup 3, 2004 at 9.

¹⁸⁹ ICN AERS Subgroup 1, 2004 at 3.

¹⁹⁰ ICN AERS Subgroup 1, 2004 at 3.

¹⁹¹ ICN AERS Subgroup 1, 2004 at 3; the outcome will generally depend on the behaviour in question and the precise words of the respective legal statutes.





When overlapping jurisdiction persists, the case law also shows a general willingness by the courts to reduce potential jurisdictional conflicts between sector-specific regulation and competition laws to a minimum.¹⁹² One way to minimize potential jurisdictional conflicts is to narrowly interpret the scope of the respective legislation pertaining to each agency's jurisdiction. When jurisdictional overlap cannot be minimized and continues to persist, a common legal principal is that of *lex specialis*, whereby the more specialized law is to prevail over the more general.¹⁹³ However, in jurisdictions such as the EU, where a system of legal hierarchy exists and competition laws are higher in this hierarchy than certain national sector-specific regulations, competition laws prevail due to their primacy.¹⁹⁴

In summary, the approach to judicial recourse with respect to resolving conflicts associated with overlapping jurisdiction will depend on both the economic circumstances and legal framework of the jurisdiction in question. The key is to adopt the most effective method for resolving conflicts.

9 The State of Competition in Selected Developing Countries

It is widely accepted that an efficient and competitive telecommunications sector is key to enhancing productivity, attracting foreign investment, participating in the global economy, and driving economic growth.¹⁹⁵ The WTO has provided a pivotal role in telecommunications liberalization in developing countries, by encouraging regulatory reform and requiring members to make both liberalization commitments and adopt a set of best-practice regulatory principles. These commitments were largely set out in the *Agreement on Basic Telecommunications Services*,¹⁹⁶ which came into force at the beginning of 1998. Best-practice regulatory principles are set out in the "*Reference Paper*,"¹⁹⁷ which is appended to the Agreement. Since this Agreement came into being, over 80 nations have either complied with the *Reference Paper* as is, or in some modified form.

The *Reference Paper* provides a rather high-level statement of principled guidance to specific areas of telecommunications regulation, including: competitive safeguards; interconnection; universal service; public availability of licensing criteria; independent regulators; and allocation and use of scarce resources. However, the *Reference Paper* neither delineates nor provides insight into how its objectives are to be met with respect to both market structure and the interaction between the sector-specific regulator and the competition authority. These issues are crucial to understanding key differences in market and institutional structures between developed and developing countries, and are examined below.

Regarding market structure, one of the key differences in the way in which telecommunications competition in developing countries has manifested itself has been the relatively greater use of mobile networks and fixed-wireless networks.¹⁹⁸ This contrasts with the situation in many developed countries in which cable networks have taken a greater role. As well, while broadband network rollout in many developing countries has started, it is often slow. In contrast, wireless networks are comparatively faster and often more cost effective to establish. Nonetheless, mobile networks have their own unique problems that should be addressed (*e.g.* access to fixed networks, spectrum licensing, and roaming). Further regarding key differences in the market structure of developing countries, it is sometimes the case that one or more telecommunications companies are owned by the state in these jurisdictions.

¹⁹² ICN AERS Subgroup 1, 2004 at 3.

¹⁹³ OECD DSTI/ICCP/TSP(99)15/FINAL at 22.

¹⁹⁴ ICN AERS Subgroup 1, 2004 at 4-5.

¹⁹⁵ Walden & Angel at 600.

¹⁹⁶ Online: <http://www.wto.org/english/tratop_e/serv_e/telecom_e/telecom_results_e.htm>

¹⁹⁷ Online: <http://www.wto.org/english/tratop_e/serv_e/telecom_e/tel23_e.htm>

¹⁹⁸ In Uganda for example, all new connections are through fixed-wireless technology. In South Africa, the second national operator has stated that its local loop will be constructed with wireless broadband technology.

Regarding the institutional framework, a number of developing countries do not have a competition authority nor do they have the resources and/or institutional capacity to rely on their courts to resolve competition concerns. As a consequence, regulators and courts in these countries have little experience in applying competition laws and principles. Additionally, if the regulations and laws pertaining to the institutional framework have been adopted in a piecemeal fashion, they may conflict, thus creating inconsistencies and uncertainty. Finally, some developing countries must pay attention to the scarcity of experienced personal.¹⁹⁹ Ultimately, these distinguishing factors must be fully considered when designing the regulatory and legal framework that surrounds liberalization in the telecommunications industry in developing countries. Full consideration of these factors is essential, as their interaction with regulations and rules will have a material impact on sectoral development.

As part of its mandate, the Working Group on Telecommunications Services determined it would collect information on the state of competition in telecommunications services in several developing countries. This information can be found in Appendix III.

¹⁹⁹ Some commentators have suggested that this factor would tend to favour a more robust competition authority rather than many separate sector-specific regulators. See CUTS 2003 at 5.